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A HEARING TO REVIEW THE STATE OF THE LIVESTOCK INDUSTRY

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

OCTOBER 7, 2021

Serial No. 117–18

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A HEARING TO REVIEW THE STATE OF THE LIVESTOCK INDUSTRY

THURSDAY, OCTOBER 7, 2021

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Committee met, pursuant to call, at 12:01 p.m., in Room 1300 of the Longworth House Office Building and via Zoom, Hon. David Scott of Georgia [Chairman of the Committee] presiding.

Members present: Representatives David Scott of Georgia, Adams, Spanberger, Hayes, Delgado, Rush, Pingree, Sablan, Kuster, Plaskett, O'Halleran, Khanna, Lawson, Craig, Harder, Axne, Schrier, Bishop, Thompson, Austin Scott of Georgia, Hartzler, LaMalfa, Allen, Rouzer, Johnson, Baird, Hagedorn, Jacobs, Balderson, Cloud, Mann, Feenstra, Miller, Moore, Cammack, Fischbach, and Letlow.

Staff present: Daniel Feingold, Prescott Martin III, Lesly Weber McNitt, Kelcy Schanuman, Ashley Smith, Caleb Crosswhite, Patricia Straughn, Erin Wilson, and Dana Sandman.

OPENING STATEMENT OF HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

The CHAIRMAN. The Committee will come to order. Welcome, and thank you for joining us today on this extraordinary, and very important, and urgent hearing entitled, *A Hearing to Review the State of the Livestock Industry.* Now, after brief opening remarks, Members will receive testimony from our witnesses today, and then the hearing will be open to questions. Members will be recognized in order of seniority, alternating between Majority and Minority Members, and in order of arrival for those Members who have joined us after the hearing was called to order. And, of course, Members, when you are recognized, please remember to unmute your microphones, and then you will have 5 minutes to ask your questions, or make a comment. And, if you are not speaking, please, I ask you to remain muted in order to minimize any background noise. And in order to get to as many questions as possible, the timer will stay consistently visible on each of your screens. Now, ladies and gentlemen, let me take just a few minutes to give you my own opening statement.

This is, as I said, a most important and urgent hearing, because today we will discuss the very important issues facing our livestock sector. Animal agriculture, ladies and gentlemen, is a very important, very significant part of the engine of our food system, and not only that, of our entire United States economy, and our very impor-

tant international trade. As agricultural policymakers, it is our job to examine the conditions that enable this important and critical industry to succeed, and to address any barriers that would limit that success as well.

Our livestock industry is facing significant challenges: heightened concerns about fairness and transparency in the marketplace as well. In fact, the previous Chairman and Ranking Member of our House Agriculture Committee requested a report on issues and trends in the cattle markets. Earlier this week Texas A&M University published this report entitled, *The U.S. Beef Supply Chain: Issues and Challenges.** So, without objection, on behalf of Ranking Member Thompson and myself, I would like to submit this report for this hearing record.

Ladies and gentlemen, we all agree now that our farmers, our ranchers, should have access to free and fair markets, and this is why the leaders of this Agriculture Committee, and the House of Representatives, have been working in a bipartisan way in our hopes of reaching an agreement on a long-term extension of Livestock Mandatory Reporting, which we refer to as LMR. That is also why we introduced H.R. 5290, to extend LMR's authorization for 1 year. Our legislation continues the United States Department of Agriculture's Mandatory Price Reporting Program, which provides vital price discovery and market information. And, of course, I expect we will hear more of that from our witnesses later on.

I also look forward to hearing from our distinguished witnesses' views on critical issues like competitiveness, supply chain resilience, labor, animal health, and our U.S. Department of Agriculture's implementation of the COVID–19 relief and rebuilding assistance, which was authorized by us in Congress. We have convened a distinguished group of witnesses, who will not only provide diverse perspectives on the issues confronting our farmers and ranchers, but they also will present views on how we can move forward. And my hope for today's hearing is that by us listening, listening to the voices of these very influential and knowledgeable voices from across the industry, we here in Congress will be able to find common ground on policies that will enhance the state of our precious livestock sector.

And I am so pleased to have before us Senator Chuck Grassley from Iowa, a distinguished gentleman. And I am also delighted to welcome our distinguished Secretary Tom Vilsack back again to the Committee, and to hear from him an update on all the work that the United States Department of Agriculture is doing for our livestock industry. And, of course, we have our distinguished panel. And ladies and gentlemen, we are going to hear from these industry experts because they are highly recognized as the most knowledgeable voices in livestock. So I welcome you all to this extraordinary hearing, and we all look forward to it.

Now, one final comment. I recognize that we do have diverse, and sometimes differing, views on what it will take to strengthen our livestock industry, and better position it for the future. And I want all of us to listen, listen with an open mind, and remember that while we may take different approaches, have different opin-

*__Editor's note:__ the report referred to is located on p. 203.

ions, here's one thing for sure, that we all have a shared motivation to make our agriculture system of the United States better so that we can maintain our recognition as the greatest, best agriculture system in the world.

[The prepared statement of Mr. David Scott follows:]

PREPARED STATEMENT OF HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

Today, we will discuss the very important issues facing the livestock sector. Animal agriculture is an engine of our food system, the U.S. economy, and our international trade. As agricultural policy makers, it is our job to examine the conditions that enable this industry to succeed and to address any barriers to its success as well.

Recently, the livestock industry has faced significant challenges and heightened concerns about fairness and transparency in the marketplace. In fact, the previous Chairman and Ranking Member of this Committee requested a report on issues and trends in cattle markets. Earlier this week, Texas A&M University published this report: "The U.S. Beef Supply Chain: Issues and Challenges" and it has proven very timely. Without objection, on behalf of Ranking Member Thompson and myself, I'd like to submit this report for the hearing record.

I think we can all agree that our farmers and ranchers should have access to free and fair markets. That is why the leaders of this Committee have been working in a bipartisan way toward reaching an agreement on a long-term extension of Livestock Mandatory Reporting (LMR). That is also why I introduced H.R. 5290 to extend LMR's authorization for 1 year.

This legislation continues USDA's Mandatory Price Reporting Program, which provides vital price discovery and market information. I expect that we will hear views on how this program is working from our witnesses.

I also look forward to hearing our witnesses' views on critical issues such as competitiveness, supply chain resilience, labor, animal health, and the USDA's implementation of the COVID–19 relief and rebuilding assistance authorized by Congress.

We have convened a distinguished group of witnesses who can not only provide diverse perspectives on the issues confronting our farmers and ranchers, but also present views on how we can move forward. My hope for today's hearing is that by listening to voices from across the industry, we will be able to find common ground on policies that will enhance the state of the livestock sector.

I am pleased to have before us Senator Chuck Grassley from Iowa. I am also delighted to welcome Secretary Vilsack back to the Committee and to hear an update from him on all of the work the U.S. Department of Agriculture is doing for our livestock industry. Last but not least, our industry panel contains some of the most knowledgeable voices in livestock, and I welcome them as well.

I recognize that among our witnesses, and even the Members of this Committee, we have diverse and sometimes differing views on what it will take to strengthen this industry and better position it for the future. I implore my friends and colleagues to listen with an open mind and remember that, while we may take different approaches, our shared motivation is the betterment of American agriculture.

The CHAIRMAN. And with that, I would now like to welcome the distinguishing Ranking Member, the gentleman from Pennsylvania, Mr. Thompson, for his opening remarks.

OPENING STATEMENT OF HON. GLENN THOMPSON, A REPRESENTATIVE IN CONGRESS FROM PENNSYLVANIA

Mr. THOMPSON. All right. Mr. Chairman, thank you so much, and good afternoon, everyone. On countless occasions I have mentioned the importance of this Committee getting back to holding hearings to explore issues facing production agriculture, and conducting oversight of the numerous programs administered by the U.S. Department of Agriculture, especially as we gear up for the next farm bill. So, in that regard, I am thankful, Chairman Scott, that we are giving the livestock industry the attention that it deserves today.

Now, while it is always nice to hear from our Senate colleagues, and I am thankful to finally have an opportunity for an open discussion with Secretary Vilsack, this certainly isn't the setting I would have chosen. First off, I have a number of questions for the Department that extend far beyond the subject matter of today's hearing, and I am sure my colleagues on both sides of the aisle do as well, questions that deserve answers, and that, in many cases, have gone ignored for far too long. Now, these grievances aside, I want to thank both Senator Grassley and Secretary Vilsack for your participation and testimony. I also want to express my gratitude to the industry panelists that have been gracious enough to participate today. I am even more eager to hear directly from you about what is and is not working, and what may need to be addressed to ensure that our livestock industry can thrive. Now, I sincerely hope your views are heard and carefully considered before this Administration or Congress takes any further action on regulations and legislation affecting the livestock industry, and ultimately your livelihoods.

Now, moving to the substance of today's hearing, I have said it before, and I am going to say it again, food security is national security. The pandemic made that sensitive linkage abundantly clear, as the resilience of our production, processing, and distribution systems was put to the test. Now, while I am impressed with the resolve of both our producers and our processors in continuing to provide safe, nutritious products tailored to meet an ever-growing array of customer demands, there are still concerns and lingering frustrations across the countryside.

Now, these issues are wide-ranging, from market concentration, price transparency, and processing capacity, to labor shortages, and lingering animal disease threats. And meanwhile, despite what we may hear from a few, there is a clear lack of consensus on legislative and regulatory proposals intended to address many of those issues. Now, it seems the forthcoming Packers and Stockyards, or GIPSA Rules, we continue to hear so much about have been plucked off the shelf by this Administration, dusted off, and rebranded as a silver bullet to every conceivable marketplace concern.

Now, they were undoubtedly controversial the last time the Secretary tried to push them through, and if this Administration is serious about these proposals, rather than pitting one segment of the industry against another, they will need to strike a careful balance reflective of the needs and the concerns of all segments of industry, while avoiding severe unintended consequences, and that won't be an easy task. It will be equally important for Congress to avoid unintended consequences, and keep diverse industry needs in mind, as we consider proposals designed to increase price transparency. We will no doubt hear today from those who view government intervention as the only solution. Others will characterize such intervention as a costly solution in search of a problem guaranteed to disrupt the use of popular marketing tools. Above all, it is imperative producers and industry participants maintain access to the information already available through the Livestock Mandatory Reporting Program, and that broader policy disputes don't become the reason for a lapse in program authority.

Now, that said, I am confident this Committee will continue its work to pursue pragmatic solutions that we all can agree upon. I would be remiss if I didn't commend Congressman Dusty Johnson, Ranking Member of our Livestock and Foreign Agriculture Subcommittee, for his continued leadership on that front.

It is no secret that labor shortages continue to plague our economy, the agriculture and processing sectors in particular. And despite innovative efforts to contain the spread of COVID within packing plants, and industry efforts to attract employees with bonuses, wage increases, and other benefits, processing facilities across the country remain woefully understaffed.

While directives related to masking requirements at processing plants and vaccine mandates for Federal and private-sector employees are assuredly well-intended, I am increasingly concerned about the rigid and dogmatic approach to their enforcement, and the potential to exacerbate our labor shortage crisis. I hear these fears as I travel across the country from truck drivers, workers in warehouses, factory workers, FSIS inspectors, FSA county office staff, and county committees, crop insurance agents, and loss adjusters, and the list goes on.

Now, thankfully, there are some areas where everyone seems to be in general agreement, including the support for improving access to processing, and increasing overall processing capacity. So far I have been pleased to see Congress and the Administration teaming up on this endeavor, from reducing overtime inspection costs for small- and very-small-processors, to providing resources to help existing plants become federally inspected to the much anticipated $500 million investment and expansion efforts across the nation.

I am certainly behind the idea of giving new small- and medium-sized facilities the boost that they need to get started, allowing them to find their niche, and hopefully watching them grow to medium- and larger-sized players, making for a more resilient and competitive marketplace along the way. But this week's announcement of an additional $100 million for a related loan guarantee program served as a stark reminder of the lack of detail regarding these programs. Rather than continue to throw money at the problem, it is time for answers and implementation of the programs already promised.

And finally, no discussion of livestock industry would be complete without acknowledging the foreign animal disease threats knocking at our doorsteps. The detection of African Swine Fever in Haiti and the Dominican Republic underscores the importance of our disease prevention and preparedness efforts. Unfortunately, politics got in the way of enhancing these efforts during the reconciliation process. That said, I am confident that industry and the Department will continue to do all they can to keep the disease at bay, and I am appreciative of the CCC money set aside to do so.

So thank you, Mr. Chairman. I look forward to today's discussion, and the testimony of our distinguished panelists that we have today, and I yield back.

The CHAIRMAN. Thank you, Ranking Member Thompson. The chair would request that other Members submit your opening

statements for the record so witnesses may begin their testimony, and to ensure that there is ample time for questions.

[The prepared statement of Mr. Costa follows:]

PREPARED STATEMENT OF HON. JIM COSTA, A REPRESENTATIVE IN CONGRESS FROM CALIFORNIA

Thank you, Mr. Chairman, for holding this important hearing and thank you to the witnesses on all three panels for agreeing to participate. As our nation continues to recover from the impact of COVID–19, climate change will also play a critical role as we look towards sustainable solutions within the livestock industry. While I appreciate USDA's efforts to provide resources to the livestock industry, I would like to highlight the importance of not repeating past mistakes. I was one of the conferees of the 2008 Farm Bill, and it is critically important that it be implemented as Congress intended. Not that Congressional intent can have unintended consequences, but we certainly would want to prevent actions that can have unintended consequences within the industry. There were careful negotiations that took place that involved compromises by all parties. In subsequent farm bills, they have been reauthorized. I remember what was discussed and what was rejected. With that being said, I will be submitting questions for the record and look forward to having further discussions on all the topics being covered today. Thank you.

The CHAIRMAN. Now we turn to our first panel, and we welcome to our first panel today the distinguished Senator Chuck Grassley, from the great State of Iowa. Senator Grassley, it is good to have you, and now you are recognized for 5 minutes. Please begin your testimony when you are ready.

STATEMENT OF HON. CHUCK GRASSLEY, A SENATOR IN CONGRESS FROM IOWA

Mr. GRASSLEY. Chairman Scott, Ranking Member Thompson, distinguished Members of the House Agriculture Committee, it is an honor to testify, to discuss the state of the livestock industry. And I want to thank you, Chairman Scott, because you gave me 1 hour in your office in June to discuss this particular issue, and you were very gracious.

My name is Chuck Grassley, and I am farmer from Butler County, Iowa, however, my son Robin and grandson Pat do most of the work. While this hearing covers all livestock, I want to discuss the reforms needed in the cattle industry. Chairman Scott, I appreciate your interest in the cattle market reform. When we met earlier this summer to discuss my bill that I have with Senator Tester, Democratic, of Montana, you took a keen interest in ensuring that family farmers across the country not only survive, but can make an honest living.

Secretary Vilsack, your next witness, knows that cattle producers are struggling. At USDA, Secretary Vilsack is taking steps to expand the meat processing industry with grants and loans to address bottlenecks in the food supply chain. Secretary Vilsack has also taken action to support the enforcement of the Packers and Stockyards Act. That is a badly needed move. In addition, President Biden issued an Executive Order where he called on the Secretary of Agriculture to ensure farmers have, "measures to enhance price discovery, increase transparency, and improve the functioning of the cattle, and other livestock markets." While I appreciate the actions from White House and Secretary Vilsack, it is now time for Congress to act.

As the nation's number one producer of meat, Iowans rely on market information provided by the Mandatory Price Reporting, and they need that information to run their businesses. The reauthorization of the mandatory price reporting is the vehicle available where we can add additional price transparency and price discovery measures, and that is what I am advocating. Over the past 18 months we have seen massive price discrepancies between fed cattle and box beef. This is pushing cattle producers and feeders to the brink of having to sell their operations.

The four major meat packing companies control 80 to 85 percent of cattle slaughter. These companies have the advantage of procuring cattle from thousands of producers. These companies can also act as a chokepoint for the entire industry. Given the critical nature of their operations, these packers dominate the marketplace, and limit opportunities for price negotiation. According to USDA, for every $1 Americans spend on food, only 14.3¢ goes to the farmers. Meanwhile, the retail price of beef for consumers has increased and remained high, and every consumer knows that. I want to make clear that I am not upset about paying more for beef. I am upset because farmers are not making a profit.

And while some participants in the third panel will say otherwise, I want to make it clear there is no denying we need serious reform in the way our country markets cattle. I believe that my bill, commonly referred to as 50/14 (S. 949), would create the price transparency that is needed in the marketplace. My colleague, Senator Fischer of Nebraska, has a bill that would help as well. Ultimately, Senator Fischer and I are working on a compromise that can unite the industry because kicking the can down the road is not an option. I hear constantly from Iowa cattle—we need help, now.

The beef industry employs hundreds of thousands of hard-working men and women who work each day to help feed our country and the world. I am in front of you today to ask that you join with me, and other Senators on the Senate Agriculture, Nutrition, and Forestry Committee, in including real reforms in mandatory price reporting. Cattlemen across the country are counting on all of us. Thank you, Chairman Scott, and please take what we talked about last summer into consideration as you look at this change in this bill. I thank you very much.

[The prepared statement of Mr. Grassley follows:]

PREPARED STATEMENT OF HON. CHUCK GRASSLEY, A SENATOR IN CONGRESS FROM IOWA

Chairman Scott, Ranking Member Thompson, and other distinguished Members of the House Agriculture Committee—it is an honor to testify today to discuss the state of the livestock industry.

My name is Chuck Grassley. And I'm a farmer from Butler County, Iowa.

While this hearing covers all livestock, I want to discuss the reform needed in the cattle industry.

Chairman Scott, I appreciate your interest in cattle market reform. When we met earlier this summer to discuss my bill with Senator Tester, you took a keen interest in ensuring that family farms across the country not only survive, but can make an honest living.

Secretary Vilsack, the next witness, knows that cattle producers are struggling.

At USDA, Secretary Vilsack is taking steps to expand the meat processing industry with grants and loans to address bottlenecks in the food supply chain.

He has also taken action to support the enforcement of the Packers and Stockyards Act.

In addition, President Biden issued an Executive Order where he called on the Secretary of Agriculture to ensure farmers have, "Measures to enhance price discovery, increase transparency, and improve the functioning of the cattle and other livestock markets."

While I appreciate the actions from the White House and Secretary Vilsack, it is now time for Congress to do our part.

As the nation's number one producer of meat, Iowans rely on market information provided by Mandatory Price Reporting to run their businesses.

The reauthorization of Mandatory Price Reporting is the vehicle available where we can add additional price transparency and price discovery measures.

Over the past 18 months we've seen massive price discrepancies between fed cattle and boxed beef.

This is pushing cattle producers and feeders to the brink of having to selling their operations.

The four major beef packing companies control over 80 percent of the cattle industry.

These companies have the advantage of procuring cattle from thousands of producers, acting as a chokepoint for the entire industry.

Given the critical nature of their operations, these packers dominate the marketplace and limit opportunity for pricing negotiations.

According to USDA, for every $1 Americans spend on food, only 14.3¢ goes to farmers.

Meanwhile, the retail price of beef for consumers has increased and remains high.

I want to make it clear that I'm not upset about paying more for my beef. I'm upset the farmer isn't getting paid.

And while some participants in the third panel will say otherwise, there is no denying we need serious reform in the way our country markets cattle.

I believe my bill, commonly referred to as 50/14, and would create the price transparency that is needed in the marketplace.

My colleague, Senator Fischer has a bill that would help as well.

Ultimately, Senator Fischer and I are working on a compromise that can unite the industry because kicking the can down the road is not an option.

The beef industry employs hundreds of thousands of hardworking men and women who work each day to help feed our country and the world.

I'm in front of you today to ask that you join with me and other Senators on the Senate Agriculture, Nutrition, and Forestry Committee to include real reform in Mandatory Price Reporting.

Cattlemen across the country are counting on us.

The CHAIRMAN. Senator Grassley, we thank you for your excellent testimony before us today, and at this time, you are now excused.

Mr. GRASSLEY. Thank you.

The CHAIRMAN. Thank you very much. Now let us turn our attention to panel two. And I am so pleased to welcome back to the Agriculture Committee our second witness today, Secretary Tom Vilsack. Secretary Vilsack, welcome. You are now recognized for your 5 minutes. Please begin your testimony when you are ready.

STATEMENT OF HON. THOMAS "TOM" J. VILSACK, SECRETARY, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Secretary VILSACK. Mr. Chairman, Ranking Member Thompson, and Members of the Committee, thank you very much for the opportunity to be here today, and I certainly commend the Chairman, and Ranking Member, and the Committee for conducting this very important hearing.

It is an extraordinary set of complex factors to be examined when we talk about the livestock industry in the United States. Supply, demand, capacity, competition, markets, and many, many factors making it an incredibly difficult industry, whether it is weather, feed costs, vertical integration, supply chain disruptions, packing

and slaughter capacity, ownership, consolidation, competition, trade, port congestion, seasonality. Many, many other factors make it extraordinarily complex.

Our inventories are down in beef, pork, and poultry for a variety of reasons, whether it is drought, or disease, or disruption of the supply chain. At the same time, we are seeing incredibly high demand domestically, and exports at a high level, in fact, setting a record for the level of ag exports this year. We know that there is a high concentration in this industry. We know that it creates capacity challenges, especially in beef, and there is a need for additional capacity. That is one of the reasons why we began the process of establishing a $500 million fund. We have solicited information and input from those who are interested in potentially utilizing this fund. We have received over 500 comments, and we are now in the process of analyzing those comments in order to establish and structure the program. The expectation is that that structure will take place sometime before the end of the year, and that we will begin to make decisions and investments hopefully in the first quarter of 2022.

We need additional capacity. We also need to strengthen our existing local and regional small- and very-small-processing facilities, and that is the reason why we have used the resources provided by Congress to, as Representative Thompson indicated, to assist in reducing overtime costs. Over 1,879 facilities have already received assistance and help from the USDA as a result of that program that you all put in place. We also have taken a look at the opportunity to modernize existing facilities with the resources established by Congress. We have over 245 applications that are in the process of being reviewed now for the roughly $55 million available for that purpose. We also recognize that, in addition to additional processing capacity, and supporting our existing facilities, we need to make sure that we address the issue of training and workforce. That obviously involves, as well, immigration reform. I am certainly pleased that the House of Representatives was able to pass the Farm Workforce Modernization Act of 2021 (H.R. 1603), and hope that the Senate is able to do so as well.

The goal here is obviously to strike a better balance between supply and demand, between process and capacity competition, with greater transparency so that we can have a stable, dependent, and fair market. At the end of the day, our Department is anxious to have fair prices for producers, and a fair deal for consumers.

Mr. Chairman, with that I would be happy to respond to questions from the Committee.

[The prepared statement of Secretary Vilsack follows:]

PREPARED STATEMENT OF HON. THOMAS "TOM" J. VILSACK, SECRETARY, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Thank you, Chairman Scott, Ranking Member Thompson, and Members of this Committee, for inviting me here today to discuss the many challenges facing our livestock producers and how the Department of Agriculture is working to address them.

Today, our livestock producers are up against historically difficult odds. They are bearing the brunt of drought and the challenges of climate change, facing arising animal diseases, adapting to new cyber threats, and dealing with the market disruptions from a global pandemic. They are also facing these challenges within an industry structure that often denies them access to fair markets.

Responding to these headwinds facing livestock producers require short-, medium-, and long-term solutions. They also require creativity to tackle old problems, and quick action to address rising new ones. Underpinning all this is the desire to ensure producers can be profitable enough to stay on the farm.

Last week, the Department announced a series of investments focused on providing immediate relief. We are committing up to $500 million in Commodity Credit Corporation funds to protect our livestock industry from African Swine Fever. We've heard from the Members of this Committee, we've heard from U.S. pork producers, and we've heard from economists about how devastating an African Swine Fever outbreak on our shores would be. One estimate from an Iowa State researcher put the total cost of an outbreak at $50 billion over 10 years.[1] In this case, we think an ounce of prevention is likely worth a pound of cure, so we're being proactive and aggressive in our approach domestically to keep this threat from reaching our shores and coordinated and collaborative in our approach internationally. We know African Swine Fever is not the only disease threat facing producers. This investment allows us to take on this challenge head-on without diverting resources from other key animal disease threats.

Another immediate challenge facing livestock producers is unprecedented drought conditions brought on by climate change. The Drought Monitor shows that more than 40 percent of the continuous United States has experienced some level of drought since September 2020 and more than 20 percent has experienced extreme or exceptional drought since April. In some areas of the U.S., conditions have been unyielding, unprecedented and costly. Producers have faced the possibility of having to liquidate herds after spending a lifetime building them because they cannot grow or afford the feed they need. They need help. We deeply appreciate Congress' recent $10 billion investment as part of the disaster supplemental bill (Public Law No[.] 117–43) to provide relief to producers facing drought, wildfire, smoke, and heat. We announced last week an effort to complement that funding by committing an additional $500 million in Commodity Credit Corporation funds to support drought recovery and encourage adoption of water-smart management practices.

Building Back Better

This short-term assistance must be complemented by longer-term efforts to ensure producers can stay on the land and make a living.

This summer I visited a meat processing plant in Council Bluffs, Iowa. While there, I met with producers who told me that the price they are getting for their cattle isn't coming close to covering the costs of production. Producers need to be better positioned to capture more value within the supply chain.

The COVID–19 pandemic led to massive disruption across the supply chain, and it exposed a food system that was rigid, consolidated, and fragile. This crisis left grocery store shelves empty at the same time farmers saw lower prices and some had nowhere to market their animals. It put a spotlight on the challenges producers face and the need to establish better balance in the marketplace of who benefits from food dollars spent.

That's why USDA is working to build more resilient, better, and fairer markets for producers and consumers alike. As part of the Biden-Harris Administration's push to build back a stronger, more resilient economy, USDA is using a wide range of tools to promote competition and create new market opportunities and support a robust workforce.

In July, USDA announced our intent to invest $500 million to expand meat and poultry processing capacity as part of the Build Back Better initiative to build a better food system through loans, grants and technical assistance. To make sure we get this critical task right, the Department sought and is currently reviewing the more than 400 comments from stakeholders over the past few months. Our intent is to invest in processing capacity that supports safe, fairly compensated jobs in rural communities, while giving producers more market options and consumers a more reliable supply of food. I look forward to sharing details of next steps soon and welcome your input.

Already, we have announced more than $150 million for existing small- and very-small-processing facilities to help them weather COVID, compete in the marketplace and have the support needed to reach more customers. This assistance comes in the form of $55 million for the Meat and Poultry Inspection Readiness Grant program and $100 million to reduce the cost of overtime inspection for existing small- and very-small-Federal establishments. I thank this Committee for its bipartisan leadership in providing us with the funds and authorities for these efforts. During the

[1] *https://asfimpact.com/wp-content/uploads/2020/03/HAS-003-4-ASFImpact-Summary_1j.pdf*.

early stages of the pandemic, many local processors wanted to keep their doors open on holidays and weekends to increase their processing capacity and address extensive backlogs in their regions. To do so, they paid overtime fees for food safety inspectors to come in after hours and ensure that products were still meeting safety standards. This program is reimbursing small- and very-small-plants for these costs and enabling them to reinvest those funds in their businesses.

This week, we announced the creation of a new Food Supply Chain Loan Guarantee Program through the Rural Business—Cooperative Service. The new loan guarantee program will support financing of the start-up or expansion of "middle of the supply chain" entities that are engaged in the processing, manufacturing, or distribution of food. The program will leverage $100 million in funds from the American Rescue Plan to make up hundreds of millions of dollars in loan guarantees available. This funding will make the supply chain more resilient to market shocks, give a greater share of the food dollar to those growing, processing and distributing our food, and ensure that consumers have a wide array of healthy and affordable choices in the grocery aisle.

Addressing Competition & Markets

Investments in capacity are just one tool available to us to create better fairer markets. We must also leverage our existing authority to create rules and regulations that ensure all livestock producers are on a level playing field. As part of the President's Executive Order on Promoting Competition in the American Economy, the Department of Agriculture is engaging in a series of rulemakings and other steps to increase competition in agricultural processing industries that will lead to fairer markets for producers. These new rules and actions will increase ranchers' earnings by fighting abuses. For too long, livestock producers as well as farmers have not been able to claim their fair share of each dollar spent on food.

First, USDA intends to propose a new rule that will provide greater clarity to strengthen enforcement of unfair and deceptive practices, undue preferences, and unjust prejudices. Second, USDA will propose a new poultry grower tournament system rule, with the current inactive proposal to be withdrawn. Third, USDA will repropose a rule to clarify that parties do not need to demonstrate harm to competition in order to bring an action under section 202(a) and 202(b) of the Packers & Stockyards Act. It's past time USDA fully deploy the Packers and Stockyards Act and protect ranchers and farmers.

Second, USDA will issue a new rule defining when meat can carry the label of "Product of USA." American consumers shouldn't be confused about what they are spending their food dollars on. And third, we're also complementing these rules with enhanced market transparency tools under our Market News Service and the Livestock Mandatory Reporting Act.

Conclusion

As the Biden-Harris Administration restarts the world's largest economy and makes great strides in the economic recovery, USDA is committed to a restart that is right for the American people—producers and consumers alike—by transforming the food system and strengthening rural communities. This is a pivotal moment of opportunity to put farmer profitability and the forefront of our efforts to build back a better food system that is secure, competitive, distributed, and resilient. Our livestock and poultry producers are a vital part of a vibrant future for rural America and we stand ready to help them tackle the challenges they face. I look forward to working with Congress on these important issues.

Thank you for your time today, and I look forward to any answering any questions you may have.

The CHAIRMAN. Sorry. Thank you, Secretary Vilsack, for your excellent testimony today. At this time, Members, we are going to open it up for questions for the Secretary. Members will be recognized for questions in order of your seniority, alternating between Majority and Minority Members. You will be recognized for 5 minutes each in order to allow us to get as many questions in as possible. Again I remind each of you to please keep your microphones muted until you are recognized so that we can minimize background noise.

Now I recognize my own self here, Secretary, and again, welcome. I want to start off by saying thank you, and you and I have been working together on some very, very serious issues facing us,

and I am delighted to be a partner with you as we deal with so many of the issues facing agriculture now. I have been especially encouraged by the recent announcement that you made out of the U.S. Department of Agriculture that is related to your bold and great efforts to combat African Swine Fever, and we refer to it now as ASF.

As you also know, this is a priority to many Members on our House Agriculture Committee, and I was so pleased to hear that you had some news, and you were kind enough to call me and share the news before you made it, that the USDA has a promising vaccine candidate for the African Swine Flu. I have also been a firm believer, as I mentioned to you, that investment in Federal research is very critical to advancing the agriculture industry, and this important work that is going on with our Agricultural Research Service is evidence of that. And so my first question to you, Mr. Secretary, is what are the next steps that you have that involves advancing this vaccine, and also how long until we can expect it to be ready for use?

Secretary VILSACK. Mr. Chairman, there are actually seven vaccines that are currently under investigation and examination at various ARS facilities in USDA. The specific vaccine that you are referring to has recently gone through sort of the first steps or stages of testing, and appears to be very effective against the Asian version of African Swine Fever. There is still quite a bit of work yet to be done before that particular vaccine is capable and able to be utilized in the market. There are additional steps and responsibilities that are undertaken. It is going to take some time, additional field tests. I also understand that there is also an effort, potentially, to involve Vietnam, that is currently dealing with African Swine Fever, in terms of doing some additional testing. So while I am as anxious as you are to get this to the market as quickly as possible, we have to do so in a way that ensures the safety of it. But it is moving forward, as are the other six possible candidates.

The CHAIRMAN. Secretary, it has come to my attention that evidence that economies-of-scale have driven consolidation in meatpacking, and that larger facilities operate more efficiently. How do we strike a balance between benefits and costs of concentration?

Secretary VILSACK. Mr. Chairman, I think the key here is to have a resilient and efficient system, which means that I think we need to continue to support our small- and very-small-processing capacity, as I mentioned in my statement, but we also need to expand capacity. There is no question that we are short of capacity, which is one of the reasons why it is more difficult for farmers to get a fair price for what they are raising. That is the reason why we have put together this fund. As I indicated, we have 500 comments in terms of how it should be structured, in terms of grants, loans, guaranteed loans, forgivable loans. We are in the process of finalizing the structure. Hopefully by the end of this year we have the structure in place so that we can begin accepting applications.

The CHAIRMAN. And then, Mr. Secretary, you mentioned barriers. Identify these barriers. What are the barriers to enhancing our meat processing capacity and supply chain resilience?

Secretary VILSACK. I would say two principal barriers, Mr. Chairman. Capital is one of them, and then second I think there is still the need for us to invest in additional training and additional workforce.

The CHAIRMAN. Very good. And now I will turn to the gentlemen from Pennsylvania, our Ranking Member, Mr. Thompson. You are now recognized for your 5 minutes.

Mr. THOMPSON. Well, Mr. Chairman, once again, thank you for this hearing. It is much appreciated. Mr. Secretary, certainly I share your commitment to enhancing the resilience of our food supply, and part of that can be achieved through increasing processing capacity across the country. Unfortunately, on this topic, some of the Department's actions simply didn't match its rhetoric. The lack of an appeal in the New Swine Inspection System case is a notable example. And while I certainly would be curious to hear the explanation for why this Administration chose not to appeal a rule with the potential to reduce national swine packing capacity by 2.5 percent, it [inaudible] and I have my suspicions, [inaudible] today it is probably more constructive to focus on what is [inaudible] being done to address this problem. I have heard that progress is being made on a solution, but things have been held up by the White House. Mr. Secretary, can you clarify what is being done to remedy this situation for both the affected processing facilities and the producers, and when can we expect to see these solutions finalized, and even more importantly, implemented?

Secretary VILSACK. Mr. Thompson, Representative Thompson, I am sorry, you cut out a little bit during the course of your question. I want to make sure I understand it. Are you asking about the effort to expand processing, or are you asking about line speed, or both? I think we can all agree we need to expand broadband.

The CHAIRMAN. Yes, better——

Secretary VILSACK. All right, Mr. Chairman, let me see if I can respond to the Ranking Member's question on both line speed and processing.

The CHAIRMAN. Sure. Go right ahead.

Secretary VILSACK. On the processing side, as I indicated, the resources for the assistance to modernize existing facilities so they could potentially qualify for Federal inspection and interstate transactions, we received 246 applications for those resources, and we are in the process of reviewing those applications, and making the grants of up to $200,000, with a match requirement. On the $500 million, as I indicated, we had 500 comments. We are in the process of finalizing the structure of how that program's going to be adopted, and I expand and anticipate we will begin making investments at the beginning of next year, in the first quarter.

On the line speed issue, the Department of Justice makes these decisions. Candidly, the previous Administration did not put into the record any information relating to worker safety. The court found that to be a fatal error in that line speed determination, and the reality is we are now working with both the industry and those who represent workers to try to figure out ways in which we can balance appropriately the need for worker safety, food safety, and farmer profits. We don't think the Department of Agriculture, or for that matter this Committee, wants to necessarily have to choose

between those three priorities. We need to establish all of them. I believe we can get that done. I believe that there is a willingness on the part of those who represent workers, and on the part of the industry to find creative ways to allow adequate processing, but to do so without sacrificing worker safety or health. And that is what we are focused on, and that is what we intend to pursue.

The CHAIRMAN. Thank you very much, Mr. Secretary. Is the Ranking Member back on the platform? He has a minute left. If not, I will now recognize the gentlewoman from North Carolina, Ms. Adams, who is also Vice Chair of the House Agriculture Committee. Ms. Adams, you are recognized for 5 minutes.

Ms. ADAMS. Thank you, Chairman Scott and Ranking Member Thompson for hosting the hearing. Secretary Vilsack, thank you for taking the time to be with us. While my district is substantially urban and suburban, I understand the urgency and the importance of this issue. In my State of North Carolina, we have heard a lot about contract poultry growers being faced with abusive, deceptive, discriminatory, and retaliatory treatment from giant poultry companies for years. Livestock and poultry markets have become highly consolidated, with very negative implications for farmers, consumers, and workers.

And President Biden, through his July Executive Order on promoting competition in the American economy, has made this point, and has called on USDA and the anti-trust enforcement agencies to address the problem. In this regard, I would like to applaud the President, and the Administration, for their promises to move forward with updated and strengthened Packers and Stockyards Act regulations to address abusive, deceptive, retaliatory, or discriminatory practice used by meatpackers and poultry companies against farmers.

As part of the vertically integrated contract poultry production model, these poultry growers take on huge debt burdens to build single-use chicken houses on their own farms, and depend on one-sided contracts with giant poultry companies to be able to continue making money and loan payments with their poultry houses. So, with a new set of Packers and Stockyards Act rulemakings coming up, we have the chance to remedy this situation, and to help to move us forward toward fair and competitive markets not only for poultry farmers, but for livestock farmers. Our farmers need fair playing fields and healthy competition to thrive, so, without decisive action from Congress and USDA to address this, we will see the same vertically integrated poultry model spread to all the livestock categories as well, to the detriment of independent farmers and rural communities. So it is time for us to stand up for farmers.

And, Mr. Secretary, I want to applaud you and President Biden for the plans you have announced to strengthen Packers and Stockyards regulations to give livestock and poultry farmers more protections against this abusive behavior. So, when do you expect to publish the rules, and what can we, as this Committee, do to help you with this process?

Secretary VILSACK. Well, thank you very much for the question. I would say three things in response. Number one, we made sure that when we were looking at COVID relief, that we made some adjustments for these contract growers so that they got adequate

assistance and help. On the Packers and Stockyards, we are focused initially on the poultry tournament system rule to make sure that that is a fair and equitable system. I anticipate and expect that we are going to see activity on this rule towards the end of this year, the first part of next year. That will be followed by the rule clarifying undue preferences and unfair practices. That will be followed by the rule that involves scope of practice.

We also point out a frequently asked question document that sort of clarifies how we see rules that were established under the Trump Administration in terms of enforcement, and making sure that folks understand and appreciate that we are going to look at ways in which we can prevent discrimination, prevent retaliation, prevent unfair practices in this industry. The last thing I would say is we are also working at the instruction of the President to put together a library, if you will, of contract information and language so that folks can make a determination of whether or not their particular contract is different, is fair, is reasonable, is in line with what you would normally see in this industry.

Ms. ADAMS. Okay. Well, thank you, Mr. Secretary. The Department of Justice has been investigating meat packers to ensure no anti-competitive or illicit behavior was at the root of the spread between the cow, fed cattle, and box beef prices. Do you have a sense of when we might see the results of this investigation, whether they will be released publicly to ensure the transparency and the accountability in the industry?

Secretary VILSACK. Well, we are cooperating with the Department of Justice, and we will continue to do so. I can't tell you today precisely what their timeline is, but I know that they are continuing to investigate. They are also, as you well know, engaged in price fixing litigation as well, one potential defendant having already acknowledged, others cooperating. So we will continue to look at ways in which we can cooperate and partner with the Department of Justice to ensure that our anti-trust laws are being enforced.

Ms. ADAMS. Great. Thank you, Mr. Secretary. Mr. Chairman, I yield back.

The CHAIRMAN. Yes, thank you. And now I recognize the gentleman from North Carolina, Mr. Rouzer. You are recognized for 5 minutes.

Mr. ROUZER. Thank you, Mr. Chairman. Can you hear me okay?

The CHAIRMAN. Yes. Yes, we can.

Mr. ROUZER. Mr. Secretary, good to see you again, I am concerned that the Department has re-proposed the GIPSA rules from the last time when you were Secretary. Generally speaking, the rules that are being proposed will invite litigation. That doesn't help anybody, except for the trial lawyers themselves, and it is going to reduce contracting [inaudible] options for producers.

The CHAIRMAN. Yes, we can hear you now.

Mr. ROUZER. Before any new proposed rules are released, will you commit to having the Office of the Chief Economist conduct a full economic analysis of the cost and benefit of the rules, and release that report at the same time of the proposed rules?

Secretary VILSACK. Congressman, we will follow the requirements under the administrative laws and rules that we are gov-

erned by in terms of the development of rules and regulations. To the extent that it requires an analysis, we will obviously do that. To the extent that it requires disclosure, we will do that. We will make sure that the rules that we have are based on an aggressive and thoughtful effort. I can commit to that.

Mr. ROUZER. But you can't commit to releasing a report at the same time?

Secretary VILSACK. Well, we will release the information that is required under the administrative rules that provides background and information on why we think this is necessary. We are not playing hide the ball here. We obviously want folks to understand and appreciate what the issue is, and why we are in the process of establishing rules and regulations. Congress passed the Packers and Stockyards Act quite some time ago, understanding and appreciating that there is always a need for oversight, and we expect to do this in a way that is fair, reasonable, and equitable.

Mr. ROUZER. Well, I think it is important that a full economic analysis of the cost and benefit of the rules is proposed at the same time the proposed rule is put forward, so that point is covered. Number two, USDA announced a program to give $700 million to farm and food workers impacted by COVID. I am just curious, will [inaudible] this money be distributed to non-union plants?

Secretary VILSACK. The resources—I am sorry, Representative, I didn't quite hear all of your question. I think you are asking about the resources that are available for inspections and for modernization? Is that what you are asking about? Whether it is available to plants, regardless of unionized status?

Mr. ROUZER. Well, you announced $700 million to farm and food workers impacted by COVID.

Secretary VILSACK. It is—that—those resources are being provided—I am sorry.

Mr. ROUZER. [inaudible].

Secretary VILSACK. Those resources are being provided to organizations that have the ability and capacity to distribute those resources to folks who worked in plants and in grocery stores. I would imagine that some of those plants are unionized, and perhaps some are not. We will be working through organizations that represent—are in a position to distribute. That is one of the qualifications for participation in that resource.

Mr. ROUZER. Okay. So how is it going to be determined that a worker would be eligible for that money?

Secretary VILSACK. Well, these are people that worked in—farm workers. These are folks who worked in grocery stores. These are folks who worked in meat packing processing facilities. I think it is relatively simple to explain and to identify folks who work in those three areas. And it is designed primarily to offset any costs or any expense that they incurred during the initial stages of COVID.

Mr. ROUZER. Will there be an audit for any potential fraud and abuse?

Secretary VILSACK. Well, I think there is always the possibility of oversight. I don't know if there is going to be a specific audit, *per se,* but there wouldn't be anything preventing that from happening.

Mr. ROUZER. Will there be a limit on the amount that goes towards administrative fees for various organizations?

Secretary VILSACK. I think there is a limitation on the amount of money that can go for administrative fees. I think the primary goal here is to get the vast amount of these resources in the hands of folks who incurred expense because they had to buy masks, or they had to take time off to get vaccinated, whatever it might be.

The CHAIRMAN. The time of the gentleman has expired. The gentlewoman from Virginia, Ms. Spanberger, who is also Chair of the Subcommittee on Conservation, Forestry, you are recognized for 5 minutes.

Ms. SPANBERGER. Thank you very much, Mr. Chairman. And, Mr. Secretary, I want to thank you so much for being here today, and I really thank you for your leadership on promoting competition and supply chain security in the livestock and meatpacking industry. As you mentioned in your testimony, between cyberattacks, pandemic disruptions, and other stresses on the U.S. food supply chains, we have seen the issue of consolidation in our meatpacking industry as not just an economic threat to producers, but it is also a national security threat to the United States. As a former CIA officer, I am deeply concerned about the ability of foreign actors to disrupt our agricultural sector, particularly as we see this type of consolidation. That is why I was really proud to co-lead the Butcher Block Act (H.R. 4140), alongside my colleague and fellow Committee Member, Dusty Johnson. The Butcher Block Act would establish a loan program at USDA for new and expanding meat processors, and I was very excited that just this week USDA announced a similar loan guarantee initiative that will help expand meat and poultry processing capacity using funds from the American Rescue Plan, so I thank you for that initiative.

But for my question today, Mr. Secretary, I want to talk about climate change, and I want to thank you for your work in bringing growers and producers to the table to combat the climate crisis. And certainly I once had a farmer say we are the original conservationists. And certainly, as the original conservationists, farmers in rural communities really have to be an integral part of any solution to the climate crisis. And it was in that vein, and with that thought, that I was proud to introduce the Growing Climate Solutions Act, H.R. 2820, alongside Representative Don Bacon of Nebraska, also a Committee Member, and ultimately we were pleased to see that legislation pass the Senate with a vote of 92–8.

So the legislation, as I know you are aware, would empower USDA to help farmers navigate voluntary private carbon markets with confidence. With USDA's help, farmers who choose to participate would be able to collect a new stream of revenue for their work. They'd be sequestering carbon and reducing emissions, and the bill is almost universally endorsed by national farm groups, while gaining support from prominent environmental groups and private-sector companies as well. So I was curious, Secretary Vilsack, from your view of this legislation, do you believe that this legislation would be helpful to growers and producers as you, in your role as Secretary, are working on the climate crisis? And would you care to comment on it?

Secretary VILSACK. Well, I think it would be incredibly helpful, because it is clear that we need to provide more information and more technical assistance, in terms of what climate-smart practices consist of, and how to measure, and quantify, and verify those results. So the Act that you are encouraging your Members and your colleagues to vote on, and the one that passed the Senate overwhelmingly, would provide that kind of help and assistance, and I think it would complement nicely the Climate-Smart Partnership Initiative we announced last week in Colorado, where we are essentially looking at large scale demonstration and pilot projects to be able to aggregate information about what works and what doesn't so that we can, over time, create the standard for climate-smart commodities.

As was the case with your Act, significant support from the agricultural community, a lot of farm groups supporting the Growing Climate Solutions Act. Likewise, both the food, and ag, and environmental industries are very supportive of our efforts to try to focus on these pilots and demonstration projects, so I think it is a nice combination of providing the technical assistance and the resources to minimize risk to farmers, and to empower them with information and knowledge about how best to incorporate climate-smart practices in their farming operations.

Ms. SPANBERGER. And certainly the trusted voice that is USDA is a valuable resource there. Well, thank you for those comments, it is music to my ears, and certainly we do hope to be able to move forward, and ensure that our farmers and producers can sequester carbon, while also ensuring an additional revenue stream, particularly given the challenges that so many producers are facing across the country. In the time that I have left, Secretary Vilsack, could you speak a little bit about the loan guarantee program that I mentioned in my comments, before I asked the first question? I am curious how you see this loan guarantee program specifically helping new entrants to the meat packing and processing industry.

Secretary VILSACK. Well, we have two basic opportunities for folks who are getting into the business, the $500 million program that was announced several months ago. And the loan guarantee program is really looking at ways in which we can help folks in the middle of the supply chain. There may be a need for cold storage. There may be a need for mobile processing. There may be a need for farmers to work together cooperatively to brand and market a particular product. These resources would basically make it easier for banks, CDFIs, to lend the money to have an entity either get started, or to expand, or to improve their operation.

Right now many bankers, many CDFIs, are not really fully comfortable knowing this area of the middle, and so the loan guarantee makes it a little bit easier for them to make the loans available across the board. But it is primarily designed at the middle of the supply chain. The $500 million is based on creating capital for new processing facilities.

Ms. SPANBERGER. Fantastic. Well, thank you for your time.

The CHAIRMAN. The gentlewoman's time has expired. The gentleman from Georgia, Mr. Austin Scott, is recognized for 5 minutes.

Mr. AUSTIN SCOTT of Georgia. Thank you, Mr. Chairman. Secretary Vilsack, thank you for joining us today. My pork producers

are telling me that the pork producers still have not been paid the CFAP payments. Is that correct?

Secretary VILSACK. I think we have announced those payments, Representative, but I am more than happy to double check and get back to you with exactly how many dollars have actually been paid out to those producers.

Mr. AUSTIN SCOTT of Georgia. Okay. I would be interested in knowing that on the pork, as well as any of the other CFAP payments.

Secretary VILSACK. I can tell you that over $4 billion have been distributed to producers, commodity producers, livestock producers, but we can get you very specific information and dollar amounts.

Mr. AUSTIN SCOTT of Georgia. Okay. I would very much appreciate that, thank you.* And I know that GIPSA's been brought up a lot. I would just like to point out that Chairman David Scott and I both co-authored a letter to Secretary Perdue outlining our concerns with what had been done in the past. There has historically been pretty broad bipartisan concerns there, and, again, would ask that you stay in close contact with the Committee on any of the rules and regulations with regard to GIPSA. There, again, has typically been broad bipartisan concern with that particular area of USDA and the rules and regulations.

One question I have deals with the Food Safety Inspection Service and the masks. How many businesses have not been allowed to have inspections, or have had inspections withheld, as a result of non-compliance of that notice?

Secretary VILSACK. I understand, Congressman, it is characterized as a handful, somewhere in the neighborhood of less than ten.

Mr. AUSTIN SCOTT of Georgia. Okay. I will yield the remainder of my time, Mr. Chairman, and certainly, by the next panel, expect to be in my office and have further questions. But, Secretary Vilsack, before I go, I certainly would very much appreciate an update with specifics on the CFAP payments. My pork producers are telling me that they have not been paid, and, as you know, all of our livestock producers have had a very difficult year. I yield back.

The CHAIRMAN. Thank you, Mr. Scott. The gentlewoman from Maine, Ms. Pingree, you are recognized for 5 minutes.

Ms. PINGREE. Thank you, Mr. Chairman, and thank you, Mr. Secretary, for being with us today. I really appreciate your attention to all this, and I am glad the Chairman has decided to have this hearing. I am going to try to get in two questions, so I will see if I can be quick. I know organic agriculture isn't the primary focus of today's hearing, but it is just so important to my district. During your previous time as the Secretary, you finalized the Organic Livestock and Poultry Practices Rule, and I was disappointed to see that the Trump Administration withdrew that. In June you announced the USDA plans to begin rulemaking on these standards again. I just want to reiterate how essential it is to have meaningful, well-defined standards for *organic livestock* and *poultry*. Could you give us a little update on the progress? And I know that there is a legal challenge going on, but I am wondering if you could start the rulemaking even with the litigation ongoing?

***Editor's note:** the information referred to is located on p. 335.

Secretary VILSACK. We have actually started that process, Congresswoman. We anticipate and expect an opportunity to get what we are working on to our General Counsel for review in the very near future, and to OMB hopefully by the end of this year, and hopefully seeing some progress, in terms of publication, in 2022. We understand and appreciate the need to get this done, that and the Origin of Livestock Rule are two things that we are prioritizing.

Ms. PINGREE. Great. Well, again, I don't have to remind you that having standards that really recognize the inputs that people have to use for what they need to do as organic producers is just so critical, and really is a challenge to the marketplace right now.

We are certainly talking a lot about meat processing today, and I just want to focus a little on the small-scale meat processors. I appreciate the attention to increasing resilience and diversity in meat and poultry processing, and I know that you have given that renewed interest, including that $500 million investment that has been announced, to support new competitive entrants into the sector, and certainly you have talked a little bit about it today. But I just want to focus more on the smaller-scale producers, including help for existing small-scale producers to expand and upgrade their infrastructure. What are the USDA's plans for supporting small processors within the $500 million investment? Will support for the existing Federal inspected small processors to upgrade their facilities be included in the program? That seems like somewhat of an oversight to me.

Secretary VILSACK. Well, reason why we are focused on new processing capacity with the $500 million is because you all have identified additional resources available to small- and very-small-processing facilities that wish to modernize. That is the grant program that I alluded to earlier, roughly $55 million. We received 240+ applications for those resources. These are $200,000 grants that will enable those small producers, if they wish, to upgrade their systems so that they can qualify for interstate transactions which would expand their market. And we want to see where that goes, and we want to see what the demand is.

In addition, we ought to see, as well how the $100 million that has been provided to reduce overtime costs to help small- and very-small-producers, processing facilities, pay for Federal inspection, and for their inspectors. That has been a very popular effort. Almost 1,900 operations are taking advantage of that. So those two areas are areas that we are providing help and assistance. The $500 million, we will see essentially how the $55 million operates, and see if there is additional demand. If there is, we can make some adjustments, or we can take a look at additional resources in that processing grant program.

Ms. PINGREE. Great. And, I mean, I really appreciate how important that is, and how big of a roadblock this is for so many producers who are finding increased interest in the market. A lot of people want to buy locally raised meat, and they want to buy it from farms that are using sustainable methods, but there is such a backlog in the processing. I know I don't have to tell you that, but it is just a huge issue in our region.

I am just going to clarify, because I think I heard you right, and I know one grant can't do everything, but under the meat and poultry inspection readiness grants, if you are already a federally inspected processor, but you won't expand your capacity, you currently aren't eligible, is that correct?

Secretary VILSACK. I think that is correct, but I could be corrected on that, but I believe that is correct. The goal of this was to try to give people the ability to expand their capacity and expand their market opportunities.

Ms. PINGREE. Right. Okay. I will clarify that with you, and I appreciate your answers, and I am out of time, but thank you for being with us here today.

The CHAIRMAN. Thank you. The gentlelady from Missouri, Mrs. Hartzler, you are now recognized for 5 minutes.

Mrs. HARTZLER. Great. Thank you so much, Mr. Chairman, and thank you, Secretary Vilsack. I wanted to actually build on the question that we just heard from my colleague, Representative Pingree, about the $500 million grants that are under review right now. I want to encourage you to include the smaller plants that stood up after COVID began. I hope that you will consider the definition of *new plant* as including new as in from the start of the pandemic, because I am aware of some facilities that, with the problem that we were seeing, stood up during that timeframe, and they went in debt to build these facilities, and I am concerned that they won't be able to qualify for some of these funds that are very, very important. I sure hope that you will consider that in the process.

Secretary VILSACK. Well, as I indicated, we received over 500 comments. I suspect those comments will be incorporated. We will obviously take your concerns into consideration. I expect and anticipate that the demand is going to be in excess of what we have resources for the very reason that you have just alluded to. There are facilities that were in the planning stage, there were facilities that are about ready to operate, and they may need operating resources, as opposed to capital, to build.

So I think we are going to find a lot from this particular program, and the goal here is to learn, so that in turn, as you all look at farm bill programs, and things of that nature, there may be lessons that could be applied to additional programs that could be established on a more permanent basis in this space.

Mrs. HARTZLER. Thank you. And another area of concern that I am hearing from several of our USDA offices is this concern with the vaccine mandate that has been put down by the Administration. There is the thinking that many USDA offices will have to close because individuals just do not feel comfortable, for whatever reason, in taking a vaccine. And I was hoping that you would be open to allowing for some exemptions of these mandates if the individuals already had antibodies in their system, or if they did other precautions, rather than having these offices close, and our farmers not have access to the services. Are you open to setting up some sort of an exemption service to keep them open, and allow the workers to continue to come if the offices are going to close, or if it is going to significantly hamper the operations?

Secretary VILSACK. Well, there are provisions in the proposal for religious exemptions and for health exemptions, and so we will certainly respect those. And I would anticipate and expect that we will do what we need to do to keep offices open. At the end of the day, we don't want to necessarily reduce the service to people that need the service, so I don't anticipate that we are actually going to see a significant number of closed offices that would significantly reduce our capacity to serve farmers and ranchers in your state, and in other states.

Mrs. HARTZLER. Great. That is great news. I appreciate that. In the outdated Packers and Stockyard Act there is a prohibition that individuals who own sale barns cannot also have a packing facility, and this is detrimental to our goal to be able to increase the packing capacity. And so are you open to looking at removing this barrier to entry to allow people active in the livestock sector already to invest in local and regional processing?

Secretary VILSACK. Congresswoman, this is the first time that question's been asked of me, and I am probably not in a position to say yes or no. I am more than happy to go back to the office and talk to our folks as they are putting this rule together. I want to make sure that I am not interfering with the capacity of the rulemaking process, but I certainly will be glad to ask the team that question.

Mrs. HARTZLER. Wonderful. And I appreciate the Chairman started off by asking a question about the vaccine for the African Swine Fever, and that is certainly very encouraging. You probably are aware, though, of some other wonderful technology at the University of Missouri they have developed a pig that is immune to or resistant to PRRS. And, of course, that is also one of the world's very costly animal diseases, but, because of the jurisdictional mayhem between the USDA and the FDA, this technology's not yet available to producers. It hasn't been approved. So can you please share your goals for ensuring that there is an appropriate regulatory structure for agriculture to use the tools that we have in addressing these environmental disease and food safety issues?

Secretary VILSACK. Well, that is a great question, and it is one that I would sort of align myself with you on. I think there are ways in which we have to work collaboratively with our friends at FDA to make sure that our regulatory system is able to respond quickly enough, and be able to keep aligned, or keep pace, with the pace of change, and I could give you several examples where I think we have work to do in that space. I have expressed that to our friends at FDA.

The CHAIRMAN. The gentlelady's time has expired. The gentleman from the Northern Mariana Islands, Mr. Sablan, you are recognized for 5 minutes.

Mr. SABLAN. Yes. Thank you very much, Mr. Chairman, for holding this truly important hearing. Secretary Vilsack, welcome, from right around the world, actually. I am 14 hours ahead of Eastern Daylight Time. Mr. Secretary, Mr. Chairman, the hearing, but I want the Secretary to commend the Deputy Under Secretary Stacy Dean for working with me to—we are getting close to coming to an agreement on an effort that I started when you were in your first term as Secretary of Agriculture a long time ago. And I think we

are getting close to an agreement, and I would just like to recognize her effort, coming to terms with this effort that I started over a decade ago, Mr. Secretary. Just thought you would know about your—about Secretary Dean, Stacy Dean's efforts. Mr. Chairman, I don't expect a response from the Secretary, so I yield back.

Secretary VILSACK. Congressman, thank you. I appreciate that. I will make sure that the Deputy Under Secretary is aware of your thanks, and we will continue to work hard to try to get those nutrition programs working for all of your folks.

Mr. SABLAN. I appreciate that, thank you. Mr. Chairman, I yield back.

The CHAIRMAN. Thank you very much. The gentleman from Georgia, Mr. Allen, is recognized for 5 minutes.

Mr. ALLEN. Thank you, Mr. Chairman. Can you hear me okay?

The CHAIRMAN. Yes.

Mr. ALLEN. Good.

The CHAIRMAN. Yes, I can.

Mr. ALLEN. Thank you very much, and I appreciate you having this hearing today. Good morning, Secretary Vilsack, or afternoon, I guess it is. Thank you for joining us today. Obviously the hearing today is an important one, and it is focused on an issue that I have heard from my constituents frequently since the outbreak of COVID–19 in 2020. All matters related to food security are certainly national security. If we cannot assure our constituents that our food supply chains are secure at all times, then we aren't doing our job.

During this pandemic we saw undisputable evidence that those supply chains are not secure. I believe that over-consolidation in the meatpacking industry does hold a share of the blame for this situation we have found ourselves in, and obviously, we want to support the small packing operations, but I think we have a geography problem. These facilities are sort of centralized in locations, and we need more distribution throughout the country. However, what we should to address this issue is an infinitely more complicated question to answer.

As you are aware, the Agricultural Marketing Service maintains a library of the various contracts and pricing arrangements in the swine industry. However, no such contract library exists for cattle producers. I have heard from several cattlemen about the need to provide more transparency in the market, particularly for formula transactions. Do you believe that establishing a contract library for cattle would provide more price transparency to the cattle producers in my district?

Secretary VILSACK. Congressman, good question. The President's Executive Order has asked us to put together a report due in December on this very issue. I don't want to anticipate and expect what the report's ultimately going to conclude, but I think, to the extent that we can create more information for producers about what contracts ought to be, what contracts are, the more transparency, I think the stronger the market is, and that would be my hope, that we would be able to provide help and assistance with a library of sorts, if you will, across all: beef, poultry, and pork.

Mr. ALLEN. Mr. Secretary, speaking to the Administration, there is concern about this Administration rushing ahead with too much,

too soon on measures that will have unknown impacts on the highly complex livestock markets. In your mind, would it make more sense, for example, to wait to see how the investments being made in additional processing capacity affect the marketplace before piling on additional measures, like the announced Packers and Stockyards regulations?

Secretary VILSACK. Congressman, I think that they are complimentary. I don't think that they necessarily need to be sequenced. And the reason they are complimentary is Packers and Stockyards really doesn't address the capacity competition issue, it addresses whether or not activities and relationships between producers and processors are fair, are reasonable, are equitable, are not being used discriminatorily, or in retaliation. So I think it is a slightly different problem it is trying to address, and trying to prevent, as opposed to the capacity consolidation issue, which requires us to have more processing capacity.

Mr. ALLEN. Well, as the industry, we need to maybe communicate a little better, because there is concern out there. Your Department announced a Packers and Stockyards investigation to explore potential packer wrongdoing in the wake of the Tyson facility fire in Holcomb, Kansas, and the ongoing pandemic. Can you clarify whether that investigation is ongoing, and if not, what were the findings?

Secretary VILSACK. Well, if there is an investigation undertaken, I am assuming it also involves the Department of Justice, who would be sort of the lead in this effort. But I will get back to you, Congressman. I don't know the answer to that question.

[The information referred to is located on p. 335.]

Mr. ALLEN. All right. Well, great. Well, thank you, Mr. Secretary, and, Mr. Chairman, I yield back.

The CHAIRMAN. Thank you, Mr. Allen. And now the gentlewoman from New Hampshire, Ms. Kuster, recognized for 5 minutes.

Ms. KUSTER. Thank you so much, Mr. Chairman. I so appreciate you holding this hearing. I want to welcome back Secretary Vilsack. Just as you have returned to the USDA, I am excited to have returned to the Agriculture Committee again this year, and I am pleased to be working with you once more. I want to begin my questions by sticking with the livestock theme of this hearing, and ask about contract production, especially in light of a large number of dairies in the Northeast region recently losing their organic milk contracts.

I would be curious to get your thoughts, Mr. Secretary, about production contracts, as I know these are also common in other parts of the livestock sector. I am troubled that in some cases production contracts can inhibit producers with unstable pricing structures and short contract lengths. Sometimes farmers don't have much leverage to stand up for fairer terms. I am wondering if you are also concerned about that, and whether this can disadvantage small farmers and producers, as well as certain geographic areas, and do you think there will be lessons we can learn from this situation in the Northeast that could help small producers remain viable?

Secretary VILSACK. Congresswoman, I am very familiar with the situation in the Northeast. In fact, we had a very extended con-

versation with a task force that has been put together that is going to operate under the Vermont Dairy Innovation Center to try to begin the process of trying to formulate a plan to deal with this regional challenge. It is a complex circumstance in the Northeast, where there is a surplus of organic milk, and there are transportation challenges that one of the major processors has determined to sort of consolidate where they process the milk, and who they are going to do business with, which has caused the disruption. So we are now in the process of taking a look at ways in which we can provide help and assistance to those producers to find a home for their milk, whether it is through procurement, USDA, whether it is through additional processing capacity, or whether it is working with other Federal agencies to address the transportation challenges that the industry faces.

I am more than happy to talk generally about the importance of having fair contracts. I think there is a role, in an efficient system, for contracting processes, but we want to make sure that they are fair. We want to make sure that when farmers enter into such contracts, they are aware of what is equitable, or what potentially might be inequitable in terms of the relationship, and that is one of the reasons why we are engaged in rulemaking, one of the reasons why we put more studies out recently on price discovery, one of the reasons why we will continue to look at ways in which we can create this contract library that I referred to earlier. So there are a series of steps that have to be taken, I think. There is no one single answer to this situation.

Ms. KUSTER. Great. Thank you. And thank you for working with the task force. I want to switch gears a bit and ask you about the Climate-Smart Agriculture and Forestry Partnership Initiative that you announced last week. While I understand the public comment period is still open, and there are details to be worked out, could you speak to your vision for how to ensure small family farms and forestry operations will be well represented in the pilot projects that are ultimately selected?

Secretary VILSACK. Well, there is, as part of the structure of the partnership, in essence a requirement that we do the sufficient outreach to community-building organizations to ensure that we receive applications that impact and affect directly small producers, disadvantaged producers, distressed producers, ways in which we can provide help and assistance across the board. This is not designed to provide help and assistance solely to large production facilities.

The reality is, this operation is really designed to address the issues that folks have raised about the importance of getting more producers engaged in this in a thoughtful way, by allowing aggregation of very-small-producers into a larger group that will allow those small-producers to receive financial assistance to adopt climate-smart agricultural practices, and then work with universities and others to be able to quantify and obtain data that will allow us, ultimately, to create standards that will assist farmers, at whatever size benefitting from climate-smart commodity sales, and also potentially benefit from any ecosystem market that they may at—in the private-sector be able to qualify for.

The goal here is to get information and data so that we do this right, and that we support the right set of policies and practices, so there will be a concerted effort to make sure that we help producers of all sizes in this effort.

Ms. KUSTER. Great. Thank you. My time is running short. I have one more question on the Northeast Federal Milk Marketing Order regarding milk producers, but I will submit that for the record. Thanks so much, I yield back.

The CHAIRMAN. Thank you very much. Now I recognize the gentleman from South Dakota, Mr. Johnson. You are now recognized for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. Mr. Secretary, I will start with a couple of thank you's. First off, you and I share a sense of the importance of small and regional processors, and so I want to thank you for the implementation of that overtime relief program that was championed by Congresswoman Angie Craig and I, so thank you to your team for that. Second, just building on I think a really good conversation that you and Ms. Adams had with regard to the value of a poultry contract library, and the conversation that you and Mr. Allen had about the potential value of a beef contract library, I just want to thank your team again. They have provided a tremendous amount of technical assistance in the last couple of months, as our team has been working to introduce, and I think it will be forthcoming, legislation that would establish a beef contract library like we have today in pork, and that you are working to develop in poultry, so thank you for that.

My third comment is going to be a question, sir, about Ms. Pingree's and Mrs. Hartzler's interest in that $500 million going toward small-processors, and maybe extremely-small-processors. I think that could well be a good investment, but I also know that this is a very difficult marketplace for small processors to exist in the long-term. A few years ago, margins were negative numbers, we saw a lot of those smaller facilities cease operation, or be bought out by much larger participants. Do you have any thoughts for us about how USDA and Congress could ensure that investments go toward processors that are likely to be able to withstand those kinds of storms, that will be abiding, and that will provide longer lived benefit to the marketplace?

Secretary VILSACK. Congressman, that is a great question, and I have asked for assistance from folks who work in the private-sector to assist us as we formulate this effort to make sure that we are making wise decisions, and not putting people in a situation where they are bound to fail. That is not the point here. The point is we want folks to succeed. So, first of all, we are going to do an analysis and make sure that we are investing.

Second, there may very well be a component of this, I don't want to prejudge this, but there may very well be a component of this that looks not just at entities that need capital to build, but those who might need assistance in the first early stages of operation to get their feet on the ground. So, structuring this in a way that potentially provides some level of assistance and help, utilizing potentially other programs at USDA to do that.

Third, there is an opportunity here, it is not just in the packing area, it is also in the value-added section. If you take a look at

where the money is in this industry, there is a lot of money being gained with value-added, and I think the opportunity here for small- and very-small-processing capacity is to add an additional wrinkle, an additional value-added component, to customize, if you will, the product that they are producing so that they get a higher value in the marketplace, that they create a niche for themselves in that marketplace. And I think we will be looking at ways in which we can provide assistance and help so that you not only have a processing capacity, but you have the ability to add value in the marketplace, and be able to get perhaps a higher price that might make it just a little bit easier for you in that niche market to be able to stay in business.

Mr. JOHNSON. Yes. Thank you, Mr. Secretary. And as you work to examine the possibility of some of those early days operating capital, I think that could be argued, rightfully, to help with capacity building. Let's just make sure that we have a gameplan for bringing down that support, because support for fledgling market participants is one thing. If the handouts just continue into perpetuity, or for a long time, then obviously I think we have more market distortion there, and more problematic investments.

Maybe just two other things quickly, sir, I would mention. It has been widely reported in the press that President Biden had indicated to Prime Minister Johnson over at the United Kingdom that we were going to open up our shores to additional British lamb without reciprocal access. I think that is concerning, and so I would just ask that—maybe I will submit that for the record, and if you could follow up with any insight you have into that, that'd be wonderful.

Secretary VILSACK. This is an important issue. We are out there asking our——

Mr. JOHNSON. Mr. Secretary, I am sorry, the Chairman's going to cut me off in 15 seconds, so let me just say this. I want to double down on the comments Chairman Thompson made with regard to the line speeds. You have talked, I think rightfully so, about the importance of building capacity. USDA has the power, through a process, to expand capacity, and I hope you will do so. Time is of the essence, sir. Thank you.

The CHAIRMAN. The Chairman will yield time. I believe, Mr. Secretary, you wanted to respond about the Prime Minister——

Secretary VILSACK. Thank you, Mr. Chairman. When I travel overseas, Representative, I am always asking our European friends and others to follow the science, particularly as it relates to BSE. We had this conversation with our Chinese friends for a long time. We have to be consistent here. We have to follow the science. We have to follow OIE recommendations and requirements. We have been dealing with this issue, in terms of lamb, for a long period of time, and so it is pretty consistent with our approach internationally, for our exports, that we follow the science, and I think we have to talk the talk and walk the walk, and that is what you are going to see here.

Mr. JOHNSON. Thank you, Mr. Chairman, for your indulgence, and the record will be stronger served because you allowed that. Thank you.

The CHAIRMAN. Thank you for responding to Mr. Johnson's question.

The gentlewoman from Iowa, Mrs. Axne, is recognized now for 5 minutes.

Mrs. AXNE. Thank you, Chairman Scott, and thank you for holding a hearing on this incredibly important issue to our state, which is, of course, why we saw Senator Grassley here earlier, and I am so grateful to have my fellow Iowan here, Secretary Vilsack. I want to thank Secretary—sorry, Senator Grassley for testifying and raising the need for reform in the cattle industry. I have actually worked with the Senator, and led the introduction of his 50/14 bill (H.R. 7501)** in the House last year, and agree that we absolutely need a compromise that unites the industry, but also works for Iowa's independent cattle producers.

And thank you, Secretary Vilsack, for joining us to discuss this important issue as well. You, of course, know I was proud to be standing next to you in Council Bluffs this summer when you announced the USDA's effort to expand processing capacity, with $500 million provided by Congress in the American Rescue Plan. And we all know that those resources are so desperately needed because I constantly hear from Iowa producers about the significant consolidation in the industry, and the increasing price spread, as well as a lack of competition in the cash market.

You and I both have heard from a local producer who had been selling his cattle at a loss while his packer was making a significant profit. We talked about that in Council Bluffs, and, unfortunately, that is not an isolated incident. In fact, at one point during the pandemic, cattle prices had declined by 18 percent, while box beef prices went up by 80 percent. So what we are seeing, of course, is producers being paid less, consumers are paying more, but the packers control over 80 percent of the market, and are making significant profits, and this is absolutely not right, and not good for our country, and certainly not good for Iowa's 3rd District, so we need more locally owned processing capacity to help with this issue.

So, Secretary Vilsack, I know your Department is reviewing comments from the request for information for the new program to expand this capacity. However, I am a bit concerned that these new resources could ultimately benefit the large packers if they are allowed to purchase their competition and retain their market power. The folks that you and I met with in Council Bluff, Cattlemen's Heritage, raised this issue in a public comment to the USDA, and suggested that if an entity receives public funding for this program, that they can't sell to the Big Four within 25—if they sell to the Big Four within 25 years, then they have to pay back 100 percent. So I am wondering if you share this concern, and if so, how can the USDA implement this program that assures that we can address this issue?

Secretary VILSACK. Congresswoman, I don't want to presuppose what the process that we are currently going through in analyzing these comments will result in, but I would say that, as a former

** **Editor's note:** the bill was introduced July 9, 2020 and is entitled, *To amend the Agricultural Marketing Act of 1946 to foster efficient markets and increase competition and transparency among packers that purchase livestock from producers.*

governor, I do understand and appreciate the notion of claw back. As you well know, with economic development programs, when an industry receives a grant, or a forgivable loan, or whatever it might be, based on certain representations concerning job growth, if they don't meet those representations, they don't meet those goals, they are required to pay all or a portion of what they receive from the state back. And I think we have to structure the program in a way that we can justify to taxpayers that their resources have been used in a thoughtful and appropriate way, and I would certainly hope that whatever structure we put together would be able to meet that standard, and continue to meet that standard.

Mrs. AXNE. Okay. Well, great, and obviously I know you are taking this to heart. You heard the words the cattleman said, and we certainly want to help those industries here in our state, so thank you for that.

Now I want to turn to African Swine Fever, which, of course, is of great concern to producers in our State of Iowa, who lead in hog production. As you know, my colleagues and I recently wrote to you, requesting that you leverage every single available authority in the USDA to fight against this deadly animal disease, so thank you, first and foremost, for your recent announcement that you would do just that, and try and make significant investments—will make significant investments, I should say, in ASF from spreading to the U.S. But I noticed in the announcement it looks like most of the funding will be concentrating about containing ASF in the Caribbean, and then heightening the surveillance there. Can you clarify, then, how these funds will be allocated, and does the Department have remaining needs for resources here at home to prepare for an emergency if ASF were to hit our shores? And, finally, is our prevention infrastructure, like the National Veterinary Stockpile, adequately equipped to handle such an outbreak?

Secretary VILSACK. Well, it is important for us to minimize and to eliminate the risk at its source, which is why we are working with the Dominican Republic and the Haitians to address the issue as it exists in their countries today, and to provide them assistance and help, both technical assistance and financial assistance, to do the right job in minimizing, and ultimately eliminating, the risk in those two countries. We also ask for OIE to establish a protective zone around Puerto Rico and the Virgin Islands so that there will be no imports coming in from those two areas into the mainland of the U.S. OIE's never had an application for protective zone protection, so they are going to take a little time to look at our application, but we are moving forward on that.

We are shoring up and beefing up our surveillance, our detection systems. I think we are in place with the systems that we have in place, and should, God forbid, this happen, that we would be able to identify it quickly, we would be able to eradicate it quickly, we would be able to contain the damage to protect a state or a region of the country. We will do everything we possibly can to make sure this doesn't get to our shores, and to be able to respond as quickly as possible, should it get to our shores.

The CHAIRMAN. Thank you.

Secretary VILSACK. I am sorry, Mr. Chairman.

The CHAIRMAN. Go ahead.

Secretary VILSACK. There is no vaccine yet, so it is not like we can stockpile vaccine, but we are obviously—as I said earlier, we are working on the development of a vaccine, and hope to get that as quickly as possible.

Mrs. AXNE. Thank you, Mr. Secretary.

The CHAIRMAN. Thank you, Mr. Secretary. The gentleman from Indiana, Mr. Baird, is recognized for 5 minutes.

Mr. BAIRD. Thank you, Mr. Chairman, and thank you, Mr. Secretary for being here. It is very timely to have the discussion we are having relating to livestock. My question deals with a topic that really is fascinating to me, and it represents an opportunity for American agriculture, and that is animal biotech. We all know the broad and valuable benefits our industry can gain from this technology, but with past products, we have seen somewhat of a difficulty in getting those to market, and the regulatory process is incredibly onerous. So this morning Chair Plaskett and I sent over a letter to you, and the Acting FDA Commissioner Woodcock, with the support of Chairman Scott and Ranking Member Thompson, and more than ⅔ of the entire Committee, and we were expressing our concerns for how the current cumbersome regulatory process sends a message, and tends to stifle innovation, and so we want to urge cooperation between the agencies to develop an efficient, and risk- and science-based regulatory system that can create a safe, predictable path to market for these innovative technologies. So my question to you, can you elaborate and update us on USDA's ANPR regarding what steps the Department's taking to lead in providing this regulatory framework?

Secretary VILSACK. Well, I would agree with, yes, Congressman, I would agree with you this is a technology that is important and relevant. In terms of USDA's involvement, we are really focused on ensuring that products that are produced, animals that are produced, that we have sufficient and appropriate labeling, and so our focus is on that. With the advance notice of rulemaking, we are going to proceed expeditiously. We attempted, as a Department, to reach an agreement with the Health and Human Services and FDA. In the Trump Administration, there was a Memorandum of Understanding that was originally signed. I am not sure that the folks at HHS published that memorandum. There were some concerns about whether or not there was adequate authority at HHS to sign the memorandum, so we are in the process, obviously, of taking a look at that, and determining whether or not there are some additional steps that need to be taken to make sure we have bright lines between what we do and what FDA does. We will certainly work hard to make sure that we are not impeding the market, and impeding the importance of this technology.

Mr. BAIRD. Well, that is encouraging, and I thank you very much for doing that, and your comment's are kind of a lead-in to my next question, which deals with the USDA, as they recently re-opened the comment period on labeling of meat and poultry products that are derived from cultured cells of swine and poultry. That memorandum, or agreement, that I think you were talking about, between FDA and FSIS, was back in 2019. So my question to you is how do you see this labeling process, and what's your perspective on labeling these cultured meat products?

Secretary VILSACK. Well, I think the key here is to make sure that the consumers are not confused, the consumers have information that allows them to make appropriate choices in the marketplace. And so we are taking a look and making sure that, in a number of areas in labeling, that we are sort of on the side of consumers here, making sure that they have the information they need, and the information that is being provided to them is accurate, and doesn't misrepresent. Whether it is in this space, or whether it is in the "Product of U.S." labeling space, we want to make sure consumers are well informed.

Mr. BAIRD. Well, thank you very much for those comments, and, with that, Mr. Chairman, I yield back.

The CHAIRMAN. Thank you. The gentlewoman from Washington, Ms. Schrier, is recognized for 5 minutes.

Ms. SCHRIER. Thank you so much, Mr. Chairman, and welcome back, Secretary Vilsack. It is good to have you here today. The first issue I want to discuss is access to slaughter and processing for small- and medium-sized producers, which is a top concern for ranchers in my district, and we have heard a lot of this theme of protecting the little guy today, so I want to tell you about Bright Ide Acres. It is a small farm in Orting, Washington that I visited back in May, and they said, basically, they are just one or two injuries or illnesses away from losing access to slaughter and processing services entirely.

And most small producers in Washington State are served by slaughter and processor services operating under a custom of exempt licenses that are granted by the state. And yet Washington has a shortage of inspected processing plants, and many producers don't want to pay the costs of these processors, or to upgrade their own businesses to meet inspection requirements. So, as a result, many producers that want to access retail markets are unable to do so, and they end up, as you have heard, with the farmers losing money along the way.

So, to address the market access issues for local producers in Washington, access to these services would probably make the biggest difference to them. So, Secretary Vilsack, how is the USDA working to facilitate livestock farmers' access to markets broadly, as directed in President Biden's July Executive Order on promoting competition?

Secretary VILSACK. Well, there are a couple of things we are doing, Congresswoman. First of all, we are instituting the resources that you all provided for modernization of existing facilities to expand market opportunities. We are providing those resources that would allow folks to upgrade their facilities, the grants of up to $200,000. As I said, roughly 240 applications for those resources, so perhaps folks in your district might have considered applying for that. Second, we just recently announced this $100 million loan guarantee program, which we think is going to leverage hundreds of millions of dollars of loan guarantees. That also could be used potentially for mobile processing capacity, which might also provide another avenue, if you will, for your farmers to be able to have their meat processed.

And finally, to the extent that they might be interested in coming together in a co-op situation to build themselves, and to be owners

of a processing facility, they could potentially take advantage of the $500 million program that we are setting up. So I think there are a number of places along the way, with specific focus on processing. Then there are, of course, a series of other USDA programs, whether it is Value-Added Producer Grants, or whether it is business and industry loan guarantee programs that could potentially be used as well.

Ms. SCHRIER. Thank you so much. That is a great answer. I love the idea of the small farms joining together, and we will pursue those grants, and I will share this information with them. I also just want to note that the Washington State livestock industry, and, in fact, all of our agriculture sector, is very reliant on foreign trade, Washington is number three in exports in the United States, and, thanks to our ports, has the fourth largest container shipping center in North America. And north central Washington's is not about livestock, but we have been known as the apple capital of the world, and beyond agriculture, from aerospace to digital trade, one in five jobs in Washington State is supported by trade.

And so, I know this matters to other people on this Committee, because we all ship overseas, and that is why I am so concerned about shipping issues that I know you know about at our ports, and I was heartened by your recent announcement that the USDA will be dedicating funding to address this, which we got to speak about briefly on the phone the other day. So my question is this: profitability of U.S. livestock producers depends on access to these foreign markets, can you speak more specifically to how USDA is working to ensure access to foreign consumers, and maintaining relationships built over many years?

Secretary VILSACK. Well, there are two answers to that question. I think first and foremost we continue to promote U.S. agriculture through our various offices across the world. We are in 75 countries. We have agriculture experts in 75 countries promoting U.S. ag, working with cooperators that we helped to fund through the market assistance programs at the Foreign Agricultural Service.

Second, we are also obviously working on the port congestion issue. I have talked to John Porcari, who's been put in charge by the President to look into this issue of congestion to determine how best to break up the congestion so we can get more movement. We have established the fund that you made reference to, designed to look at ways in which we can address whatever issues it may be, whether it is pallets, whether it is workforce, whether it is empty containers, and trying to provide financial incentives to fill those containers with our stuff and send it overseas.

The good news is, from an export perspective, that we are looking, and just set a record, a fiscal year record, exceeding by about $30 billion the previous record, in terms of exports, and we anticipate and expect Fiscal Year 2022 will be another record year. So we are moving product, we are going to continue to advocate. I mean, there is a whole series of other things I could say, but the time is up, the Chairman's giving me the eye up there. I am going to have to stop.

Ms. SCHRIER. Thank you. And thank you for also working with the Federal Maritime Commission on those shippers. Thanks very much. I yield back.

The CHAIRMAN. Thank you, Mr. Secretary. The gentleman from Minnesota, Mr. Hagedorn, is recognized for 5 minutes.

Mr. HAGEDORN. Well, thank you, Mr. Chairman. I apologize to be doing this from the car, but it is a district work period, and I am out working the district, so it is what it is. Mr. Secretary, thank you for being here, and answering our questions, and discussing the issues, and for whatever advocacy you and the Department can give our livestock industry.

I would like to talk a little bit about the line speed issue that Ranking Member Thompson and Representative Johnson brought up. This past spring a Federal judge blocked USDA's New Swine Inspection System rule because of a technicality. And, the court ruled that USDA failed to address comments related to worker safety, which is kind of strange, because under the NSIS (New Swine Inspection System) Program, where they sped up the lines, actually workplace injuries were reduced 86 percent. That is a pretty good record, and something I think we would want to continue.

Six facilities around the country have been operating under these higher line speeds for, like, 20 years, and one of them is in my district in Austin, Minnesota, Quality Pork Processing. Senator Grassley, myself, Representative Johnson, and over 70 other Members from both chambers sent you a letter a couple months back urging you to take action to prevent the line speeds from being slowed down. And I might add, I was very disappointed that we couldn't do this on a bipartisan basis. None of the Democrats in the House or the Senate joined 74 Republicans in urging the USDA to look out for our pork producers in this area.

I don't know if this is a real urgency for you and the Department, Mr. Secretary, because so far you haven't answered our letter. And, as a former Congressional Relations Officer, usually if you are going to testify before a committee, you try to clear up all the letters that hadn't been answered, but thus far, we never received anything. And, on top of that, in a closed door session with our Livestock and Foreign Agriculture Subcommittee, your staff said to us directly that the reason you didn't take action in this area is because essentially you were colluding and working with the unions. Now, that is very disappointing to me. Chairman Scott, I would like to make a motion that I would add this into the record, the NSIS letter, to which 74 Members of Congress wrote the Secretary, and we have yet to hear a response.

The CHAIRMAN. Without objection.

[The letter referred to is located on p. 330.]

Secretary VILSACK. Congressman, I am happy—

Mr. HAGEDORN. I just kind of want to finish up here, please, Mr. Secretary. Because of the Biden Administration's inaction, NSIS plants slowed down line speeds July 1, in some cases by 200 head per hour. That hurt our independent producers, that hurt consumers, that hurt these plants. It was a lose/lose/lose/lose situation. It hurt the workers, to be honest with you. The result is that we lost 2.5 percent of production, which is the equivalent, believe it or not, of one plant. Now, we don't have very many packing plants in this country for pork, and we need more capacity, and now we are down one plant because of this inaction. So, after that, for whatever reason, you announced you are going to put out $500 million

to try to help people. That seems to not make a lot of sense because you could've just handled the situation, and avoided the need to spend taxpayer dollars.

Since July, though, you have told industry that there are some waiver criteria out there that you would like to look at it in order to get the line speeds back up and running for these six plants, and so I guess my question is, what's the status of that criteria, as far as these waivers? And, when you receive those waivers, will you and USDA commit to approving them so we can get back to regular order? And with that, I will await your response.

Secretary VILSACK. Well, thank you very much, Congressman. I apologize for not responding to the letter. We will make sure that we get a response to you quickly, but you will get my response here today. First of all, we are under an injunction, so it is not a situation where we have the ability to tell a Federal judge that we are not going to comply with the injunction. And the reason we are under an injunction is because the Trump Administration did not put into the record any information that they had about worker safety. For some reason, they chose not to do that. That is more than a technicality, that is a fatal flaw, and that is the problem. That is the number one problem.

The second thing is we did try to work, and continue to work with, actually, the facility in your district. They sat down with workers, and they said, let's be creative about this. Let's not have to choose between worker safety, food safety, and pork profits, let's figure out how we can do all three. And they came up with a proposal. We are in the process of trying to get that proposal essentially to a point where it could create the structure for a waiver for the other five facilities to be able to decide whether they wish to choose to follow that. If they wish to choose to follow it, then obviously we are in a situation where those folks can try, for the next 12 months, this program, and we learn from this program. We figure out what the challenges, what the problems are.

Mr. HAGEDORN. To reclaim whatever time I have, first of all, the Solicitor General under Biden did nothing to appeal this case and move it along. Second of all, you guys could've written regulations that solve the problem, and——

The CHAIRMAN. The time of the gentleman has expired.

Mr. HAGEDORN. We had worker safety for 20 years——

The CHAIRMAN. Thank you for that explanation, Mr. Secretary. The gentleman from Georgia, Mr. Bishop, is recognized for 5 minutes.

Mr. BISHOP. Thank you very much, Mr. Chairman. Thank you so much for holding this hearing today. It is very timely. And thank you, Mr. Secretary, for being here with us today. The tremendous job that you are doing at USDA to implement the COVID relief through the various programs that are being executed by USDA deserves accolades. The nutrition programs, the supply chain, the workforce safety concerns, for all of our producers that are impacted. So thank you for that, and thank you for your courtesies to me, in my capacity as Chair of the Agriculture Subcommittee of Appropriations, in providing the regular updates that you provide with respect to what USGS is doing. And most recently I was ex-

cited to hear of the success of the African Swine Fever vaccine development.

That being said, I would like to deal with a little bit, Mr. Secretary, on the cooperative interstate agreements. I was encouraged to see that the Food Safety Inspection Service and South Dakota finalized Cooperative Interstate Shipment agreement in June. But under the program, selected state inspected establishments that comply with Federal inspection requirements are permitted to ship processed meats into interstate commerce. This is an underutilized tool that would diversify the beef and the other meat processing markets, but only 9 of the 27 states that have state meat and poultry inspection programs have cooperative interstate shipping agreements. Can you help me understand why there is so little participation in the program, and whether there is anything that we can do to make it easier for states like Georgia and others to participate?

Secretary VILSACK. I think the simple answer, Mr. Chairman, is that, in order to be able to do interstate, or, for that matter, export activities, the facilities have to have not equal to, but they have to have the same inspection system that you have in federally inspected facilities, so it is a significant change in the way in which they would approach inspections. It is not a matter of equivalency, it is a matter of actually having exactly the same. So that is one of the reasons I think you all put the resources together to provide the money for folks, if they wish, to modernize their facilities to be able to get up to that standard, to be able to meet that standard, they now have the option and the ability to do that. A number of facilities have made applications, so we may see that increase, and that may create incentive for states to take a slightly different position. We may get to see more than nine of the 27 states qualify.

Mr. BISHOP. Thank you, Mr. Secretary. I understand, and I am going back to the Packers and Stockyards Act. I understand that the Department intends to issue the three new proposed rules to enforce the Packers and Stockyards Act, and that, in August, you introduced a new enforcement policy while the rulemakings are being finalized, and there was considerable pushback from segments of the livestock and poultry industries when you proposed the GIPSA rules in 2011. Tell us, how has the need for rulemaking on certain provisions of the Packers and Stockyards Act changed during the last 10 years, if at all?

Secretary VILSACK. Well, I think we have learned a lot about some of the challenges that poultry producers in particular had under the tournament system, questions about whether or not they were being treated fairly, whether there was sort of an equivalent treatment from one grower to the next. We learned of situations where producers were advised, without much notice, of a decision to cut off the ability to continue to contract with particular processors. And so there was a series of significant events and activities that gave rise to the need for us to strengthen the rules against retaliation, to strengthen the rules against discrimination, to draw a bright line as to what is an undue and unfair practice, that there was clarity.

Now, I think there is also the issue of whether or not the standard that courts have imposed on the rules that requires a finding

that competition is not limited specifically to the individual producer, but to the entire industry, well, that is a very high standard, and a very difficult standard to meet, so a combination of all those factors led us to believe there was a need to take a look at, to provide greater clarity, greater direction and protection, if you will, so that there is a more level playing field in this space between the processors and the producer.

The CHAIRMAN. The gentleman's time has expired. The gentleman from Kansas, Mr. Mann, is recognized for 5 minutes.

Mr. MANN. Thank you, Mr. Chairman, and Mr. Secretary, thank you for participating in this hearing this afternoon. I am still awaiting replies from your office regarding different written concerns. One, the delay in CFAP payments to deserving producers, and two, issues concerning USDA vaccine mandates, including FSA County Committee members need to be exempt from the Administration vaccine mandates. If these vaccine mandates go into effect, Mr. Secretary, it will decimate an already diminished FSA workforce, also dramatically disrupt the current county committee structure filled by producers across many of my 63 counties, and much of rural America, so I would appreciate a response back on those items, sir, when you can.

My first question has to do with vaccine mandates. I have a lot of concerns about them. As you know, President Biden issued an Executive Order requiring all Federal employees to be fully vaccinated by November 22. Given, sir, that federally inspected establishments cannot operate without USDA inspection, what is the USDA's plan to ensure that federally inspected meat and poultry processing plants are adequately staffed if a significant percentage of the inspection workforce elects not to get vaccinated, and is subsequently discharged? In other words, on one hand, I think there is overwhelming consensus we need to increase capacity. On the other hand, we are about to put ourselves in a situation, because of forced vaccine mandates, where the government might dramatically decrease capacity. What are your thoughts on that, and what is the plan to remedy that?

Secretary VILSACK. Well, we are in the process of surveying our employees, Representative, to determine whether or not what you have suggested is a likely scenario. At this point, I am not convinced it is. I think that the significant percentage of workers at USDA understand and appreciate that our concern is for worker safety. Our concern is to make sure that people are protected, that we comply with CDC guidelines, and I don't anticipate at this point that we are going to see a major disruption in our capacity to do our job at USDA. We will make adjustments if it turns out that survey results over time begin to reflect a different approach than what I am seeing today. Obviously we will take steps to make sure that we do not disrupt inspections, and we do not disrupt the important work that is being done at these plants. I don't see it today.

Mr. MANN. Okay. Yes. November 22 is going to be here pretty quickly, and I just have a lot of concerns with the position we are potentially ourselves in, further hampering and hindering the industry. The second question, sir, would you agree that part of a healthy free market competition is the ability to distinguish your product from your competitors? And if the USDA is successful in

allowing individual harm as a basis for violation under Section 202 of the Packers and Stockyards Act, won't this inhibit cattle producers in Kansas and across the country from differentiating their products because the packer can't pay a higher price for a higher quality, better product due to fear of prosecution by the USDA, or a potential lawsuit from the producer who didn't get the same price for an inferior product?

Secretary VILSACK. I don't believe so, Congressman. I think we can craft these rules in a way that provides a bright line for industry to understand and appreciate what is acceptable and what is not acceptable, what is fair to producers and what is unfair. I think the problem in the past has been the uncertainty of what is or what isn't, and that is what we are trying to rectify with the Packers and Stockyards revisions that we are considering.

Mr. MANN. Well, my understanding is today we have had eight Federal Circuit Courts of Appeal have upheld the requirements so far, with no dissenting circuits, and the U.S. Supreme Court has denied review of this topic multiple times. Each time the courts have found the Plaintiffs must show harm to overall competition, rather than injury to an individual. Essentially, the courts have said the law is meant to ensure equal opportunity, not equal outcomes amongst producers. So, based on all the court decisions, and despite a clear Congressional intent, how do you plan to initiate the rulemaking and draw this line that you discussed?

Secretary VILSACK. Well, I am going to rely on the folks in our Department that are essentially responsible for making sure that what we propose can pass muster in courts. That is the goal here. Obviously, we are not going to review these in isolation. We are going to review these in light of the way the law is, and the way the law needs to be followed.

Mr. MANN. Okay. I see my time has expired. Thank you, sir. I appreciate you coming before us this afternoon.

The CHAIRMAN. The gentleman from Arizona, Mr. O'Halleran, is recognized for 5 minutes.

Mr. O'HALLERAN. Thank you, Mr. Chairman, and Ranking Member, for today's hearing, and thank you, Mr. Secretary, for being here today. I still look forward, at some time, to having you out to Arizona and seeing some of our agriculture industry, and our beautiful forests. And I also want to show you firsthand the devastation that unabated wildfire, and subsequent burn scars, during extreme monsoonal flooding that has occurred in communities. These disasters are not one-time events. They continue to impact communities for months, and even years, after their occurrence. One such example is the Museum Fire in Flagstaff. In July of 2019, the fire was originally sparked by forest studying work from a Federal contractor. Since that time, the burn scar has resulted in intense flooding from routine rains in some communities in Flagstaff, and, throughout my district, quite frankly. We need Federal assistance soon.

Secretary, as you know, the entire State of Arizona, and much of the Southwest, is experiencing a severe drought. We know that short-term drought can negatively affect nutrition sources, milk production, and future yields. It can also reduce feed availability, leading to overgrazing. Heat stress is also proven to decrease milk

production in dairy cattle, and result in lower quality of beef. How is the Department of Agriculture working with the Bureau of Reclamation on drought issues to ensure that livestock markets are not impacted? What additional resources are needed to better support ranchers during these period of extended drought? Thank you.

Secretary VILSACK. Well, I want to acknowledge the good work of the Congress in passing the continuing resolution that contained $10 billion of additional resource and help, $750 million of which was designated for assistance to livestock producers, particularly in the western part of the U.S., who have suffered, and those, well, in other parts of the country that have suffered from natural disasters.

We at the USDA have also identified some additional resources from the Commodity Credit Corporation that we would have available that can't be used for specific payments to farmers, as is the case with the continuing resolution resources, but can be used potentially to reduce the cost of transportation or the cost of feed that producers may have to incur as a result of not having access to sufficient forage for their animals. What we want to do is we want to keep farmers on the farm. We want to keep them in business. We don't want them to have to liquidate their herds, because they spent a lifetime building them up.

Second, we have also looked at ways in which we could use the existing conservation programs to provide some help and assistance to producers. Arizona was one of four states that received additional EQIP resources under the EQIP Program that was drought related, so we are going to continue to look for ways in which we could provide direct assistance, ways in which we can help reduce costs, and ways in which we can enable farmers to embrace conservation practices to try to mitigate the consequences of this very severe drought.

Mr. O'HALLERAN. Thank you, Secretary. My second question, some of it has been answered about processing, but I do have a part that I don't know if you answered or not. What is the USDA doing to investigate ways to make inspections more readily available through the use of technology, including utilizing video and sensors to make virtual inspection a feasible reality?

Secretary VILSACK. Well, one of the things that we did when I was Secretary before was to take a look at the science of food, food safety, and to make sure that we were inspecting in the right places. Obviously, it is incredibly important to the market that we maintain food safety, and so, to the extent that our old system of inspection was one that, essentially, was inspecting the wrong things, or was inspecting areas where there was little risk of contaminants or bacteria attaching to product, we have now basically changed that so we are really focused on the areas in a production facility where the risks are highest. We will continue to look at ways in which we can modernize our system, and modernize our rules. I think we are constantly looking for ways in which we can improve food safety.

There are also additional steps we can take, particularly with reference to *Salmonella,* which I think we will be announcing in the very near future, to really try to reduce the risk of that, and

reduce the risk of foodborne illnesses directly connected to *Salmonella.* It is still too high.

The CHAIRMAN. The gentleman's time has expired. Now I recognize the gentleman from Iowa, Mr. Feenstra. You are recognized for 5 minutes.

Mr. FEENSTRA. Thank you, Chairman Scott and Ranking Member Thompson, and thank you, Secretary Vilsack, for being here today. There are many challenges today impacting our livestock producers, from African Swine Fever, that we talked about, to cyberattacks on the agriculture sector, also our line speeds, so we have a lot of work to do. But today I want to focus my questions on cattle market reform.

For months I have been calling on the Agriculture Committee to hold a hearing to examine anti-competitive behavior in the beef industry. I continue to hear from cattle producers struggling to break even, and I am glad for the opportunity to express these concerns before the Committee today. One of the key concerns from the cattle producers in my district is a lack of transparency and pricing. Since coming to Congress, I have advocated for efforts to ensure true price discovery, and allow cattle producers sufficient leverage in cash negotiations.

Last month the White House published a statement on the actions the Administration is taking to improve competition in cattle markets. One of these items was that the Administration will, and I quote, "work with Congress to make cattle markets more transparent and fair", and that the Administration, as I quote, is "encouraged to see bipartisan legislation by Senators Tester, Fischer, Grassley, Widen, and others to seek to improve price discovery in the cattle markets."

Secretary Vilsack, we heard from Senator Grassley today about the need to act on legislation now, it is so crucial. This is an area that has bipartisan support. Can I get a commitment from you to help on bipartisan legislation like what Secretary Grassley and Fischer have proposed, in line with the support of the White House that has been expressed?

Secretary VILSACK. Congressman, I think there is no question that we need more information. There are just fewer and fewer negotiated sales, which obviously have an impact on alternative marketing arrangements, and there can be potential for manipulation. We are more than happy to provide help and assistance. Just one caution, that we look for the proper balance, as we try to provide greater transparency, we don't necessarily sacrifice the benefits of the existing system in terms of efficiency. It is not easy to do. This is not easy to do, but it is important to be aware of the need for greater transparency, and also maintaining the efficiency of the current system.

Mr. FEENSTRA. Thank you, Secretary Vilsack. I could simply say that there is a significant monopoly going on with pork packers right now that we have to get down to the bottom of this, and we have to have transparency to make this all work. And, as you know from Iowa, there are a lot of independent producers that are getting forced out of their operations, and we simply cannot wait any longer.

While Congress continues to do its part, I appreciate USDA's effort to address these issues. In July USDA announced $500 million to expand meat and poultry processing capacity. I understand the Department's currently reviewing comments from stakeholders. Earlier this week USDA announced another $100 million to increase processing and strengthen the supply chain. Secretary Vilsack, do you know when we can expect to know the eligibility requirements and application window for this funding?

Secretary VILSACK. It is my hope that, on the $500 million fund, that we have a framework in place before the end of the year, and that we start making decisions in the first quarter of 2022.

Mr. FEENSTRA. Awesome. Thank you very much. Do you know when we will have more details about the series of Packers and Stockyard rulings announced as part of the President's Executive Order promoting competition in the American economy?

Secretary VILSACK. The goal that I have set in my own mind is for us to get information to OMB potentially by the end of this year on Packers and Stockyards.

Mr. FEENSTRA. Thank you. Again, there is so much urgency regarding this. Our independent producers are truly at stake. I appreciate you coming before the Committee today, Secretary, and I am glad to partner with you in restoring fairness in the cattle market. Thank you, and I yield back.

The CHAIRMAN. The gentlewoman from the U.S. Virgin Islands, Ms. Plaskett, who is also Chair of the Subcommittee on Biotechnology, Horticulture, and Research, is now recognized for 5 minutes.

Ms. PLASKETT. Thank you very much, Mr. Chairman, and thank you for convening all of us today for this important hearing during Committee work week. I also want to thank my colleagues for such tremendously informative and thoughtful questions, and to you, Mr. Secretary, for the time that you have been willing to spend with us, and really informing us on so much of the work that you were doing since taking the helm once again of the Department of Agriculture.

As you were aware, during the previous Administration there were changes that were made in the Economic Research Service, as well as in NIFA. Those entities were moved from Washington, and sent out into the other parts of the United States. There was great concern that many of us had that the knowledge base, the scientists who had been with those agencies for a number of years, would not make that move as well, and we saw a reduction in personnel and FTEs in those agencies, which, of course, will impact how those agencies operate. Can you give us an update on, if any changes have been made, and plan on ensuring that those agencies are able to do the output of scientific research that is so critical for the agricultural industry?

Secretary VILSACK. I am certainly aware of the concern that you raised, and one of the first things we did when I came back into office was to make sure that we used whatever resources we could use to accelerate hiring so that we could fill the vacancies that had occurred as a result of the shift to Kansas City. I believe I am correct when I say that NIFA has essentially fulfilled its goal of additional staff. I think 110 comes to mind right now of folks that NIFA

has recently hired to get back to a level where work is getting done. In fact, I think work is getting done even more quickly than it was under the previous Administration, and I think ERS has also made some additional hires. I am not sure if they are yet at the level they need to be, but I know that they have accelerated hiring as well. So I feel a little bit more comfortable about the circumstance and situation because of these new hires.

Ms. PLASKETT. Thank you. Thank you very much for that. I also recognize that the Biden-Harris Administration has made addressing climate change a major part of its agenda. Can you share how new technologies, like gene editing in livestock, help American farmers and ranchers improve their environmental footprint?

Secretary VILSACK. I recently came back from Florence, Italy after visiting with my counterparts from the G20, and one of the messages that I conveyed on behalf of U.S. agriculture was the importance and necessity of us continuing to embrace innovation, and not to necessarily surrender the ability to continue to be productive, notwithstanding the challenges of climate. I was heartened by the response that I got from many of my colleagues, recognizing that productivity, and innovation, and climate response, and mitigation adaptation don't necessarily have to be in conflict.

Gene editing has a tremendous capacity, and I will just give you an example. You can, and there is research now underway, in root systems, primarily of radishes and things of that nature, of cover crops, but could potentially be applied to commodity crops, where you expand significantly the capacity of the root system that can, in turn, store more carbon, which could potentially create an opportunity for American agriculture to do even more than it is capable of doing today, in terms of carbon storage and capture. You can potentially, with gene editing, change the photosynthesis formula, if you will, for plants and crops so that they essentially absorb more carbon, and convert it into nutrients, and convert it into the root system.

So there is an unlimited potential here, which means we need to invest more in research, and I am glad to see that, in the budget that is been approved by the House Agriculture Committee, there are additional resources for this important research.

Ms. PLASKETT. Well, thank you very much for that, and once again, thank you, Mr. Chairman, for convening this hearing, and I also want to thank my colleague, Mr. Baird, for addressing the letter that we were able to get out, working in a bipartisan manner, expressing our concerns, and the work that is needed in genetic improvements, and the hallmark that they have made in agriculture. And thank you for addressing that in your discussion with him. I yield back.

The CHAIRMAN. The gentlelady from Florida, Mrs. Cammack, is recognized for 5 minutes.

Mrs. CAMMACK. Thank you, Mr. Chairman. Thank you, Ranking Member. You guys know that I come from a district with a strong livestock presence, particularly cow-calf operations, and their success over past decades has been driven not by government intervention or mandates, but by allowing markets to sort themselves out. We all know conditions change. We know, through natural

market fluctuations, or even though unique unprecedented events, like COVID–19——

The CHAIRMAN. Excuse me, Mrs. Cammack. Let me remind Members, please unmute, and mute if you are not speaking. Thank you.

Mrs. CAMMACK. Thank you, Mr. Chairman. Point being that the markets work, and they work best with as little government intervention as possible. Producers, like those I have met with cow-calf operations in Florida, share concerns that any attempt to intervene in their ability to make their own transaction choices will prove harmful to their long-term success.

So, Secretary Vilsack, I appreciate you being here today. As you know, cow-calf operations, cattle producers, and packers, enter into various marketing agreements to ensure that a supply of cattle that meet certain specifications, breed, genetics, antibiotic and hormones use and others, are frequently tied to branded products or retailer requirements. These specifications allow producers, packers, and retailers to differentiate their products in the marketplace and meet consumer demand.

Now, courts have long upheld the harm to competition standard in USDA Packers and Stockyard rules, however, recent proposals by the USDA, your Department, could see that standard eliminated. Now, if that were to happen, it would, one, open up a floodgate of litigation, two, potentially limit choice for consumers, and three, limit the opportunity for producers to obtain premiums for their cattle. Secretary Vilsack, is that the USDA's goal with the Packers and Stockyard rules?

Secretary VILSACK. No, Congresswoman. The goal, obviously, is to make sure that there is a fair price for producers, and that the marketplace works with appropriate transparency, and that producers are not at a significant disadvantage in negotiating with processors.

Mrs. CAMMACK. Thank you, Secretary Vilsack. Does the USDA believe that beef quality and product differentiation are important to consumers and producers?

Secretary VILSACK. Well, I think there is no question that, to the extent that you have opportunities to value-add, that is an important consideration, as long as producers get fair price, or a fair return, for the value added that they are providing. That is the key here, is getting the fair return.

Mrs. CAMMACK. Absolutely. Now, Mr. Secretary, I spoke with a number of cattle producers in my state this week about their top concerns, and one of their chief concerns they highlighted was pretty straightforward, the vacancies at our Farm Service Agency offices. Now, the FSA offices across the country continue to suffer from staff vacancies. I understand that this is a new Administration, but we both know how important these offices are to the success of our producers, so why are we into month 10 of this Administration, and these positions remain vacant, and do you have a timeline that you could share with us on completing these incredibly important appointments and filling the vacancies?

Secretary VILSACK. Well, let me reassure you we survey the level of work being done at FSA offices to see whether or not there has been a drop-off of work in terms of processing loan applications and

so forth, and the good news is the great work that is being done at FSA offices, there has not been a drop-off of work to farmers. We are dealing with, however, a department that had significant reductions, employment freezes in the previous Administration, that we are now in the process of working our way through, trying to deal with. We faced a department that literally had thousands of vacancies, and thousands of jobs that needed to be filled. Now, we are working as fast as we possibly can to get up to speed here, but in the meantime, our folks are doing a great job of making sure that they can provide the service that farmers need.

Mrs. CAMMACK. Well, Mr. Secretary, I have information that is contrary to your statement about the level of efficiency within the FSA offices, and I know in a state like Florida, that is a top ten state in total agricultural output, we have agriculture as our number one economic driver, the fact that we do not have these positions filled is a huge issue for states like ours, and I would love to continue that conversation offline. But, in the interest of time, and the fact that I only have 34 seconds left, I do want to get to a final question. And, of course, if you could detail this into a report back to us in the coming weeks, I sure would appreciate it. Have you been communicating, Mr. Secretary, with the Department of Homeland Security, working with your counterparts in other agencies, to ensure that there is a cohesive, effective response to preventing African Swine Fever from entering the United States through our ports in Florida and elsewhere? This is a concern that we have seen here recently in the news, and we want to ensure that this is at top of mind.

Secretary VILSACK. My first call was to Secretary Mayorkas on African Swine Fever——

Mrs. CAMMACK. And would you be willing to detail the conversation, and the plan, in a report, in a follow up?

The CHAIRMAN. The lady's time has expired. Mr. Secretary, you might respond to that in writing.

Secretary VILSACK. Sure. I am happy to share with everyone the work that we are doing in building up surveillance and building up detection, increasing canine, increasing vigilance at the border, as well as working with our friends in the Dominican Republic and Haiti to minimize the risk.*** And, as I mentioned before, the protective zone that we have around Puerto Rico and the Virgin Islands that we are requesting, so there is quite a bit of activity in this space.

The CHAIRMAN. Thank you. The gentlewoman from Connecticut, Mrs. Hayes, who is also the Chairwoman of our Subcommittee on Nutrition, Oversight, and Department Operations, is now recognized for 5 minutes.

Mrs. HAYES. Well, thank you, Mr. Chairman, and thank you for hosting this very important hearing. I represent the 5th District in Connecticut, and while livestock does not have a significant footprint in my district, I cannot pass up an opportunity to present the issues that are important to the people of my community to the Secretary.

*** **Editor's note:** the information referred to is located on p. 336.

So, Secretary Vilsack, thank you so much for being here. Over the course of the COVID–19 pandemic, Connecticut farmers have suffered immensely. Early on, milk dumping was commonplace as supply chains were heavily disrupted. Later in the pandemic, Connecticut farmers sought Federal relief, but few were successful. Just four percent of Farmers to Families Food Box contracts went to the Northeast, and just eight percent of Connecticut farmers received CFAP payments. Last week, at Sub-Edge Farm in Farmington in my district, floods devastated their operation, resulting in 20 acres of crop loss and Thanksgiving turkeys. Because government assistance has not been able to fully close their margins, Sub-Edge Farms has had to rely on funds from a GoFundMe account and local restaurant fundraisers to keep their staff on payroll.

We have talked about this issue at length, Mr. Secretary, and I am happy to see that USDA has moved forward to address the concerns of small farmers. So, Secretary Vilsack, can you give further details on how the Pandemic Market Volatility Assistance Program will benefit small farmers that may have been neglected throughout the pandemic?

Secretary VILSACK. Well, it is designed to provide assistance and help, and we are not finished with this effort. We have additional announcements that we are going to make that are focused on using pandemic assistance resources to provide help and assistance to farmers that didn't get adequate protection under previous disbursements. We have taken a number of steps to try to help small- and mid-sized producers to receive assistance, and we are going to continue to look for ways in which we can provide help.

We have had procurement, where there are new procurement opportunities. We recently announced $1 billion The Emergency Food Assistance Program: $300 million to $400 million of that is to be spent for small-, mid-sized distressed farmers, those who are underserved; $500 million is to be used in local and regional distribution centers to create new market opportunities. So there is procurement, there is additional financial assistance. We are continuing to work with a variety of mechanisms that we have yet to announce to provide help and assistance, so more is coming.

Mrs. HAYES. Well, thank you so much for that detail. And I understand that this program was created with funds that the USDA has also used to create a dairy donation program, and supplemental dairy margin coverage programs. Have small- and medium-sized farms been able to access those programs easily, and how is the USDA implementing any new outreach strategies to compensate for previous program disparities?

Secretary VILSACK. Well, the dairy donation program is available for folks who essentially experienced difficulties during the early stages of the pandemic, and so they are able to apply for those resources. The other assistance programs are designed to sort of equalize sort of an oddity that occurred during the COVID situation where the U.S. Government was in the business of purchasing a lot of cheese, and that created a bit of a challenge for some of the milk producers, in terms of getting full and complete value for their milk. So we are in the process of trying to at least make up 80 percent of the losses that they may have incurred by virtue of

that distortion, up to 5 million pounds of milk, which is really focused on small- and mid-sized dairy producers.

There is additional help and assistance going to be forthcoming for dairy operators as well, as we take a look at the gross Margin Protection Program—the coverage program, rather, and making adjustments there. All told, it is about $1.3 billion of additional assistance for dairy operators.

Mrs. HAYES. Well, thank you, Mr. Secretary. I am very excited to hear all of those things, and I am always generally concerned about the lack of programmatic equity between large corporate farms and some of the smaller family farms that I represent, so I look forward to collaborating with you and the Department, and assisting in any way I can, or with the Members of Congress, to help make sure that all of our farmers can feel the impact of the work that is being done at the USDA. Thank you so much, Mr. Secretary, for your time. Mr. Chairman, I yield back.

The CHAIRMAN. Thank you. The gentlelady from Minnesota, Mrs. Fischbach, is now recognized for 5 minutes.

Mrs. FISCHBACH. Thank you, Mr. Chairman, and thank you, Secretary Vilsack, for being here today. You talked a little bit about the drought with Representative O'Halleran, but in your written testimony you mentioned that producers face the possibility of having to liquidate herds to due to the lack of availability or affordability of feed and forage from this summer's drought. In my district, that was not just a possibility, it was reality.

Nearly all of my state has had some kind of abnormally dry conditions, and over ¾ is in severe drought. Most notably, the northwest and north central portion of my district spent significant time in the highest level of drought conditions, which is where I heard from producers that, unfortunately, this possibility did become a reality. To this day, portions of that northern point are still in D3 extreme drought. The producers in my district saw this coming, and requested emergency authorization to hay and graze CRP acres prior to the nesting season. In July I led a delegation letter with Senator Klobuchar formally requesting action from you prior to the primary nesting season. Other Members and delegations, including Congressman Johnson, requested the same from you. To this day, we have yet to receive word from you or your staff on what drove that decision. Seeing as this is your first time appearing before the Committee since the drought started, I am now asking you on the record to explain this decision.

Secretary VILSACK. Well, the law didn't allow me to take the action that you all requested.

Mrs. FISCHBACH. Then, Secretary, what specifically in that 2018 bill, because I think you are referring to the 2018 Farm Bill, what specifically there prevented you from doing that?

Secretary VILSACK. Well, I can get you the chapter and verse, Congresswoman, I don't have it on the top of my head, but I will tell you that staff indicated to me that I didn't have the authority to do what you were asking me to do, that it would require a law change. I am more than happy to work with all of you to do the technical work to deal with this; but, our interpretation was that we weren't able to do what you were asking us to do. As soon as we were able to do it legally, we did it.

Mrs. FISCHBACH. And, Secretary, we have entered a bipartisan, I believe with Representative Angie Craig from Minnesota, we put together a bill already to clarify that, if that is the reason that we are unable to do that. But in addition to that, I heard frustrations from producers that emergency haying in post-primary nesting season was disallowed upon the graduation of a county from a D2 to a D3 drought, and I can't figure out why a county's hay situation is suddenly in better shape enough to lift this emergency authorization as the drought conditions actually worsened. Can you explain for the producers in my district why that decision was made, and where in law that we need to make those changes?

Secretary VILSACK. I am happy to look into that circumstance. That doesn't sound right to me either, Congresswoman. I am happy to look into that.

Mrs. FISCHBACH. Well, I would certainly appreciate some kind of a written response to that, because that is a huge concern. We just could not figure out why exactly that was the case. But, this does all tie back to one of the biggest concerns from producers in my district, and I heard from producers over and over about the confusing, and at times conflicting, information from the USDA as to what resources were available to them, what practices they can do when, and it goes on and on.

My staff and I pulled together a resource page to help adjudicate some of these concerns, but I am concerned that information, decisions, and authorities are not clearly and accurately filtering down from Washington to the states, and to those farmers. I look forward to working with you to address these concerns and better clarify the authorities you need so that we are not just throwing money at a problem, and not really addressing the concerns and issues that farmers are facing, but we are better preparing and responding to the situations like this in the future. And, Mr. Chairman, with that, I yield back.

The CHAIRMAN. Thank you. The gentleman from Florida, Mr. Lawson, is recognized for 5 minutes.

Mr. LAWSON. Thank you very much, Mr. Chairman, and, Mr. Secretary, welcome to this Committee. And I would like to say welcome to the most important Committee in Congress, because without food and poultry we have nothing. But my question centers around: for generations Black farmers and producers have been faced with systemic racism, and it shouldn't be a part of the farming effort in order to get information down and resources down to farmers that benefits all Americans, but for some reason, it has always been a part. I used to talk to former Secretary Perdue about this particular issue.

I would like to know, because of this pandemic, and I have heard other Members complain about this. Sometimes we forget that we have been in a pandemic, they want everything right now. But because of this pandemic, what kind of relief and distribution investments and supplies, Mr. Vilsack, USDA are making to ensure that these programs are successful and beneficial for new and small socially disadvantaged livestock and poultry producers and processors?

And I want to say this too, when minority farmers, because I have a lot of different farmers in the district, small farmers, when

minority farmers sometimes are granted different resources for what has happened to them in the past, then some of my White farmers, they want to go to court because they feel like now they are being discriminated against for something they didn't get. When you are trying to make up the difference, and put them more on a level playing field, it becomes very difficult, as a Member, as you walk between these groups. And so, as a result, my question is what at the Department level can make people feel that things are fair, that they have just as much resources as anybody else, and some of the things we didn't do in the past that we are going to do in the future?

Secretary VILSACK. Well, there are a number of responses to that question, Congressman. First of all, we are, actually in the next several days, making—and maybe it was today—making a series of announcements of grants to cooperative organizations designed to provide additional outreach to distressed historically underserved producers so that they get information concerning the various programs and activities, and how to apply and participate in those programs.

Second, we are looking for ways in which we can provide procurement opportunities. I mentioned earlier the temporary assistance program, where we are basically taking a look at ways in which we can create resources for local and regional distribution for sales to historically underserved producers to give them market opportunity.

As part of the American Rescue Plan, you all passed Section 1006, which is designed to expand technical access to information designed to help with market access and land access. We just recently announced the Heirs Property Rule to try to provide help and assistance to producers to be able to qualify for some of our programs, because they had fractionated interests of land. We need to get that title to land cleared so that they can apply for resources. So there are a variety of activities underway. There is also an internal review within USDA to identify any particular barriers that exist, and remove those barriers. And then we also just recently announced the formation of the Equity Commission called for under the American Rescue Plan, and President Biden's Executive Order, that will provide an outside look at our activities to make recommendations on how we may be able to reduce any barriers that may exist.

The CHAIRMAN. Does the gentleman yield back?

Mr. LAWSON. Mr. Chairman, I yield back. I am losing my voice.

The CHAIRMAN. Okay. Thank you very much. The gentleman from California now, Mr. LaMalfa, is recognized for 5 minutes.

Mr. LAMALFA. Actually, we are cutting a little rice right here in northern California on our farm. It is our last day, trying to beat the rain, so it is timely for Secretary Vilsack to check out the——

The CHAIRMAN. Mr. LaMalfa, you might want to speak a little closer to your microphone. We are having a little difficulty hearing you.

Mr. LAMALFA. Thanks for your indulgence there. Secretary, thanks for being at our hearing today, as I come from our combine in NorCal. So just a couple quick things. First of all, I appreciate your attention to these issues for us. Here in my northern Cali-

fornia district, livestock grazing is an extremely important tool for vegetation management, and that is, as you know, very huge, since we have had over 1½ million acres of fire in our forested areas, where grazing can be a big help in those forests, and in the periphery around it. So we have seen, with the permitted and vacant allotments, that the forests have become overgrown, so we need a lot more effort on that.

So, there were, as of June of 2019, 211 vacant U.S. Forest Service Region 5 grazing allotments. What can we do to get those back into circulation again, to get more cattle, sheep, and goats helping out? Because certainly we are under the gun with the amount of fire we have each year. And, as a side note, I hope we can get the Forest Service really cracking on the restoration that needs to be done, because we are going to have so much erosion that is going to get into our waterways as well. But what can we do to speed up the grazing allotments?

Secretary VILSACK. Well, thanks for the question. First of all is to make sure that the vacant areas that you are referring to, are they vacant for a reason or not? Are they just simply vacant? Sometimes there are vacant lots because they have been over-utilized, and it is rotational grazing. Sometimes there is a scientific reason why we can't allow grazing. We want to make sure we don't disrupt the science. But to the extent that we have vacant lots, sometimes we have them for these kinds of circumstances, so I am sure the Forest Service will be moving as quickly as possible, for those lots that are appropriate, to create access for those folks who have lost their grazing rights because of fire.

I will tell you, Congressman, I couldn't agree with you more. We do need to do a lot more restoration, but at the end of the day, it is really about finances, and that is it is important for the infrastructure bill, that is why it is important for the reconciliation bill to get passed, because it is going to provide sufficient resources for us not to continue to do what we have been doing for far too long, which is simply putting fires out. It takes about $50,000 an acre to put a fire out. It takes about $1,400 an acre to adequately treat an acre, so it is cost-efficient for us to treat more acres, but continually have to rob Peter to pay Paul. So I am looking forward to——

Mr. LAMALFA. Yes. Thank you. I just toured much of the area yesterday in my district. There are so many dead ghost trees. We are going to have hundreds of thousands of acres of dead trees, and whatever grazing can do to help in between that will be huge. Let me touch on, too, the situation with our ports, as I know you are painfully aware, with our ports here on the West Coast, there are many, many ships out there, and that means we are not also loading up our ag products to go back overseas from port, and there are so many almonds we grow here in California. Could you touch on a little bit, please, on how far USDA's been able to get with the Department of Transportation and Maritime on just helping break the backlog, and make sure that agriculture is served in putting something back on these empty containers that seem to be going across the seas?

Secretary VILSACK. Well, I think I heard most of that question, Congressman. I will try to respond. We have been in contact with the Maritime Commission. As you know, it is an independent Fed-

eral regulatory agency, so there is limited capacity that we have to basically force them to do things, but we have strongly encouraged them to do what they can to break up the congestion, to deal with the issue of empty containers. We have also worked with John Porcari, who the President has appointed as a special envoy, and most recently we identified money within CCC to be able to be used as we determine what we can do, whether it is pallets, whether it is workers, whether it is incentives for empty containers to be filled with agricultural products, resources that can potentially be used to provide some help and assistance. That is our intent. About $500 million is available now to help. If you have some suggestions and ideas about that, we would welcome them.

Mr. LAMALFA. Okay. We will send those in. I appreciate the time. I will leave you with a little more harvest scenery here, so take care, sir.

The CHAIRMAN. Thank you. The gentlelady now from Illinois, Mrs. Miller, is recognized for 5 minutes.

Mrs. MILLER. Thank you so much, Mr. Secretary. I am grateful for the opportunity today to address questions and concerns, of producers, and I want to say that I understand from personal experience. My husband and I have been running a multi-generational family farm and cow-calf operation, and our two adult sons are now struggling to carry on. So many of these concerns, I have a deep understanding of, and they definitely affect many of our neighbors and friends that are involved in this industry.

So, Mr. Secretary, in your testimony you mentioned that the Department will be complementing the proposed Packers and Stockyards rules with enhanced market transparency tools under our *Market News* Service and Livestock Mandatory Reporting Act, would you please explain what sorts of tools you are referring to?

Secretary VILSACK. We just issued two additional studies to provide additional resources and information that would provide, based on LMR data. We also had a webinar recently to give folks a better understanding of how to utilize LMR, so additional *Market News* reports and webinars to make sure that producers are fully aware. We will continue to look for ways in which we can, as I mentioned earlier, utilize libraries so people understand and appreciate, as well contract provisions that may be fair and reasonable to be included in their contracts.

Mrs. MILLER. Thank you, and I look forward to having access to you to bring ideas from the producers. I know you are aware many in the cattle industry and in Congress are eager to learn the results of the DOJ's investigation of beef packers announced in the summer of 2020. To date, the DOJ has not provided any updates regarding investigation status, or conclusive reports resulting from its review. Would you please describe how the USDA collaborates with or supports the DOJ during such an investigation, and do you have insight on when we can expect to see the conclusion of the investigation?

Secretary VILSACK. I don't have insight in terms of when the DOJ will finish their work, but I will tell you that USDA is engaged and involved in providing the technical assistance, the data, the information that the DOJ requests. We are sort of the depository of a lot of information, a lot of data, about the market which

the DOJ requests, and we provide it as they request it so that they can make a proper evaluation and determination.

Mrs. MILLER. Okay. And we look forward to getting more of that information. And finally, Mr. Secretary, when the President promised not to raise taxes on anyone making less than $400,000 a year, is it reasonable to presume that the promise included farm and ranch families? Can you guarantee that no rancher who makes less than $400,000 per year will face new taxes, or increased borrowing costs due to the President's support for drastically reducing the estate tax exemption?

Secretary VILSACK. Well, I don't think there is—the President hasn't made any recommendation to reduce the estate tax exemption. That is still $11 million, and I don't think there has been any change that is been proposed there. I think what you might be asking about is the stepped-up basis. That is a different issue, and I will tell you that our ERS has taken a look at this, and they have concluded not once but twice that roughly 98 percent of the family farms in this country are not going to be impacted and affected by this, and so I would stand on the ERS study. I would be happy to provide it to you if you have not had a chance to read it.

Mrs. MILLER. Are you saying that rolling that back is not going to affect the family farm or ranch?

Secretary VILSACK. I am sorry, what?

Mrs. MILLER. Did you just say that rolling back the stepped-up basis is not going to affect them?

Secretary VILSACK. Well, that is because there are two very important conditions here. One is if the farm continues to be owned and operated by the family, there is no impact. There is no tax due, there is no capital gains that is due at that point in time. Second, if, in fact, at some point in time in the future the family decides to sell the farm and get out of the farming business, there are exemptions, $1 million a person. When you combine the exemptions, and the fact that the vast majority of farms that are being transferred will continue to be owned and operated by the family, you are talking about 98 percent of the farms.

The people that are going to be impacted by this are people like me. I am an owner of a farm, my kids are never going to be farmers. The farm I own has appreciated over the last 30 years that I have owned it, and the reality is, if my kids sell it, then, frankly, I am okay with them having to pay tax, because I am not a farmer, they are not farmers. We are trying to protect the family farm, and I think the family farms are being protected.

The CHAIRMAN. The time of the gentlewoman has expired.

Mrs. MILLER. Rolling back stepped-up basis is the end of the family farm.

Secretary VILSACK. I don't agree, respectfully.

The CHAIRMAN. The gentlelady from Louisiana, Ms. Letlow, is recognized now for 5 minutes.

Ms. LETLOW. Thank you, Chairman Scott. Secretary Vilsack, it is an honor to have you before the House Agriculture Committee today. As one of the newest Members of this Committee, and in Congress, this is my first hearing opportunity to discuss with you the essential role agriculture plays throughout Louisiana's 5th District, and the challenges our producers are facing throughout the

state. As you know, just last month Louisiana, and the southeastern part of my district, was hit really hard by Hurricane Ida. While our agriculture community works to recovery from this devastating storm, many other producers across my state still await assistance in the aftermath of Hurricanes Laura and Delta of last year.

Since taking office, it has remained a top priority of mine to secure vital disaster assistance for the hardworking farmers, ranchers, and forestland owners back home. That is why last week I voted in support of critical disaster relief that will help Louisianans rebuild their homes and livelihoods. The continuing resolution also included the much anticipated extension of the WHIP+ Program for 2020 and 2021 natural disasters. I urge you and your staff to provide our communities with some certainty in a time of hardship by getting these funds in the hands of our farmers as quickly as possible.

On September 8, USDA announced its plans to help cover costs of transporting feed for livestock that rely on grazing by updating the Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program, specific to drought impacted producers. While not due to the drought, ranchers throughout Hurricane Ida's path have experienced similar issues on the opposite end of the spectrum. Livestock producers in coastal parishes that don't typically store much feed or hay were left with pasture land inundated with salt water surge. Additionally, ranchers that do store some hay haven't been able to cut much, if any, this year due to abnormally wet weather. My office inquired with the USDA about expanding this same assistance to individuals having to haul in feed as a result of the storm. In response, it is my understanding that the change gives the flexibility to consider this program for other events when USDA has determined a shortage of local or regional feed availability.

Mr. Secretary, I wanted to take this opportunity today to express that the need for assistance is there, and Louisiana agriculture stakeholders are currently working to gather the appropriate data to quantify this need. As you work to develop this policy, are you committed to ensuring other events, such as Hurricane Ida, will be given full consideration to access this program?

Secretary VILSACK. Yes.

Ms. LETLOW. Great. Okay. Thank you for that, and I look forward to working with you on this issue, as well as other standing disaster programs, and how we can make them work more efficiently in the next farm bill. Thank you so much for your time. I yield back.

The CHAIRMAN. Thank you, Ms. Letlow. And with that, Mr. Secretary, we have completed our questions for you. We want to thank you for your participation, and for the thoughtful and very informative presentation that you have given, and answering our questions. Thank you very much.

Secretary VILSACK. Thank you, Mr. Chairman.

The CHAIRMAN. And now, Mr. Secretary, you are excused.

Ladies and gentlemen of the Committee, and those who are watching us on C–SPAN, I have a very important announcement. In order for us to reset the room for our third panel of five very

outstanding livestock industry representatives and witnesses, we are going to have to reset the room, pause, for 15 minutes, and then we will return at exactly 3:05. And so, without objection, the Committee now stands in recess for 15 minutes. We will be back with an exciting, informative panel of five industry witnesses at exactly 3:05.

[Recess.]

The CHAIRMAN. The Committee will now come to order, and we are now ready to move on to our third panel of distinguished witnesses today, and we all are very excited about hearing from each of you, because you represent really where the action is when it comes to our livestock animal agriculture. And we are so delighted that you are here, and taking the time to give us your wisdom, your knowledge, in terms of the great challenges that we are facing to make sure we address the right way all of the concerns that are resting with our very precious, and I mean that sincerely, our livestock animal part of our food supply is most important to us, and around the world, in terms of our trade negotiations.

And so let us start with our distinguished fellow Member of Congress, the distinguished gentleman from South Dakota, Representative Dusty Johnson, to introduce our very first witness today. Representative Johnson, you are now recognized.

Mr. JOHNSON. Thank you very much, Mr. Chairman, for this opportunity. We all have people we know in our lives who are widely acknowledged to be wise, to be thoughtful, to be fair, and our speaker from South Dakota today is those things, and he has come by that wisdom, Mr. Chairman, honestly. I have to tell you, when you look at his résumé, you can see that he's been out doing it, as you alluded to at the top of this hearing, sir. This gentleman, with his son, has been a cow-calf producer. He is the co-owner of a small feeding operation. He has served in leadership roles at the state level, and now at the national level as well. When this gentleman speaks, his friends and his neighbors listen, and I know, Mr. Chairman, I certainly do listen to him. So, without any further ado, it is an honor for me to recognize my friend, and fellow South Dakotan, Todd Wilkinson.

The CHAIRMAN. I thank the gentleman. And now our next witness on this panel is Mr. François Léger, I hope I got that right, from the great State of Georgia, my own state. He is the owner of FPL Food, and he's here to testify on behalf of our North American Meat Institute.

Our third witness on the panel is Mr. Scott Blubaugh, who is the President of the Oklahoma Farmers Union, and is here testifying on behalf of the National Farmers Union.

Our fourth witness on this panel today is Mr. Scott Hays, who is the Vice President of the National Pork Producers Council.

And our fifth, and final, witness on this panel is Mr. Brad Boner, who is the Vice President of the American Sheep Association.

Such a distinguished panel of witnesses before us today, and we are so delighted to have you, and thank you for taking some of your valuable time to come before this Committee and give us this important knowledge that we need on this Committee so we can make the correct decisions that are impacting our livestock industry.

Now, let me just give you a few directions. The timer will be visible to you on your screen, and you will have a countdown to zero, at which point your time has expired. Each of you will have 5 minutes. Now let me start with Mr. Wilkinson. Please begin when you are ready.

STATEMENT OF TODD WILKINSON, VICE PRESIDENT, NATIONAL CATTLEMEN'S BEEF ASSOCIATION, DE SMET, SD

Mr. WILKINSON. Chairman Scott, Ranking Member Thompson, and Members of the Committee, on behalf of America's cattle producers, thank you for inviting me to testify today. My name is Todd Wilkinson, and I am currently serving as the Vice President of the National Cattlemen's Beef Association. Together with my son, I own and operate a cow-calf and feeding operation in South Dakota. Additionally, I maintain a law practice focused largely on ag law. I am testifying today on behalf of the National Cattlemen's Beef Association, the U.S. cattle and beef industry's oldest and largest national trade association. Our role at NCBA is to facilitate a policy process that respects differing perspectives, consults informed expertise, allows for robust debate, and ultimately arrives at grassroots policy positions that are representative of the entire industry. It is from this perspective that I offer my remarks.

Cattle production is inherently challenging. Even in a good year the differences between making a profit and a loss depend upon factors outside of the rancher's and farmer's control. Let me be clear, the past few years have been anything but good. As producers struggled to get by, the large meat packers rake in record breaking profits, profits that have not been equitably shared with cattle producers. The current marketing situation brought on by COVID, cybersecurity, plant fires, countless other factors, have even the most seasoned industry veterans asking for changes. Something has to give. Because the challenges facing our industry are so diverse, it is imperative that policymakers at all levels of the government remain focused on viable and tenable solutions with vast industry buy-in. NCBA is working through these problems, and has consistently come back to four points.

First, price discovery. Adequate negotiated trade volumes are critical to our market's function. Thanks to efforts of producers, negotiated trade volumes are up. Some meat packers, however, have yet to demonstrate a serious commitment to purchasing cattle on a negotiated basis. AMAs are very important to the fed cattle trade. NCBA supports their continued use, as they fit the unique business models of cattle producers. However, equally as important is the price discovery drive from direct buyer-seller negotiations.

Second, market transparency. Since the enactment of the Livestock Mandatory Reporting Act, cattle producers have benefitted from consistent and timely reports. That is currently up for reauthorization, and as it is up for reauthorization, we ask you to make changes in LMR to increase transparency.

Third, processing capacity. Much of the problem in this industry is processing capacity. Currently there is a serious shortage of hook space. The industry could economically accommodate another 5,700 hooks of daily processing capacity. Help is needed for new independent regional and small producers. Look, we understand supply

and demand. The problem is demand is excellent. We are moving record amounts of beef. The issue is the ability to process it. Big supplies forced into a narrow funnel result in the packers exercising too much market control.

Finally, market oversight. Markets can only function when all participants play by the same rules, which, while much of the spread between box beef and fed cattle prices can be explained on supply and demand, NCBA called on the Department of Justice to investigate the major packers in June of 2020. The purpose of this request was to ensure that no anti-competitive behavior has taken place. To date, we have not learned the results of that investigation. Our question is how long does it take to do an investigation?

The message I am here to deliver today is that complex problems rarely have simple solutions. Regardless of the origin of today's problem, it is clear there is no silver bullet. We strongly urge Congress to resist one-size-fits-all policy prescriptions, which may have disastrous unintended consequences. Careful consideration must be given to the risk/reward of enacting market influencing laws for hundreds of thousands of American ranchers, and millions of beef consumers. Lawmakers should adopt a multi-pronged approach to bring relief to cattle producers, transparency to the markets, and resiliency to the supply chain.

In closing, Mr. Chairman, it has been a difficult few years for the cattle producers, but this Committee's desire to aid our industry has not gone unnoticed. We appreciate your leadership, and with that, Mr. Chairman, I stand willing to handle any questions.

[The prepared statement of Mr. Wilkinson follows:]

PREPARED STATEMENT OF TODD WILKINSON, VICE PRESIDENT, NATIONAL CATTLEMEN'S BEEF ASSOCIATION, DE SMET, SD

Introduction

Chairman Scott, Ranking Member Thompson, and Members of the Committee, on behalf of America's cattle producers, thank you for inviting me to offer testimony on this important issue.

My name is Todd Wilkinson, and I currently serve as Vice President of the National Cattlemen's Beef Association. I am a second generation rancher and live in De Smet, SD. I own and operate a cow-calf and cattle backgrounding operation with my son, who is the third generation of our family to work the ranch. Additionally, I run a small cattle feeding facility and maintain a law practice, where I assist other farmers and ranchers with estate planning and other agricultural law issues.

The National Cattlemen's Beef Association (NCBA), on whose behalf I testify today, is the U.S. cattle and beef industry's oldest and largest national trade association. In addition to our 25,000 direct members, NCBA represents forty-four state cattlemen's associations with collective memberships numbering some 175,000 cattle producers—each of whom has a voice in our grassroots policy-making process. It is important to note that well in excess of 90 percent of those members are family-owned business entities involved in the cow-calf, stocker/backgrounder, and feeding sectors of the supply chain. In other words, like myself, true ranchers and farmers.

In a grassroots membership base as diverse as ours, it necessarily follows that business models and opinions are equally diverse. Just as cattle production in the western United States is very different than in the Midwest or Southeast, so too are the methods by which our producers choose to market cattle between segments of the supply chain. Our role at NCBA is to facilitate a policy process that respects those differing perspectives, consults informed expertise, allows for robust discussion and debate, and ultimately arrives at policy positions that are representative of the entire industry.

Background

The present situation unfolding within the U.S. cattle markets is highly complex and multifaceted. Some of the underlying dynamics at play have been present in

our industry for some time. Other factors have emerged more recently. Independent of the origins of the issues themselves, the present conversations on how best to address them were recently elevated as a result of two major events.

In August of 2019, a fire at Tyson Foods' Finney County beef plant in Holcomb, KS wreaked havoc upon the cattle markets. In the days following the fire, live cattle prices declined substantially while boxed beef values soared.[1] At the peak of this market volatility, the spread between fed cattle and boxed beef prices reached $67.17/cwt—at the time, the widest gap since records began under Livestock Mandatory Reporting (LMR).[2] While the supply shocks brought about by this "black swan" event created severe challenges for cattle producers, those hardships were dwarfed by those brought on by the COVID–19 pandemic.

As meatpacking plants began to temporarily close, whether due to isolated outbreaks of the virus or to comply with local public health orders, cattle supplies began to build up across all segments of the supply chain. At the height of the pandemic, the industry realized a roughly 40 percent decline in beef processing capacity utilization.[3] The resulting supply and demand dynamics showed similar results to the Holcomb fire: fed cattle prices fell by 18 percent and boxed beef prices skyrocketed 80 percent.[4] While the industry has made great strides toward recovery, the effects of COVID–19 are still being felt by cattle producers today.

The marketing environment for livestock these past several years has been immensely challenging for farmers and ranchers nationwide. Input costs have continued to rise and prices paid for cattle have not comparably risen from recent lows. As previously noted, some of these challenges were brought about because of the pandemic; others existed before and were merely accentuated by the immense volatility that COVID–19 brought to our markets. Earlier this year, USDA requested comments from the agricultural sector on ways to strengthen our supply chains.[5] NCBA submitted exhaustive comments to this docket, and some of the issues discussed therein overlap with those the Committee is exploring today. Thus, those comments have been attached to this testimony for the Committee's consideration.

Because the challenges facing our industry are so diverse, it is imperative that policy makers at all levels of government remain focused on viable and tenable solutions with vast industry buy-in. Let me be clear, there is no such thing as a silver bullet. We strongly urge Congress to resist one-size-fits-all policy prescriptions.

Recent NCBA Engagement on Cattle Marketing Issues

NCBA has maintained a standing Live Cattle Marketing Committee for many years, and often employs a working group of market participants, state affiliates, and outside experts to research specific issues and offer objective guidance that may be used in the development of NCBA policies. While a few outside observers have been critical of NCBA's approach and policies, we have remained committed to respecting the direction and intent passed by our tens of thousands of grassroots members through our policy process. We strongly recommend against discounting those voices around the country simply because they do not align with those of one particular lawmaker, region, or organization. As our organization has navigated the complexities of the myriad challenges at play, and the differing opinions on how best to address them, we have consistently come back to four main issues.

Price Discovery

While long-term declines of negotiated trades of fed cattle had already begun an industry-wide discussion on the subject of price discovery, the Holcomb Fire and COVID–19 underscored the urgency of resolving this issue. In July 2020, NCBA's Live Cattle Marketing Committee met to discuss policy proposals as part of our organization's 2020 Summer Business Meeting. Producer leaders from more than forty state cattlemen's associations worked for more than 6 hours to craft a policy that would help resolve concerns about live cattle marketing issues and lead the industry toward more robust price discovery. The NCBA Committee considered several proposals, each aimed at achieving greater volumes of negotiated cattle trade. After debate, the NCBA Committee recommended, and the NCBA Board of Directors approved, a policy that supports voluntary efforts to improve negotiated trade volumes with the potential for a legislative or regulatory solution in the future should robust regional trade numbers not be achieved.

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[1] *Boxed Beef & Fed Cattle Price Spread Investigation Report.* USDA–AMS: 2020.
[2] *Ibid.*
[3] *Ibid.*
[4] *Ibid.*
[5] 86 *Fed. Reg.* 20652; Docket No. AMS–TM–21–0034.

As mandated by this member-passed policy, NCBA leadership appointed a subgroup of the Live Cattle Marketing Working Group to develop a framework by which NCBA would monitor negotiated trades and establish benchmarks of weekly volumes. In October of 2020, the group announced this plan and issued a report titled, "A Voluntary Approach to Achieve Robust Price Discovery in the Fed Cattle Market."

NCBA implemented this framework in January 2021. Since that time, cattle feeders within USDA's five major cattle feeding reporting regions (the "5-Area")[6] have responded to the need for more negotiated trade in order to improve price discovery at the fed cattle level. In an impressively short period of time, many cattle producers, particularly in the Texas-Oklahoma-New Mexico and Kansas regions, have adjusted longstanding business models to offer more cattle on a negotiated basis. In some cases, they have even traded cattle to achieve these weekly benchmarks despite short-term market indicators that prices would improve the following week. Our members' commitment to the success of this voluntary effort cannot be overstated.

We evaluate our framework on a quarterly basis, and have established a series of benchmarks (which we call "triggers") to inform the progress being made toward robust price discovery. Negotiated trade volumes were substantially higher across the country during the first quarter, though this progress still fell short of our established triggers. In the second quarter, however, cattle producers again rose to the occasion to trend even higher—on par with our triggers, and the preliminary results from the third quarter are also promising.[7] This is certainly a marked improvement from trends observed even 1 year ago, and cattle producers deserve high praise for this work.

All transactions require both a willing buyer and a willing seller. As evidenced by the negotiated trade volumes exhibited in the first and second quarters, cattle producers have been willing to sell their cattle on a negotiated basis, rather than utilizing alternative marketing arrangements (AMAs), such as formulas and forward contracts. Still, some meatpackers have yet to demonstrate a serious commitment to purchasing cattle on a negotiated basis. This jeopardizes our efforts to improve price discovery since the packer represents the buy-side of a cattle producer's ledger. NCBA recently completed an addition to our voluntary framework which will allow us to gauge whether or not the largest meatpackers are participating in negotiated trade at sufficient levels. Known as the "packer participation silo," this addendum has been in place since the beginning of 2021's third quarter, and we expect to see its first results in mid-October.

AMAs are very important in the fed cattle trade, and NCBA supports their continued use as they fit the unique business models of many cattle producers. They allow cattlemen and women to earn premiums for higher quality cattle and mitigate those risks associated with selling in the spot market. However, equally as important, is the price discovery derived from direct, buyer-seller negotiations. Just as NCBA and industry experts warn against a total rejection of AMAs, we also know that lack of participation in the negotiated market will similarly result in dire consequences for our industry. The benefits of AMAs cannot be allowed to come at the cost of robust price discovery. There must be a balance. That is why we continue to explore new means to encourage greater use of the cash market and negotiated grids through our voluntary framework.

While more improvements are still needed to achieve consistency, including adequate meatpacker participation in the negotiated market, these results are encouraging. As new and innovative price discovery tools continue to emerge, we are confident our industry will continue to progress toward robust price discovery in the near-term future.

Market Transparency

Since enactment of the Livestock Mandatory Reporting Act in 1999,[8] cattle producers have benefitted from the consistent and timely reporting of market information by USDA. Producers utilize this information to make informed marketing decisions that best suit their unique business needs. LMR requires Congressional reauthorization every 5 years, and was set to expire at the end of Fiscal Year 2020. A 1 year extension of the program was included in the Consolidated Appropriations Act of 2021,[9] and it was temporarily extended again via the most recent continuing

[6] Alphabetically, USDA's five LMR reporting regions are: Colorado, Iowa-Minnesota, Kansas, Nebraska, and Texas-Oklahoma-New Mexico.

[7] Negotiated trade volumes by region are attached for convenience.

[8] P.L. 106–78.

[9] P.L. 116–260.

resolution. The program is currently set to expire on December 3, 2021. NCBA strongly supports LMR and urges Congress to ensure that this critical tool does not expire.

Though LMR is essential to cattle producers, improvements could be made to the program to increase transparency within the cattle markets. Though many of these proposals can be adopted through the regulatory process, NCBA supports the establishment of a cattle contract library, reporting of formula base prices, and next-day carcass weight reporting among other things. We believe that this new information could further benefit producers as they market their cattle.

USDA is required by law to protect the confidential business information of entities who report market information under LMR.[10] To implement this mandate, USDA established the "3/70/20" confidentiality guidelines in 2001. Under this provision, price reports are published provided each report meets three conditions over the most recent 60 day period:

(1) At least three reporting entities provide data at least 50 percent of the time;
(2) No single reporting entity provides more than 70 percent of the data for a report; and
(3) No single reporting entity may be the sole reporting entity for an individual report more than 20 percent of the time.

While NCBA recognizes the Agency's statutory requirement to balance information with confidentiality, the 3/70/20 guidelines have often resulted in withheld reports throughout the major cattle feeding regions—most frequently in the Colorado region. NCBA supports efforts to revisit confidentiality rules to reduce instances of nonreporting, and will continue to work alongside allies on Capitol Hill and with USDA to ensure this critical information remains accessible to cattle producers.

The reporting of formula transactions is another area where improvements to transparency could be made. Formulas are one of four transaction types reported by USDA under LMR, but it is the only type that is not clearly defined. Whereas negotiated grids, negotiated cash trades, and contracts are denoted by clear parameters and transaction structure, formulas are a catch-all for those trades which do not meet the definition of the other three. In an effort to bring more transparency to the formula bucket, we were pleased to see USDA announce they would begin publication of two new LMR reports on the subject. The National Daily Direct Formula Base Cattle report shares national base price information of formula agreements. The National Weekly Cattle Net Price Distribution reports the price and volume levels at which trade occurred across the weekly weighted average price for each purchase type—negotiated, negotiated grid, formula, and forward contract. The addition of these new publications will allow producers to better compare their marketing arrangement to others and allow them to make more informed business decisions on their operations. This was a tremendous step in the right direction, and NCBA encourages the enactment of similar transparency measures to shed more light on activity in the formula bucket.

Cattle producers demand transparent markets in which to trade their livestock, and NCBA will work alongside all our Federal partners to improve transparency wherever possible. At the 2021 Cattle Industry Convention & NCBA Trade Show in Nashville in August, voting delegates from NCBA's various affiliates adopted a directive to establish a working group of cattle producers to explore issues related to market information, transparency, and reporting. The cattlemen and women who were appointed to this working group had their first meeting last week. Over the course of the next several months, they will explore issues relating to LMR confidentiality, market transparency, captive supply, Packers & Stockyards, economic research, and reporting thresholds. They will report their findings to NCBA's Live Cattle Marketing Committee in February 2022, and may recommend further policies to build upon our existing market transparency efforts.

Processing Capacity

Adequate beef processing capacity is critical to maintaining profitability in the cattle industry and providing a steady supply of essential food products to American consumers. Currently, there is a serious shortage of processing capacity (commonly referred to as "hook space") throughout the beef production system. A recent study by RaboBank found that excess operational beef processing capacity—or hooks available in addition to those used to process existing fed cattle supplies—fell to zero in late 2016 and turned negative in early 2017. The same study found that, under the current dynamics of supply and demand, the industry could economically accommo-

[10] 7 U.S.C. § 1636(a).

date an additional 5,700 hooks of daily processing capacity. This equates to roughly 1.5 million additional animals per year.[11]

At present, the processing sector represents a bottleneck in the overall beef supply chain. The result has a negative effect on cattle producer leverage in fed cattle negotiations. When cattle supplies exceed the capacity to process them, the livestock become a less scarce resource and cattle prices decline. It is important to note that this is independent of demand for beef. Even when demand for U.S. beef is strong, a lack of processing capacity depresses prices for live cattle. The most pointed examples of this can be found in the Holcomb fire and COVID–19. In both cases, operational beef processing capacity utilization fell dramatically following temporary closures of high-throughput beef plants. As a result, cattle prices declined, and boxed beef values drastically increased.

To improve producer leverage in fed cattle negotiations, either cattle supplies must be reduced, or processing capacity must be expanded. Herd contractions and expansions occur naturally over the course of a somewhat predictable 10 year cycle. Currently, U.S. cattle inventories are cyclically high,[12] but beef demand is also high both domestically and in our major export markets.[13] Therefore, the clearest solution to meeting this demand while fostering profitability throughout the supply chain is not to shrink the cattle herd, but rather to expand beef processing capacity.

Meatpackers of all sizes face similar operational challenges, the most consistent and severe of which is labor recruitment and retention. The largest barrier to entry, however, is access to sufficient capital for construction. The industry average start-up cost for a meat processing facility is roughly $100,000 per hook.[14] This means that a modest 25 head per day plant would need to secure $2.5 million in financing just to build the infrastructure. As a further complication, traditional lending institutions are often unable to provide adequate financing due to the risk profile assessed to meatpacking business models. NCBA supported legislation such as the *Butcher Block Act,*[15] introduced by bipartisan Members of this Committee, to provide Federal assistance to new processors, or those who wish to expand operations.

We were further pleased to see USDA acknowledge this need for more processing infrastructure and welcomed the Agency's announcement that over $500 million would be committed to support new market entrants in expanding beef packing capacity. While the addition of any new hook space is beneficial to remedy the current supply and demand imbalance, focusing on bringing more very small and small processors to market can provide producers additional options for processing and diversification for more resiliency within the sector overall. We submitted comments to USDA in response to their Request for Information,[16] and have attached those comments to this testimony for the Committee's convenience.

Market Oversight

Markets can only properly function when all participants play by the same rules. While much of the spread between boxed beef and fed cattle prices during the pandemic can be explained by the inherent characteristics of supply and demand, NCBA called upon the Department of Justice to investigate the major meatpackers in June 2020. The purpose of this request was to ensure that no anticompetitive behavior or illicit activity contributed to these disparate prices paid for similar commodities. To date, we have not learned the results of this investigation, nor have we received definitive confirmation that it is still ongoing. Over 100 lawmakers have signed onto letters requesting a status update from the Attorney General, and NCBA supported most of these efforts. It is imperative that cattle producers learn the Department's findings at the earliest possible opportunity. They deserve transparency and accountability.

NCBA Recommendations

Throughout cattle marketing conversations over the past sixteen months, a small but vocal minority has suggested—and continues to suggest—that low cattle prices can be remedied or balanced simply through a government mandated marketing requirement. This is not accurate. Definitively, there is no simple solution sufficient to address the myriad challenges facing our industry. To suggest that any single legislative, regulatory, or industry-led action will solve all these problems is to grossly oversimplify and mislead. Rather, progress and marked improvement will require a multifaceted response from the industry, Congress, and Federal agencies.

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[11] Aherin, Dustin. *The Case for Capacity.* RaboBank: 2020.
[12] *Cattle Report,* USDA–NASS, January 2021.
[13] *Factors that Drive Beef, Cattle Prices to Record Highs.* RaboBank: 2021.
[14] Newlin, Lacey. *So You Want to Build a Slaughter Plant?* HIGH PLAINS JOURNAL*:* 2020
[15] H.R. 4140 (117th Cong.).
[16] 86 *Fed. Reg.* 37728; Docket No. AMS–TM–21–0058.

In Congress, lawmakers should focus their efforts on bringing more transparency to the cattle marketplace, supporting small- and mid-size beef packers, promoting expansion of processing capacity, ensuring a timely reauthorization of LMR, reviewing the confidentiality obligations required of USDA, and continuing oversight of the Department of Justice to ensure their ongoing investigation reaches a swift conclusion. We are continually reminded that a handful of lawmakers, are curious about legislation to require certain levels of negotiated trade, such as the *Cattle Market Transparency Act*[17] and legislation known as "50/14."[18] Per our member-driven, grassroots policy, NCBA opposes government mandates in the cattle market at this time. Our industry-led effort to achieve price discovery must be allowed the opportunity to succeed or fail before our membership decides to seek a legislative or regulatory solution. Simply put, the midst of an ongoing market crisis is never a good time to make long-term, market altering statutory changes. Careful consideration must be given to the risk and reward of enacting market-influencing laws for hundreds of thousands of American ranchers and millions of avid beef consumers.

As Congress evaluates several legislative proposals intended to help cattle producers during these uncertain times, we urge thorough vetting and attentive evaluation of economic assessments and feedback from the entire cattle industry. As we have for over fifty years, NCBA is happy to assist the Committee in this endeavor.

Conclusion

I appreciate this opportunity to testify on behalf of NCBA's members—the men and women who put beef on the American dinner plate. It has been a difficult few years for cattle producers, and this Committee's desire to aid our industry during this time has not gone unnoticed. Your attention to these issues is greatly appreciated. As we continue to discuss creative solutions and potential paths forwards, we stand ready to assist in any way. Please do not hesitate to reach out to the NCBA Center for Public Policy at (202) 347–0228 with any questions.

ATTACHMENT 1

NCBA Supply Chain Comments (Docket No. AMS–TM–21–0034)

June 21, 2021

Dr. MELISSA R. BAILEY,
Agricultural Marketing Service,
U.S. Department of Agriculture,
Washington, D.C.

FR Docket No. AMS–TM–21–0034 (86 *Fed. Reg.* 20652)

Submitted via Regulations.gov

National Cattlemen's Beef Association Comments on Supply Chains for the Production of Agricultural Commodities and Food Products

The National Cattlemen's Beef Association (NCBA) appreciates the opportunity to submit comments in response to the Agricultural Marketing Service (AMS) Notice on Supply Chains for the Production of Agricultural Commodities and Food Products published on April 21, 2021, and NCBA looks forward to partnering with the U.S. Department of Agriculture (USDA) on initiatives to bolster cattle and beef supply chain resiliency under President Biden's "America's Supply Chains" Executive Order 14017.

NCBA is the oldest and largest national trade association representing the interest of cattle producers, with both direct members and over 250,000 members represented through its 44 state affiliate associations. Producer-driven and directed, the following comments largely focus on an array of pre-harvest matters. Given the complexity and diversity of domestic cattle and beef production and the varied issues facing each segment of production, it is important to note that these comments should not be considered all-inclusive but are reflective of our membership's priorities and the current challenges facing U.S. cattle producers.

Cattle Production is the Most Important Segment of the U.S. Agricultural Industry

According to the U.S. Department of Agriculture's (USDA) 2017 Census of Agriculture, the United States has more than 720,000 cattle ranches and farms which account for 35 percent of all U.S. agricultural operations. According to USDA–ERS, cattle production is the most important agricultural industry in the United States,

[17] S. 543 (117th Cong.).
[18] S. 949 (117th Cong.).

accounting for $62 billion in cash receipts in 2020.[1] In 2021, cattle production is forecasted to represent about 17 percent of the $391 billion in total cash receipts for agricultural commodities.[2]

U.S. cattle farms, ranches and feedlots in the United States raise about 93 million beef cattle. The vast majority are family-owned, multi-generational businesses with an average beef cow herd of 40 head. As a direct result of producer investments in scientific advancements in cattle genetics, nutrition, production practices, the U.S. is a global leader in cattle production efficiency. In fact, the U.S. produces 18 percent of the world's beef with six percent of the world's cattle.[3] In addition, cattle producers own or care for roughly 35 percent of the U.S. landmass. Because of this active management, they steward and improve over 800 million acres of wildlife habitat, unique landmarks, and delicate ecosystems.[4]

According to USDA's 2020 Report on Livestock Slaughter, "[b]eef production totaled 27.2 billion pounds, up slightly from the previous year."[5] The report also states that "[c]ommercial cattle slaughter during 2020 totaled 32.8 million head, down two percent from 2019, with Federal inspection comprising 98.1 percent of the total. The average live weight was 1,373 pounds, up 29 pounds from a year ago. Steers comprised 49.3 percent of the total federally inspected cattle slaughter, heifers 29.4 percent, dairy cows 9.5 percent, other cows 10.2 percent, and bulls 1.6 percent."[6]

I. Overview of the Cattle and Beef Supply Chain

The highly complex U.S. cattle and beef supply chain is best understood in two segments: pre-harvest and post-harvest.

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[1] *USDA Economic Research Service,* "Annual Cash Receipts by Commodity," Accessed 06/15/2021.

[2] *USDA Economic Research Service,* "Sector at a Glance," Accessed 06/15/2021.

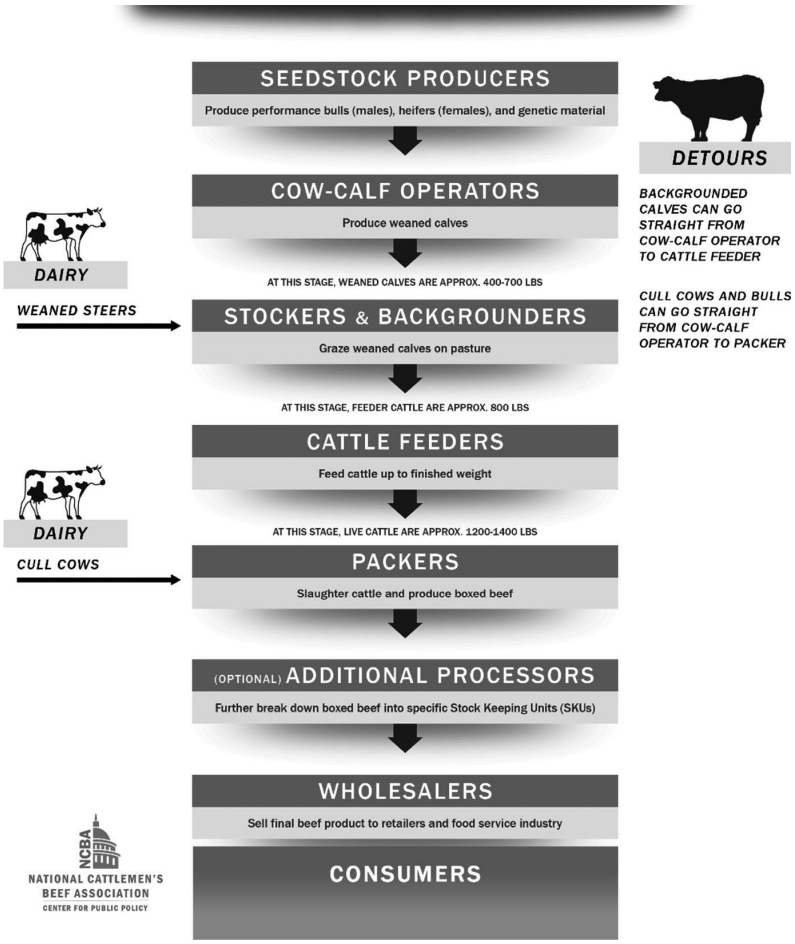
[3] Source: UN FAOSTAT, 2018. *http://www.fao.org/faostat/en/#home*.

[4] Andreini, E.M., "How does upcycling relate to beef production?", *https://www.beefresearch.org/resources/beef-sustainability/fact-sheets/upcycling*, 2019.

[5] USDA-National Agricultural Statistics Service, "Livestock Slaughter, 2020 Summary," April 2021.

[6] *Id.*

U.S. Cattle and Beef Supply Chain



Pre-Harvest (Cattle Supply Chain)

- **Seedstock:** While it is widely considered that the cow-calf sector is beginning of the supply chain, the pre-cursor to the cow-calf sector is the seedstock sector. The seedstock sector consists of producers who specialize in raising prized breeding stock (bulls, heifers) as well as genetics (semen and embryos) and marketing their genetics to cow-calf producers. While many calves are sired the old-fashioned way, there are segments of the cattle industry who also use artificial insemination—a practice that is more common in dairy cattle but has an increasing presence in beef cattle.
- **Cow-calf Operations:** The cattle supply chain begins with ranchers who maintain a breeding herd of mother cows that give birth to calves once a year. When a calf is born, it weighs about 60 to 100 pounds. Over the next few months, each calf will live off its mother's milk and graze on grass pastures.
- **Weaned Calves:** Calves are weaned from their mother's milk at about 6 to 10 months of age when they weigh between 450 and 700 pounds. These calves continue to graze on grass pastures. About ⅓ of the female calves will stay on the farm as heifers and continue to grow until they become new mother cows the following year. Heifers not retained for reproduction purposes will continue to graze in pastures until they gain enough weight to be transferred to a feedlot. Bulls are male calves that are retained for breeding purposes. A vast majority

of males are not retained as breeding stock, and therefore become steers. Depending on their size and weight, steers will either be put on grass for a while to gain weight as stockers or will be sent directly to feedlots.

- **Stockers/Backgrounders:** Cattle that are weaned but have not reached an ideal weight for feedlots are referred to as stockers or backgrounders. Stockers/backgrounders will continue to grow and thrive by grazing on grass and pastures with ranchers providing supplemental feed including vitamins and minerals to meet all their nutritional needs. Once cattle reach an ideal weight (750–850 lbs.), usually between 6 and 12 months of age, they will be sold and shipped to a feedlot as feeder cattle.
- **Feed Lot:** Most feeder cattle will spend between 4–6 months at the feedlot, where they are cared for daily by nutritionists, veterinarians and pen riders who ensure cattle have constant access to water and a balanced diet that may include grains (corn, wheat, soybean meal), roughage (hay and grass) and local renewable byproducts (distillers grains and beet pulp). Once cattle reach market weight (typically 1,200 to 1,400 pounds at 18 to 22 months of age), they are sent to a packing plant (also called a processing facility).
- **Livestock Markets:** Feeder cattle and live cattle are sold at livestock auction markets or through various marketing arrangements. Seed stock (cows and bulls) that no longer produce are sold to packers in livestock auction markets. Cattle producers may work with an auction market to sell their cattle to other cattle producers, to feedlots, or packers. Historically, many livestock markets conducted in-person sales, but many livestock markets have capitalized on technological advancements and now host online auctions.
- **Dairy Stock:** Most males in dairy breeds are weaned as steers, backgrounded, and sent to the feedlot before slaughter. Most females are kept until they can no longer produce calves or milk production declines, then they go to slaughter. Roughly ten percent of cattle slaughtered in 2020 were dairy cows.[7]
- **International Livestock Trade, Cattle Imports & Exports:** The United States, Canada, and Mexico regularly trade livestock at multiple stages of life. American producers purchase calves from Mexico to background on grass until they are large enough to go to feedlots. American feedlots purchase feeder cattle from Canada and Mexico. American packers purchase live cattle, direct-for-slaughter, from Canada. Less than two percent of cattle in the United States are foreign-born.

  Our robust domestic feeding and packing infrastructure leaves little incentive to export feeder cattle and live cattle, although there has been a recent increase in American feeder cattle sales to Canadian feedlots, including Holstein calves from Midwestern dairies. Overall, U.S. cattle exports are mostly seedstock and genetics sold to producers in Canada, Mexico, Brazil, China, and Argentina.

Critical Goods for Pre-Harvest Supply Chain

- **Livestock/Livestock Genetics:** Livestock serve as the integral commodity for the entire cattle and beef supply chain. Without cattle, there is no supply chain. The U.S. cattle sector consists of roughly 93 million head of cattle raised in all 50 states, with vast geographic and climatic diversity that provides opportunities for producers to use different cattle breeds to produce high-quality beef. While some producers use purebred genetics, there are many crossbred or composite cattle that are created to maximize strengths of different breeds. We know the genetics of some breeds contribute to more tender steak while other breeds of cattle are known for production qualities such as calving ease, growth efficiency or increased muscle mass. Each level of the pre-harvest supply chain depends heavily on the safety, health, and quality of each animal. Properly caring for cattle increases the likelihood that a carcass will grade better upon slaughter and yield greater economic return.
- **Animal Health:** A primary goal for cattle production at each level within the supply chain, animal health is prioritized in all cattle operations. While some aspects of animal care may vary due to the complexity of the beef lifecycle and the geographic variation across the country, the total commitment to optimal animal care remains consistent among beef cattle farmers and ranchers. Cattle producers work closely with their veterinarians to properly apply scientific advancements and innovations for animal health into their operations. Preventive health care in the form of herd health programs, vaccination protocols, disease control, nutritional management, and low stress handling practices contribute

[7] *Id.*

to healthier cattle and result in increased stewardship of resources. For over thirty years, cattlemen and women have promoted and subscribed to Beef Quality Assurance (BQA) program standards in such areas as cattle care and handling, feedlot management, transportation, and antimicrobial stewardship. The industry actively promotes the national BQA program to provide greater guidance for producers in these areas and to assure a high quality of production nationwide for beef cattle. The BQA program is a nationally coordinated, state-implemented program that provides accepted scientific knowledge coupled with common-sense husbandry techniques to raise cattle under optimum management and environmental conditions.[8] BQA exists as the gold standard to ensure that cattle in the United States remain healthy, are raised humanely, and beef is wholesome and safe for consumers.

- **Work Force—Cattle producers:** Cattle production is a family-centered business with 91 percent of cattle operations being family-owned[9] and operated. With that said, the cattle industry is very competitive, and success is never guaranteed. Many U.S. cattle producers are highly skilled, highly educated workers who are a combination of business manager, entrepreneur, soil and water expert, veterinarian, tax preparer, and attorney. Successful cattle production is not something that can be taught in matter of weeks or months—it requires years, sometimes generations of experience to be economically and environmentally sustainable. Yet even the most successful cattle operations are subject to economic downturns and factors beyond their control. Many cattle producers are also involved in their communities and churches, providing another layer of value to rural communities. According to the *2017 Cattlemen's Stewardship Review,* "nearly 90 percent of farmers and ranchers state that ensuring and maintaining a healthy workforce is important to the future of the industry. This includes a focus on safety, job creation/fair compensation and management plans. According to the checkoff-funded Sustainability Lifecycle Assessment, there was a 32 percent reduction in occupational illnesses and accidents between 2005 and 2011. This achievement was the product of many segments of the supply chain improving their protocols, including the packing plant sector. Additionally, the implementation of BQA animal handling programs also creates a safer environment for both the employees and the cattle. 82 percent of farmers and ranchers agree that fair compensation for labor is a high priority for the future of the beef industry. Because many small cattle farmers and ranchers employ only family members, the inclusion of formalized employee training programs is more prevalent in larger operations. The majority (73 percent) of feedlots have nutritional management plans in place, and nearly 60 percent have environment plans as well. These practices all contribute to a more equipped and engaged workforce."[10]
- **Work Force—Veterinarians:** Veterinarians serve as integral members of the cattle health team on beef cattle operations and ensure the use of the best preventative health and husbandry practices for cattle. Veterinary nutritionists formulate rations for the nutritional management of both healthy animals and those with one or more diseases. Cattle operations throughout the supply chain may employ or retain consulting veterinarians who advise on all aspects of cattle health and nutrition. The American Veterinary Medical Association reported a total membership of 92,000 veterinarians in 2018 with 8159 reporting as practicing on food animal species. The American Association of Bovine Practitioners is composed of over 5000 veterinarians and veterinary students interested in bovine medicine and surgery. The Academy of Veterinary Consultants, composed of mostly veterinary nutritionists and consultants for the cattle feeding sector, also serves as an organization for veterinarians who exclusively practice bovine veterinary medicine, with a current membership of 852 veterinarians.

  A shortage of veterinarians practicing food animal medicine currently exists in rural veterinary practice areas across the United States. The USDA, National Institute of Food and Agriculture maintains a veterinary services shortages map in the United States for a given fiscal year cycle.[11] Economic issues surrounding veterinary college debt and lower veterinary salary ranges for rural large animal veterinary practitioners play a major role in the veterinary shortage problems experienced in rural settings. According to the American Veterinary Medical Association, graduates of veterinary colleges in 2020 incurred an

[8] Beef Quality Assurance Program, *BQA.org*.
[9] *2017 Cattlemen's Stewardship Review,* p. 54.
[10] *2017 Cattlemen's Stewardship Review,* p. 58.
[11] *https://nifa.usda.gov/vmlrp-map*.

average student debt of $188,000.[12] Veterinary student loan debt combined with lower expected veterinary salaries in rural practice areas contributes to the current shortage of veterinary care for some regions of the country.

- **Access to Capital:** Cattle production is a capital-intensive enterprise. As such, cattle producers depend upon access to financing to increase efficiency, maintain solvency, and ensure continuity in their businesses. One of the greatest impediments to beginning farmers and ranchers and the continued success of multi-generational operations alike is access to capital. While capital needs vary by operation size and structure, in almost all cases those needs are extraordinarily high. For cattle production, land is the most expensive up-front cost. Unless a producer inherits the land, they must compete with more established cattle producers, farmers, and real estate developers who can offer more competitive bids.

  USDA offers a number of tools to bolster access to land and capital, with targeted support for beginning farmers and ranchers. It is important to note however, that other sources of capital are also needed to purchase cattle, equipment, animal health products, feed, and other goods and services—and access to financing often supports agricultural producers in the wake of severe weather events and market volatility. The unfortunate reality is that the steady decline of rural financial institutions and a growing disconnect between Wall Street financiers and rural America has left fewer financial lending options for cattle producers. USDA and other relevant agencies can help bridge the gap and address deficiencies in financing for rural businesses.
- **Feed/Feed Additives:** The diet of beef cattle contributes to the efficient growth of the animal and the production of wholesome, delicious, and nutritious beef. Cattle spend most of their lives grazing on grass—and some continue to graze solely on grass their entire lives to produce grass-finished beef. Some ranchers choose to raise grass-finished beef because they live in an area with lush grasses. But most beef cattle—approximately 95 percent—are finished in a feedlot on grains like soybean meal, cotton seed hulls, barley, sugar beets, and distillers grains.[13] Cattle in feedlots typically reach market weight around 3 to 6 months earlier than those raised on grass alone. Cattle in feedlots are fed a carefully crafted diet consisting of grains, roughage, and vitamins and minerals. A variety of feed ingredients are used to help optimize cattle nutrient intake and maintain their natural muscle-building ability. While at the feedlots, cattle are fed rations that are formulated by an animal nutritionist whose sole responsibility is to ensure the animals are receiving all the nutrients necessary for them to thrive. It is important to point out that beef cattle, like other ruminants, have a digestive system that includes a multi-compartment stomach that can digest fibrous materials such as grass, corn stalks, cottonseeds, alfalfa and grass hays, for example.
- **Transportation:** Cattle rarely spend their entire lives on one operation. In fact, many cattle produced on the East and West Coasts will travel thousands of miles to their ultimate destination. As cattle develop and advance to different stages of production, they are moved by truck to each segment of the supply chain. Livestock haulers are skilled drivers who are critically important to the cattle supply chain because they understand how to safely load, transport, and unload cattle at each destination. Proper handling and transportation of cattle can reduce sickness in calves, prevent bruises, and improve the quality of the meat from these animals. The BQA Transportation Program provides training specific for livestock haulers.[14]

Post-Harvest (Beef Supply Chain)

- **Packer:** After cattle are received and inspected at the packing plant and are deemed safe for processing, they undergo substantial transformation and become beef. United States Department of Agriculture (USDA) inspectors are stationed in all federally inspected packing plants and oversee the implementation of safety, animal welfare and quality standards from the time animals enter the plant until the final beef products are shipped to processors, wholesale customers, food service and retail outlets. If animals are sick or have an injury, the USDA inspector will deem the animal unfit for human consumption, and the animal will not enter the food supply. In addition to beef cuts, packers utilize the entire carcass by marketing hides, blood, tallow, and other parts for

[12] "AVMA secures reintroduction of House legislation addressing student debt, veterinary shortages", *AVMA.org,* 04/08/2021.
[13] *2017 Cattlemen's Stewardship Review,* pp.18–19.
[14] BQA Transportation Program, *https://www.bqa.org/programs/transportation-program.*

rendering. The main product of a packing plant is boxed beef. This product is sold to wholesale customers, processors and further processors.

- **Processor/Further Processor:** A processor takes carcasses, wholesale muscle cuts, and products like beef trimmings and fabricates them to meet specific product demands from retail markets and food service providers. Further processing responds to demand from retail markets and food service providers that have specific product demands such as curing, smoking, cooking, salting, *etc.* A significant volume of beef imports, approximately 72 percent, are lean beef trimmings that are combined with fatty trimmings to make ground beef for hamburgers.[15]
- **Wholesale Customer:** Wholesale customers are the middlemen between packers and processors, and the food service and retail sectors. Wholesale customers typically make bulk purchases and have the logistical capacity to provide food service and retail markets with timely and customized deliveries.
- **Food Service Sector:** Food Service applies to restaurants, cafeterias, and other venues where food is consumed away from home. About 60 percent of annual beef demand is consumed at restaurants, schools, entertainment venues, and other non-retail locations. COVID–19 restrictions negatively impacted traditional service at restaurants and forced many locations to shift to carry-out and delivery options. The food service sector suffered significantly due to COVID–19 restrictions, resulting in an 11 percent loss in sales.[16]
- **Retail Sector:** Retail sales apply to food that is purchased at grocery stores and is typically consumed at home. COVID–19 restrictions and supply chain disruptions caused a significant increase in retail demand, with 83 percent of meals being cooked or consumed at home. The shift in retail demand also created a shift in buying patterns, with consumers stocking up on items like ground beef and shifting to online purchases.[17]
- **Consumer:** The consumer is the ultimate destination for beef carcass products, whether it is beef, hides, or the myriad of products that are rendered from the carcass (pharmaceuticals, cosmetics, *etc.*). Consumers can choose from over 30 different lean cuts of beef. Beef is a nutrient-packed protein which provides ten essential nutrients and, on average, half the protein Daily Value in a single 3 ounce cooked serving. According to USDA, a lean beef serving of about 170 calories (3 oz., cooked, with visible fat trimmed) contains less than 10 grams of total fat, 4.5 grams or less of saturated fat, and less than 95 mg of cholesterol.[18] Consumers can also learn more about the nutritional qualities of beef, view recipes to properly cook and enjoy beef, and learn more about how cattle are sustainably raised at *www.beefitswhatsfordinner.com*.

Critical Goods for Post-Harvest

- **Work Force—Need for Skilled Labor in Packing Plants:** The beef supply chain cannot function properly without a steady supply of skilled labor. Absent changes to COVID benefits for individual workers, NCBA believes changes to the H–2A program to include year-round labor is one viable solution to our labor shortage. Additionally, the ability to obtain year-round labor for employment at processing facilities, feedlots, and cow-calf operations will continue to be a struggle for the cattle industry without a multi-faceted approach to address a number of weaknesses that exist from pasture to plate. This includes allowing appropriate flexibilities to address near-term in-plant shortages, providing additional resources for workforce training and development for highly skilled technical workers, in-plant line operators, meat scientists and veterinarians alike, and other potential regulatory changes to assist our year-round cattle industry overall in closing the gaps in our ongoing labor shortage.
- **Work Force—FSIS Inspectors:** Under the Federal Meat Inspection Act of 1906 and related legislation, all meat, poultry and egg products produced here in the United States, or imported meat products, must be inspected by a Federal food safety inspector and that service must be paid for by the Federal Government. Without Federal food safety inspection, no product can be sold or shipped interstate. FSIS inspectors are vitally important to the supply chain, and we encourage the government to continue designating them as essential

[15] "Exports and imports of beef both add value," Dr. Derrell Peel, Oklahoma State University, September 2019.
[16] "Hindsight 2020: Retail and Foodservice Trends Through the Pandemic", *beefitswhatsfordinner.com,* 03/26/2021.
[17] *Id.*
[18] "Lean Beef Choices for Today's Consumer", *beefitswhatsfordinner.com,* 09/23/2019.

staff who will not be subject to government shutdowns and political gamesmanship.

II. Impact of COVID–19 on the Cattle and Beef Industry, and the Industry's Response

As 2020 began, the cattle industry was cautiously optimistic about opportunities for profitability. Supply fundamentals were trending bullish, with plentiful grain, relatively low feed costs, record low unemployment and encouraging news relative to expanded foreign market access, and as a result, prospects looked promising for U.S. cattle producers. Unfortunately, in part due to the complex and highly fragmented nature of the beef supply chain, the COVID–19 pandemic created a unique set of challenges for each segment of our industry. Further, this extreme market volatility resulted in disproportionate economic harm for cattle ranchers and farmers, with initial estimates projecting roughly $13.6 billion in total economic damage.

Throughout the pandemic, NCBA worked closely with stakeholders across of the cattle and beef supply chain to preserve continuity while at the same time prioritizing the health and safety of those who produce, process and deliver beef, as well as the safety of live animals and beef products alike (please see attachment for greater description). The Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020, the Families First Coronavirus Response Act 2020, and other USDA existing authorities delivered much needed support to producers throughout the pandemic, and in particular, the Coronavirus Food Assistance Program (CFAP) provided vital financial assistance to buoy U.S. cattle producers. Moving forward, NCBA hopes to work closely with the Biden Administration to build and improve upon existing COVID–19 response efforts, including but not limited to the following:

- **Supply Chain:** For cattle producers, the most calamitous effect of the pandemic, by far, was the temporary closure of, and slowdowns at, beef processing facilities. It is estimated that at the height of slowdowns the industry realized a nearly 40 percent reduction in weekly processing capacity. The result was catastrophic for cattle producers. While the industry has made tremendous strides toward recovery, the effects of this black swan event can still be seen in recent *Cattle on Feed* Reports, the cattle futures market, and in cash bidding throughout the fed cattle complex. Fortunately, unlike other livestock species, no cattle were depopulated because of the supply shocks brought on by COVID–19. If we are to avoid making this the most humane option, every effort must be made to safeguard beef production in the meatpacking sector and ensure no further reduction in beef processing capacity occurs.
- **Workforce:** Worker safety continues to be of paramount concern for cattle producers. The challenges packing plants and producer suppliers faced in the early stages of the pandemic were unprecedented. However, the supply chain remains intact today due to the critical infrastructure designation which ensured the availability of resources to implement critical protocols and best practices like providing supplemental protective equipment, implementing additional cleaning procedures, and employing social distancing in the plants. NCBA supported the Centers for Disease Control recommendation to first administer COVID–19 vaccines to health care workers and certain other high-risk individuals, and we greatly appreciate the prioritization of COVID–19 vaccinations for meat industry workers, including USDA inspectors and livestock suppliers.
- **Transportation:** On May 26, the Federal Motor Carrier Safety Administration (FMCSA) announced an extension of the Hours-of-Service Emergency Declaration through August 31, 2021. NCBA anticipates there will be a continued need for this declaration through the duration of the pandemic. This critical step not only keeps cattle haulers in business, but it is also the only way to ensure grocery stores remained stocked by preserving movement across the supply chain even when the flow of commerce is disrupted by processing plant closures. USDA has often served an important role, advocating for the agricultural sectors unique transportation needs with Federal Motor Carrier Safety Administration, and we respectfully encourage USDA to maintain those efforts under the Biden Administration.

III. Ongoing Issues Facing the Industry and Recommended Solutions

(i.) Promote Economic Sustainability through Robust Price Discovery and Increased Processing Capacity

- **Price Discovery & Market Transparency:** Profitability in the cattle production segments of the beef supply chain is largely influenced by producers' ability to discover prices at the fed cattle level. Since the chief end-value of beef cattle is the dressed carcass, prices paid for weaned calves, stockers, and feeders are

a derivative of the fed cattle price. While there are myriad tools available to producers to discover price, the most widely utilized are the weighted average prices paid through negotiated transactions of fed cattle and reported under Livestock Mandatory Reporting (LMR). USDA is prohibited by law from disclosing the identifying information or proprietary business information of reporting entities [7 U.S.C. § 1636(a)]. To implement this mandate, USDA established the "3/70/20" confidentiality guidelines in 2001. Under this provision, price reports are published provided three conditions are met for each report over the most recent 60 day period:

(1) At least three reporting entities provide data at least 50 percent of the time;

(2) No single reporting entity provides more than 70 percent of the data for a report; and

(3) No single reporting entity may be the sole reporting entity for an individual report more than 20 percent of the time.

While NCBA recognizes the Agency's requirement to balance the need for information with safeguarding confidentiality, the 3/70/20 guidelines have resulted in instances of nonreporting throughout the major cattle feeding regions. Recently, this problem has been most apparent in the Colorado region. Cattle producers rely upon the information reported under LMR to make informed business decisions on their operations and are placed at a competitive disadvantage when information is not published due to confidentiality. NCBA encourages USDA to revisit the 3/70/20 guidelines and evaluate innovative ways to reduce instances of nonreporting while adhering to statutory obligations.

NCBA appreciates and supports the wide array of LMR reports published by the Agricultural Marketing Service (USDA–AMS). Though LMR is a critical tool which provides essential information to cattle producers, improvements could be made to the implementation of the program to expand the information which is reported. As the industry evolves over time, NCBA encourages USDA–AMS to continuously solicit feedback from market participants to identify new useful information which could be published with regularity. For example, NCBA supports the publication of next-day beef carcass weights, base prices for formula transactions, and a cattle contract library similar to the existing library for swine contracts.

- **Processing Capacity & Negotiating Leverage:** Adequate beef processing capacity is critical to maintaining profitability in the cattle industry and a steady supply of essential food products to consumers. Currently, there is a shortage of adequate processing capacity (commonly referred to as "hook space") throughout the system. A recent study by Rabobank [19] found that excess operational beef processing capacity—or hooks available in addition to those used to process existing fed cattle supplies—fell to zero in late 2016 and turned negative in early 2017. The same study found that, under the current dynamics of supply and demand, the industry could economically accommodate an additional 5,700 hooks of daily processing capacity. This equates to roughly 1.5 million additional animals per year.

  At present, the processing sector represents a bottleneck in the overall beef supply chain. The result has a negative effect on cattle producer leverage in fed cattle negotiations. When cattle supplies exceed the capacity to process them, the livestock become a less scarce resource and cattle prices decline. It is important to note that this is independent of demand for the end-product, in this case beef. The most pointed examples of this can be found in the 2019 fire at Tyson Foods' Finney County beef processing facility in Holcomb, KS, and the COVID–19 pandemic. In both cases, operational beef processing capacity utilization dramatically fell following temporary closures of high-throughput beef plants. As a result, cattle prices declined, and boxed beef values drastically increased according to a report issued by USDA–AMS in the summer of 2020.[20]

  To improve producer leverage in fed cattle negotiations, either cattle supplies must be reduced, or processing capacity must be expanded. Herd contractions and expansions occur naturally over the course of a somewhat predictable 10

[19] Aherin, Dustin, RaboBank, October 2020 *https://research.rabobank.com/far/en/sectors/animal-protein/the-case-for-capacity.html*.

[20] *Boxed Beef & Fed Cattle Price Spread Investigation Report,* USDA–AMS, July 2020 *https://www.ams.usda.gov/sites/default/files/media/CattleandBeefPriceMarginReport.pdf*.

year cycle. Currently, U.S. cattle inventories are cyclically high,[21] but beef demand is also high both domestically and in our major export markets.[22] The clearest solution to meeting this demand while fostering profitability throughout the supply chain is to expand beef processing capacity.

Meatpackers of all sizes face similar operational challenges, the most consistent and severe of which is labor recruitment and retention. The largest barrier to entry, however, is access to sufficient capital for construction. The industry average startup cost for a meat processing facility is roughly $100,000 per hook.[23] This means that a modest 25 head per day plant would need to secure $2.5 million in financing just to build the infrastructure. As a further complication, traditional lending institutions are often unable to provide adequate financing due to the risk profile assessed to meatpacking business models.

NCBA has partnered with lawmakers in Congress to introduce legislation authorizing federally guaranteed, low-interest loans to prospective meatpackers. As these proposals work through the legislative process, we urge USDA to evaluate existing programs and authorities where resources can immediately be directed to support the expansion of beef processing capacity. During such evaluations, we encourage special attention to the Business and Industry Loan Guarantee program under USDA's Rural Development mission area, and unused funds appropriated to the Agency under the Coronavirus Aid, Response, and Economic Security (CARES) Act.[24]

Expanding domestic beef processing capacity is an important mid-to-long-term strategy to improve resiliency in our supply chain. However, the existing infrastructure is today being underutilized. Most major meatpackers are not operating plants at 100 percent throughput capacity. Unfortunately, due to the proprietary nature of firm-by-firm and plant-by-plant efficiency data, the exact number of hooks which are not being utilized is unknown. NCBA urges USDA to examine ways to support the industry in reaching 100 percent processing capacity utilization.

(ii) Promote Animal Health by Prioritizing Prevention and Preparedness

Cattle producers recognize that a safe, secure, and healthy cattle herd is the foundation of a resilient cattle and beef supply chain. Without question, farmers and ranchers have long prioritized the welfare of livestock, recognizing that good animal health, care, production, and handling practices are essential to efficient and profitable production. The U.S. cattle and beef industry strongly supports investment in agricultural research related to animal health and productivity, coupled with producer education and extension services, to properly apply scientific advancements and innovations into our cattle operations to promote healthier cattle and greater stewardship of resources. The combination of scientific research and real-world application strengthens our food production capabilities and increases the health and safety of our food animals and the people who care for them. NCBA encourages the Biden Administration to work closely with cattle producers in addressing the following issues related to animal health and the NCBA-recommended solutions.

(iii) Prioritize Animal Disease Prevention and Preparedness

NCBA served as a staunch advocate for the animal health provisions authorized under the 2018 Farm Bill, including expansions to the National Animal Disease Preparedness and Response Program (NADPRP) and the National Animal Health Laboratory Network (NAHLN), as well as the establishment of the National Animal Vaccine and Veterinary Countermeasures Bank (NAVVCB). These programs are critically important for the health and protection of our domestic cattle herd. NCBA hopes to serve as a resource for the Biden Administration on programmatic implementation and believes there is ample opportunity for continued partnership relative to the future development and expansion of these programs. Additionally, NCBA seeks to remain an active participant in traceability conversations with USDA. In keeping with the stated objec-

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[21] *Cattle,* USDA NASS, January 2021 *https://downloads.usda.library.cornell.edu/usda-esmis/files/h702q636h/n009ww19g/9880wj45t/catl0121.pdf*.

[22] *Factors that drive beef, cattle prices to record highs,* RaboBank, June 2021 *https://www.meatpoultry.com/articles/25040-rabobank-factors-that-drive-beef-cattle-prices-to-record-highs*.

[23] Newlin, Lacey, *So you want to build a slaughter plant?,* HIGH PLAINS JOURNAL, June 2020, *https://www.hpj.com/livestock/so-you-want-to-build-a-slaughter-plant/article_a033a44e-acaf-11ea-a32d-63beecbd5f05.html*.

[24] H.R. 748, 116th Congress, *https://www.congress.gov/116/bills/hr748/BILLS-116hr748enr.pdf*.

tive in the Beef Industry Long Range plan (2021–2025)[25] to make traceability a reality for the U.S. beef cattle industry, NCBA hopes to work with USDA's Animal and Plant Health Inspection Service to develop a platform for Radio-frequency identification (RFID) technology to improve animal disease traceability for the cattle industry while still prioritizing the need to safeguard data confidentiality, protect producers from liability concerns, operate at the speed of commerce, and provide an economically feasible technology transition with regard to tags and infrastructure requirements.

(iv) Monitor Safety of Imported Feed Ingredients

There are growing concerns among veterinary health professionals that imported animal feed ingredients may serve as a vector for the transmission of animal diseases such as African Swine Fever (ASF) and Foot-and-Mouth Disease (FMD). NCBA is a member of the Feed Risk Task Force, consisting of experts from USDA–APHIS and the beef, pork, dairy, and animal feed sectors. The Feed Risk Task Force meets regularly to share information and recommendations to prevent the introduction of pathogens into and within the United States via imported feed products. The Feed Risk Task Force work led to the establishment of a resolution at U.S. Animal Health Association (USAHA) in 2020 titled "Feed Import Restrictions to Protect Against ASF Importation in Feed".[26] In summary, USAHA asked the U.S. government to restrict the importation of feed and/or feed ingredients from countries that are positive for ASF, and to create enforceable standards for affected countries to reduce the risk of importing contaminated feed or feed ingredients. While ASF does not directly impact cattle health, there is great concern that there is similar risk for the transmission of FMD in imported feed. NCBA encourages USDA and other pertinent agencies to work with the Feed Risk Task Force to identify risks associated with imported feed and feed ingredients and take necessary steps to reduce associated risks.

(v) Improve Access to Biotechnology

It is important for NCBA and the Biden Administration to continue to modernize the regulatory framework for animal biotechnology. NCBA supports the establishment of regulatory pathways for animal biotechnology that facilitate innovation and provide timely solutions for existing problems of morbidity and mortality related to disease processes in cattle in the United States. Gene-editing technology offers the opportunity to alter the genome to eliminate some disease processes in animals and thereby, improve productivity, reduce antimicrobial drug use, and possibly even lower the risk for the development of antimicrobial resistance over time. NCBA encourages the Biden Administration to strongly consider moving all pre-market and post-market regulatory authority for animal biotechnology (other than for medical uses) from the Food and Drug Administration to the United States Department of Agriculture through a mutual order of understanding between the two agencies. Greater access to biotechnology will empower cattle producers to innovate and improve production methods while addressing animal health and climate concerns.

(vi) Promote Antimicrobial Stewardship

NCBA has demonstrated a long history of working to promote the responsible use of antimicrobial drugs to prevent, control, and treat diseases in cattle. NCBA has worked with FDA to advance judicious antimicrobial use through our support of GFI #209 and GFI #213, as well as first establishing "A Beef Producers Guide for Judicious Use of Antibiotics in Cattle" to direct responsible antimicrobial drug use in the cattle industry over 30 years ago. As FDA implements their 5 year strategy, Supporting Antimicrobial Stewardship in Veterinary Settings, NCBA hopes to continue to collaborate with the agency to achieve best stewardship practices while also preserving uses in animal agriculture for the antimicrobial tools necessary to prevent, control, and treat diseases in the U.S. cattle herd. We are especially interested in providing our feedback on a proposed concept paper concerning the duration of use labeling for medically important antimicrobial drugs used in animal feed that currently lack a defined duration of use. As referenced in NCBA's comments to the agency in response to a 2017 FDA Request for Information (RFI) in the *Federal Register,* NCBA called for scientific evidence to support all FDA decision-making on defining durations of use for the specific disease conditions, especially the vector-

[25] *https://www.beeflongrangeplan.com/*.
[26] *https://www.usaha.org/usaha-resolutions*.

borne diseases, as well as consideration for the effects of any proposed changes on animal health and welfare. FDA supports veterinary oversight of antimicrobial drugs and NCBA supports providing the necessary flexibility in duration of use labeling for veterinarians to provide adequate care for their animal patients.

(vii) Promote Cattle Producer Engagement to Address Antimicrobial Resistance

NCBA is actively working to prevent the development of antimicrobial resistance thorough our involvement with antimicrobial resistance research as a member of the Executive Committee for the Foundation for Food and Agriculture Research, International Consortium for Antimicrobial Stewardship in Agriculture. In the past, NCBA's participation in the Association of Public Land Grant Universities and American Association of Veterinary Medical Colleges Task Force (2015) led to the formation of the National Institute of Antimicrobial Resistance Research and Education. Work on the organizational committee for the Second International Symposium on Alternatives to Antibiotics at the OIE (2016), and successful engagement on the CDC Antimicrobial Resistance Challenge project (2019) also demonstrate NCBA's commitment to seeking solutions for antimicrobial resistance. Working collaboratively to limit the development of antimicrobial resistance is a priority for preserving antimicrobial drug effectiveness and protecting human and animal health. In the past, the NARMS program, a collaboration between FDA, CDC, USDA, state and local health departments, and universities, has provided quality antimicrobial resistance information for use in making better informed decisions concerning antimicrobial drug use. NCBA remains concerned that the new NARMS strategic plan (2021–2025) is highly aspirational for a historically resource-limited program and will require increased interagency cooperation and resources to meet the newly expanded scope and enhanced objectives. NCBA also recognizes the greater role of bioinformatics for data analysis in NARMS and requests that the agency establish a clear science-based pathway for data attribution. We caution against the risk of sampling bias within complex and dynamic environments. Finally, NCBA requests a strong commitment by FDA for increased stakeholder outreach and interagency coordination for the NARMS program. NCBA was disappointed by the recent lack of agency collaboration with industry stakeholders, who have been consistently supportive of the NARMS program, when developing the updated NARMS strategic plan.

(viii) Ranking of Antimicrobial Drugs According to Their Importance in Human Medicine

Historically, animal agriculture stakeholders have engaged more closely with the Center for Veterinary Medicine at FDA than with the other organizational units in the agency. At the same time, NCBA hopes to engage with the Center for Drug Evaluation and Research in the upcoming year to better inform CDER of the possible implications for animal agriculture resulting from future significant changes in the language of GFI #152 beyond the proposed updated rankings for antimicrobials regarding their importance to human medicine. While changes to the language of GFI #152 were mentioned at the public meeting on November 16, no definite revisions for the guidance were proposed in the concept paper. Under a One Health approach, revisions to GFI #152 to promote human health should also protect animal health. Additionally, revisions should not be structured to encourage the use of antimicrobial resistance as a future non-tariff trade barrier.

(ix) The Importance of Technology in Addressing Animal Health and Achieving Climate Goals

Multiple ionophores have been marketed for use in food animals in the United States since 1975. They were first identified as coccidiosis control agents in poultry, then were discovered to have significant performance advantages in cattle as well as coccidiosis control, reduction of rumen acidosis and bloat in beef feedlots, and pulmonary emphysema due to lush pasture conditions. Ionophores comprise the majority of non-medically important antibiotics sold for food animals in the United States. Antibiotic resistance to the ionophores is only able to be estimated based on epidemiological cutoffs, as no clinical cutoffs related to *in-vivo* efficacy have been established. No genetic resistance elements have been identified and genetic transfer has only rarely been suggested in the literature. Findings indicate that use of the ionophores in food animals poses an almost nonexistent risk to animal or human health, either through co-selection for medically important antibiotic resistance or altering bacterial populations to increase the shedding of potential foodborne pathogens. Maintaining

access to this technology is critical to the cattle industry's ability to increase our sustainability footprint. Without these products, USDA will not see the agriculture industry reach its goals of reducing environmental impacts and increasing productivity.

NCBA also encourages USDA to collaborate with other Federal agencies in prioritizing the approval of products that reduce enteric methane production while maintaining or improving animal performance. Products that reduce methane emissions at the expense of animal performance are fatally flawed and will likely never reach "scalability." To provide value to both producers and consumers, methane inhibitors should simultaneously limit direct methane emissions while increasing growth efficiency. USDA should consider these criteria when evaluating products to maximize the impact of taxpayer dollars.

(x) Promote Safe and Efficient Transportation of Livestock

- **Hours of Service Exemption for Livestock Haulers:** Livestock haulers play an integral role in the U.S. cattle and beef supply chain by transporting cattle across the country. Unfortunately, current Federal law imposes a significant burden on livestock haulers as well as potential risks for animal welfare in certain situations. The implementation of electronic logging devices (ELDs) and existing Hours-of-Service (HOS) rules pose unique challenges for livestock haulers. HOS rules limit livestock haulers to 14 hours of on-duty time, a maximum drive time of 11 hours, and then 10 consecutive hours of rest. These time requirements are insufficient for most trips made by livestock haulers and fail to accommodate the realities of hauling live animals across the country. Unlike drivers hauling consumer goods, livestock haulers cannot simply pull over and rest for 10 consecutive hours when they run out of drive time, because it is unhealthy for livestock to be left idle on a trailer for long periods of time. Also, unloading livestock can only occur in special facilities, and repeated loading and unloading of livestock creates stress for the animal and may compromise animal welfare. While NCBA appreciates the Federal Motor Carrier Safety Administration (FMCSA) extending the emergency HOS exemptions for livestock haulers through August 31, 2021, there are long-term regulatory and statutory issues that need to be addressed in order to protect and shore-up the supply chain. First of all, the cattle industry needs a continued exemption from the ELD mandate beyond the deadline of September 30, 2021. Second, the cattle industry needs greater flexibility to operate within the HOS requirements. The current HOS exemption allows anyone hauling agricultural commodities to be exempt from HOS rules as long as they are inside the 150 air mile radius (172 road miles) of their initial starting point for that day also known as the source. NCBA hopes to secure the same exemption for the backend or destination of the agricultural commodity haul to provide further flexibility during the unloading period. It would be helpful to add this backend 150 air mile exemption to the next surface transportation reauthorization bill and we will continue to work with Members of Congress to get this accomplished. This will require a commitment from Congress to make the necessary statutory changes in the surface transportation reauthorization bill, and a commitment from FMCSA to work with livestock producers to implement changes to HOS requirements.
- **Truck Weights:** Since 1982, the Federal gross vehicle weight limit has remained at 80,000 pounds on five axles. The steady increase in the speed of commerce due to growth in consumer demand has resulted in more trucks on the road. While the Federal weight limit is restricted to federally-funded roads such as interstate highways, many states permit trucks that far exceed 80,000 pounds to operate on lower classification roads, driving through neighborhoods, by schools, and around other densely populated areas. The cattle sector depends on livestock haulers to ship cattle throughout the entire supply chain, and the added transportation costs due to truck weight restrictions creates a disparity in production costs for producers on the East and West Coasts. NCBA supports the inclusion of a program in the surface transportation reauthorization bill that would permit a ten-state pilot program to allow operation of vehicles weighing up to 91,000 pounds gross vehicle weight (GVW) with six axles on Interstate System Highways. NCBA believes this ten-state, 10 year pilot program will not only shift truck traffic to the Interstate Highway System, reducing the need for trucks to drive on smaller, more hazardous roads, but also take more trucks off the road reducing overall greenhouse gas emissions.
- **Congestion at Ports:** COVID–19 presented many supply chain challenges, including delays and disruptions at our ports. During the first months of COVID–19 shutdowns, the United States imported large amounts of lean beef trimmings from our trade partners in Australia and New Zealand—trimmings necessary

to produce ground beef. Worker availability and shortages at inspection houses created supply chain disruptions that were fortunately resolved in a matter of days, although the ripple effect was felt throughout the supply chain for a long time. Likewise, the lack of available workers to reload ships with exports added to the backlog and exacerbated supply chain disruptions. While many of the work force availability issues have improved, U.S. exports are still facing logistical challenges in our West Coast ports. There is strong demand for U.S. beef and other proteins in Asian markets, but we are hindered in fully capitalizing on that demand until the ongoing backlog is resolved.

(xi) Strengthen the Work Force of the Entire Supply Chain

The American cattle and beef industry operates at a more safe and efficient level than most countries because of our highly skilled labor force in both the pre-harvest and post-harvest sectors of the supply chain. To maintain this competitive advantage, it is important for the private sector and government to continue working together to support industry-led efforts in producer education and training, to address disruptions in labor supply by expanding access to skilled labor, and to reinforce food safety by ensuring access to food safety inspectors.

- **Promote Producer-Education and Quality Assurance Programs:** The cattle industry is actively engaged in promoting training and education for cattle producers through coordinated efforts such as the Beef Quality Assurance Program (BQA). BQA is a nationally coordinated, state-implemented program that provides accepted scientific knowledge coupled with common sense husbandry techniques to raise cattle under optimum management and environmental conditions.[27] BQA standards are consistent with principles found in the OIE Terrestrial Animal Health Code related to cattle,[28] and BQA complies with the International Organization for Standardization (ISO) Animal Welfare Management/General Requirements and Guidance for Organizations in the Food Supply Chain.[29] The ISO specification was developed in 2016 to provide a path for programs to show they are aligned with the principles of the World Organisation of Animal Health (OIE) Terrestrial Animal Health Code and ensures the welfare of farm animals across the supply chain. BQA also reinforces principles of the *Codex Alimentarius*[30] by instructing the creation and maintenance of Hazard Analysis Critical Control Points (HACCP) plans for livestock operations.[31] In response to the Centers for Disease Control (CDC) Challenge on Antimicrobial Resistance, NCBA worked to increase participation in the Beef Quality Assurance (BQA) program to ensure cattle producers are responsible and judicious in their use of antimicrobial products through every segment of the industry.[32] Other countries, like Canada and the United Kingdom, have developed similar producer programs with similar goals, with BQA as an example to follow. As greater attention is afforded to production standards and improving supply chains, BQA should be viewed as an example of higher standards achieved through producer education and training. U.S. beef consumers at home and abroad will be pleased to know that more than 85 percent of U.S. beef comes from BQA-certified farmers and ranchers.[33]
- **Need for Skilled Labor in Pre-Harvest and Post-Harvest Sectors:** The beef supply chain cannot function properly without access to skilled labor. Absent changes to COVID benefits for individual workers, NCBA believes changes to the H–2A program to include year-round labor is one viable solution to our labor shortage. Additionally, the ability to obtain year-round labor for employment at processing facilities, feedlots, and cow-calf operations will continue to be a struggle for the cattle industry without a multi-faceted approach to address weaknesses that exist from pasture to plate. This includes allowing appropriate flexibilities to address near-term in-plant shortages, providing additional resources for workforce training and development for highly skilled technical workers, in-plant line operators, meat scientists and veterinarians alike, and

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[27] *https://www.bqa.org/*.
[28] World Organisation for Animal Health, *https://www.oie.int/standard-setting/terrestrial-code/*.
[29] USDA-Agricultural Marketing Service, *https://www.ams.usda.gov/services/auditing/awap*.
[30] FAO, *www.fao.org/3/w8088e/w8088e05.htm*.
[31] *Beef Quality Assurance Program Manual, https://www.bqa.org/Media/BQA/Docs/nationalmanual.pdf*.
[32] Centers for Disease Control and Prevention, "The AMR Challenge", *https://www.cdc.gov/drugresistance/intl-activities/amr-challenge.html*.
[33] *http://www.beefitswhatsfordinner.com/raising-beef/beef-quality-assurance*.

other potential regulatory changes to assist our year-round cattle industry overall in closing the gaps in our ongoing labor shortage.

- **Support for FSIS Inspectors:** Under the Federal Meat Inspection Act of 1906 and related legislation, all meat, poultry and egg products produced here in the United States or imported must be inspected by a Federal food safety inspector and that service must be paid for by the Federal Government. Without Federal food safety inspection, no product can be sold or shipped interstate. FSIS inspectors are vitally important to the supply chain, and we encourage the government to continue designating them as essential staff who will not be subject to government shutdowns and political gamesmanship.

(xii) Encourage Climate Resiliency with Producer Engagement in Conservation Efforts

Cattle producers are America's original environmentalists, and as such, we are instrumental in building a strong and sustainable supply chain. We rely on healthy soil, clean air, and clean water to raise healthy cattle and healthy families. We strive to improve our environment at every stage of production by being efficient, responsible, and respectful of our natural resources.

From the mountains of Montana to the swamplands of Florida, livestock producers carefully manage stocking rates to create a cultivated ecosystem that supports hundreds of thousands of wildlife species, including endangered or otherwise imperiled species that would not otherwise have suitable habitat. The U.S. currently has 140 million acres enrolled in conservation programs, resulting in cleaner water and air on a tract of land approximately the size of New York and California combined.[34] Cattle grazing is the highest and best use of more than 800 million acres of permanent grassland, pasture, and rangeland, which accounts for nearly ⅓ of the continental U.S. landmass. Much of the land cattle graze is not suitable for growing other food products.[35] Raising cattle on it more than doubles the land area farmers and ranchers can use to raise food for the world's growing population. This acreage not only feeds cattle but also naturally sequesters carbon, a benefit compounded by ruminant grazing. Grazing builds deep root systems in prairie grasses, which improves soil health. Healthy soils retain more water, sequester more carbon, and increase the resiliency of our land. When properly managed, livestock grazing can be used as a tool to lower wildfire risk by controlling the amount, height, and distribution of grasses and forage that fuel wildfires.[36]

NCBA encourages USDA to consider the vital role of cattle producers in building a strong and sustainable supply chain through voluntary conservation programs, range health and fire mitigation, collaborating to address air quality, providing sound regulatory guidance for producer compliance, and using science-based metrics to accurately measure climate factors.

- **Increase Efficiency of USDA Conservation Programs:** USDA has a bevy of programs that allow for strong partnerships between agency officials the public. NCBA supports investment in voluntary conservation programs to improve public investment in existing agency priorities, while also leveraging public and private investment for improved natural resource outcomes. Voluntary conservation practices supported by research and implemented by producers with technical assistance are the key to increasing efficiency and resilience. The use of cover crops by farmers across the nation is perhaps the best example. While cover crops have been a key tool in the agricultural producer's toolbox since the mid-20th century, the producer community knew little about which cover crops were best suited for their climate and soil type. Often, the most suitable cover crop can differ between regions, states, counties, or even fields on a single farm. Years of dedicated research by USDA and land grant universities continue to develop the cover crop knowledge base. Now, farmers can utilize USDA and land-grant university resources to determine the cover crops that best suit their individual operations.

  NCBA urges USDA to bolster programs that keep land in production, rather than promoting programs that allow land to lay fallow. These "working lands" programs, including USDA's Environmental Quality Incentives Program (EQIP) and Conservation Stewardship Program (CSP) cost-share programs, allow producers to manage their land efficiently while simultaneously contributing to our

[34] Farmers for a Sustainable Future, *https://www.fb.org/land/fsf*.
[35] Andreini, E.M., "How does upcycling relate to beef production?", *https://www.beefresearch.org/resources/beef-sustainability/fact-sheets/upcycling*, 2019.
[36] *2017 Cattlemen's Stewardship Review,* p.45.

nation's food supply. Land in production, whether it be crop fields or pastures with grazing cattle, provides a greater carbon sink than a fallow landscape. Ruminant grazing increases land's ability to sequester carbon, by deepening root structures and encouraging photosynthesis. USDA–NRCS not only provides cost-share funding through its EQIP and CSP programs, but also technical assistance to farmers and ranchers who wish to implement conservation practices. The benefit of Conservation Technical Assistance (CTA) is its personalized approach: local NRCS employees work with agricultural producers to implement a suite of conservation practices best suited to fit the individual needs of each operation. Many of the solutions supported by NRCS' Conservation Technical Assistance are the product of land-grant university research and extension. Voluntary conservation practices, supported by research and implemented by producers with technical assistance, are the key to increasing efficiency and resilience.

As USDA works to improve agriculture's environmental footprint, we encourage the government to forgo use of subjective metrics, such as potential climate impact, to determine eligibility to conservation programs. Any standards for conservation program access, including the conservation practice standards, should be rooted in science. Animal feeding operations utilize voluntary conservation programs to establish manure management systems and eliminate waste discharges. By shutting the door to producers who will most significantly benefit from conservation programs, efforts to limit access based on potential climate impact would directly reduce the programs' overall environmental benefit. Greenhouse gas emissions cannot be considered in a vacuum; the Agency must consider how best to achieve holistic environmental improvements. Air quality, water quality, soil quality, and wildlife habitat are all necessary elements in establishing conservation programs that improve the overall environmental footprint of the industry.

- **Promote Greater Range Health and Fire Mitigation Efforts:** Livestock grazing provides a nimble tool to create fire breaks, strategically reduce hazardous fuel loads, and apply targeted forage management for a variety of resource management goals. NCBA and our partners are eager to work with the Biden Administration to find creative and effective ways to apply livestock grazing as a tool to improve environment and ecological goals, including the use of livestock for forage management and wildfire fuel load reduction.
- **Collaboration with Industry through the USDA Agricultural Air Quality Task Force (AAQTF):** This Federal advisory committee has been an effective tool of collaboration between agricultural stakeholders and the USDA on issues concerning agricultural air quality. Prior iterations of the AAQTF provided a forum to submit formal recommendations to the Secretary of Agriculture, and NCBA recommends the Biden Administration continue this effort in a way that promotes inclusion of agricultural stakeholders.
- **Provide Producers with Sound Regulatory Guidance—Navigable Waters Protection Rule:** In 2019, EPA, along with the U.S. Army Corps of Engineers, finalized the Navigable Waters Protection Rule—a replacement for the 2015 Clean Water Rule. America's cattle producers need clean water to maintain successful operations; their families, livestock, and communities depend on it. However, the broad nature of the 2015 Clean Water Rule created significant regulatory uncertainty for farmers and ranchers across the nation. And while clean water is necessary, clear rules are equally important to ensure that farmers can pass their operations on to the next generation. The Navigable Waters Protection Rule increases jurisdictional certainty for farmers and ranchers while ensuring that our nation's most vital surface waterbodies are protected.

  In its first round of implementation guidance (issued in December 2020), EPA addressed CWA 404 Jurisdictional Determination elevation scenarios, ditches subject to the Normal Farming Activities exemption, and program coordination with USDA and USACE regarding Prior Converted Cropland determinations. NCBA generally supports the continued use of these guidance documents.
- **Using Science-Based Metrics to Accurately Measure Climate Factors—GWP*:** As the government seeks to implement its climate strategy, NCBA urges the adoption of the GWP* methodology. GWP* accurately characterizes the warming potential of short-lived GHGs, such as methane.

  According to leading scientists at the University of Oxford, "[t]he 100 year variant of the Global Warming Potential (GWP_{100}) has been formally adopted in international climate policy (currently as established in the Kyoto Protocol,

and in the draft text of the Paris Agreement[37]) and standardized Life Cycle Assessment (LCA)/carbon-footprinting approaches[38]). Subsequently, GWP_{100} has become the de facto standard for expressing emissions in the scientific literature and general media, having essentially become shorthand for the relative climate impacts of a given product or activity. Despite its ubiquity, the relationship between aggregate CO_2 Equivalent (CO_2-e) emissions calculated using GWP_{100} and global warming itself is ambiguous. Fundamentally, many of the shortcomings of the GWP_{100} calculation as a universal climate metric arise because it cannot sufficiently differentiate the impacts of long- and short-lived climate pollutants (SLCPs). In previous reports, the International Panel on Climate Change (IPCC) has acknowledged the shortcomings of current methods of reporting methane impacts, including GWP100."[39] GWP* was first reported by the Climate Dynamics research team at the University of Oxford in 2018, led by Myles Allen (commonly referred to as "the physicist behind net zero") and has been gaining acceptance in the scientific community as a GWP calculation that more effectively measures the global warming impact of methane.[40]

Moreover, the conventional GWP_{100} methodology does not adequately capture the different behaviors of long-lived climate pollutants (LLCPs) and SLCPs. The atmospheric lifetime and radiative impacts of different GHGs differ dramatically. Acknowledgement of this reality led to the widescale adoption of the GWP_{100} methodology. GWP_{100} equates emissions using a scaling factor—CO_2-e. GHGs are assigned a GHG equivalency, then that number is used to determine the emissions' potential impact. Following GWP_{100}, a pound of methane equates to 25 pounds of CO_2. Thus, methane is calculated as 25 CO_2e. However, this simplified scaling factor fails to recognize the amount of time emissions remain in the atmosphere—an equally important factor in determining potential atmospheric impact. The GWP* methodology seeks to remedy this oversight.[41]

Anthropogenic warming estimations are largely determined by the cumulative total emissions of LLCPs and the emission rates of SLCPs. GWP* equates an increase in the emissions rate of an SLCP with a single "pulse" emission of CO_2, and thus considers not only the initial intensity of GHGs, but also the amount of time that they remain in the atmosphere. This approach is a significant improvement on the conventional GWP_{100} methodology. Further, the GWP* methodology modifies the conventional GWP definition to consider CO_2 warming equivalents (CO_2-we) rather than CO_2-e. Following GWP*, SLCPs can be incorporated directly into carbon budgets consistent with long-term temperature goals, because every unit of CO_2-we emitted generates approximately the same amount of warming, whether it is emitted as a SLCP or a LLCP. This is not the case for conventionally derived CO_2-e measurements. The adoption of accurate emissions methodology is necessary to ensure that national and international climate policies achieve desired outcomes. NCBA urges the United States' adoption of GWP*, and further asks the United States to promote GWP* adoption internationally.

(xiii) Promote Economic Sustainability through Market-Based, Rules-Based, and Science-Based Trade Policies

- **Impact of COVID–19 on Trade:** At the beginning of 2020, U.S. cattle producers were optimistic that export sales would significantly increase due to expanded duty-free access in the European Union, removal of Japan's massive 38.5 percent tariff, and the removal of numerous non-tariff trade barriers as part of the trade deal with China. The first quarter showed much promise as sales were up eight percent (through March)[42] over the previous year, driven primarily by strong growth in Japan and Korea despite the first signs of COVID–19 disrupting key Asia markets. Unfortunately, as we moved into the second quarter, we began to see our vulnerabilities exposed by the pandemic,

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[37] UNFCCC 2018 Presidency consultations on modalities, procedures and guidelines under the Paris Agreement with a focus on transparency Draft Report Version 1.

[38] *ISO 14044 2006 Environmental Management—Life Cycle Assessment—Requirements and Guidelines.*

[39] John Lynch, *et al.* 2020 *Environ. Res. Lett.* 15 044023

[40] Allen, M., *et al., A solution to the misrepresentations of CO_2-equivalent emissions of short-lived climate pollutants under ambitious mitigation,* CLIMATE AND ATMOSPHERIC SCIENCE 1, 16 (2018).

[41] Cain, M., Lynch, J., Allen, M.R., *et al., Improved calculation of warming-equivalent emissions for short-lived climate pollutants,* CLIMATE ATMOSPHERE SCIENCE 2, 29 (2019). *https://doi.org/10.1038/s41612-019-0086-4.*

[42] U.S. Meat Export Federation, "Beef Plus Beef Variety Meats, March 2020," *https://www.usmef.org/downloads/statistics/2020-03-beef-plus.pdf.*

and the complex and highly fragmented nature of the cattle and beef supply chain created a unique set of challenges for each segment of our industry. Further, the extreme market volatility resulted in disproportionate economic harm for cattle producers, with initial estimates projecting roughly $13.6 billion in total economic damage.

Our greatest export loss occurred in May and June, but export sales increased significantly from July to October and brought our annual sales close to 2019 totals. In 2020, our export growth was primarily driven by sales in Japan and Korea—our two greatest markets that accounted for half of our total export sales. Expanded access to China coupled with the onset of African Swine Fever in China, resulted in an increase of 260 percent in U.S. beef sales to China.[43] We experienced modest growth in Canada, but sales were down in most markets. One of the hardest hit markets was Mexico, a perennial top 5 market for U.S. beef, where U.S. beef sales declined by 23 percent.[44]

In the past few years leading up to 2020, the United States was a net exporter of beef. That trend continued into the first quarter of 2021 until COVID–19 hit. The increased demand for ground beef and limited supply of domestic lean trimmings created an increase in demand for lean beef imports. In 2021, beef imports are down nearly 11 percent[45] and exports have started to recover in Asian markets. Fortunately, we were able to make it through 2020 without being forced to euthanize cattle, we avoided bans and closures in all major markets, and we are in a much better position to recover faster and stronger due to the removal of tariff and non-tariff trade barriers in recent trade deals. In fact, 2021 is proving to be a positive year for U.S. beef exports with a ten percent increase in global sales, and an increase of 1318 percent in beef sales to China.[46]

- **Importance of Interagency Coordination Between USDA and other Agencies:** NCBA greatly appreciates the team effort of USDA, USTR, U.S. Department of State, and other agencies in expanding market access for U.S. beef in key Asian markets where we previously faced non-tariff trade barriers such as age-based restrictions due to Bovine Spongiform Encephalopathy, bans on growth promotants and production technologies, onerous traceability requirements, and other arbitrary restrictions not based on objective scientific standards. NCBA strongly encourages the continuation of the close partnership of USDA and other agencies to continue removing non-tariff trade barriers and promoting science-based standards.
- **Avoid Marketing Policies That Trigger Retaliation:** Unfortunately, there are some people in the cattle and beef industry who do not support the free-market principles that have greatly benefitted our industry, and they are seeking the return of divisive policies like mandatory country-of-origin labeling (MCOOL), a law that Congress repealed in 2015. When MCOOL was law, the compliance costs were an excessive additional cost on every segment of the supply chain that led to the closure of feedlots and packing plants across the country. Studies show that MCOOL did not provide a net benefit to customers or cattle producers.[47] Most damaging of all, MCOOL resulted in WTO-sanctioned tariffs of $1 billion from Canada and Mexico. The tariffs were avoided because Congress repealed MCOOL, but Canada and Mexico still retain the right to retaliate if MCOOL is restored. It is also important to remember that if Canada and Mexico retaliate against the United States, there is currently no functioning WTO Appellate Body to resolve the dispute.

  At the same time, NCBA is taking steps to address genuine producer concerns with the current use of generic "Product of USA" label. NCBA believes the best way to have true product differentiation is to use origin labeling marketing claims that are verified and voluntary. We will continue working with our government and the entire value chain to ensure that accurate and voluntary origin labels are in place to benefit cattle producers and consumers.
- **Push Back Against European Policies That Undermine Science-Based Veterinary Practices:** While the United States is fully invested in harnessing

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[43] U.S. Meat Export Federation, "Beef Plus Beef Variety Meats, December 2020," *https://www.usmef.org/downloads/statistics/2020-12-beef-plus.pdf*.

[44] *Id.*

[45] USDA Economic Research Service, "Livestock, Dairy, Poultry Outlook," 04/15/2021.

[46] U.S. Meat Export Federation, "Beef Plus Beef Variety Meats," April 2021, *https://www.usmef.org/downloads/statistics/2021-04-beef-plus.pdf*.

[47] Allen, Katie. "K-State Research and Extension." *Report Finds Mandatory COOL Causes Meat Industry, Consumer Losses.* May 06, 2015.

the benefits and efficiencies of science-based trade, the European Union considers science as a secondary factor by embracing a philosophy called "the precautionary principle." The precautionary principle is simply known by the following: "better safe than sorry." Under EU law, the precautionary principle provides for "rapid response" to address "possible danger to human, animal, or plant health, or to protect the environment" and can be used to "stop distribution or order withdrawal from the market of products likely to be hazardous." The EU continues to invoke the precautionary principle to justify its policies regarding various regulatory issues and generally rejects arguments, on the grounds of risk management, that the lack of clear evidence of harm is not evidence of the absence of harm. A prime example of the precautionary principle is the EU's ban on production technologies such as hormones and beta agonists. These are examples of two FDA-approved technologies that are commonly used in U.S. cattle production and in many countries around the world. And while the European Union does not have peer-reviewed science and risk assessments to justify their bans of these technologies, they hide behind the precautionary principle as a protectionist measure to restrict beef imports from the United States and other countries who use these safe and efficient technologies.

In June 2018, the EU adopted veterinary medicines legislation that contains the "concept of reciprocity" for antimicrobial drug use practices—commonly referred to as Article 118. Under this new rule, the EU will no longer set antimicrobial resistance policies on a risk-assessment but will use hazard-based analysis. Lowering the scientific threshold to restrict the use of veterinary medicines could have negative impacts on animal health and will most likely be used as the European Union as another unjustified non-tariff trade barrier. Under the terms of Article 118, all countries exporting animals or animal products (meat, milk, eggs, fish) to the European Union must follow antimicrobial use guidelines from the EU and not administer any antimicrobials that are restricted from use in food-producing animals in the EU Reciprocity is not legal under the WTO and the United States must take all necessary steps to prevent the EU from diluting the importance of science-based trade standards. The veterinary medicines legislation will be implemented in January 2022.

The EU has not been transparent in this process and has not provided direction on the scope of restricted antimicrobials or the implementation of the restrictions. In short, we do not know the names of potentially restricted antimicrobials, the potential scope of restrictions on beef products, testing methodology, or process of implementation. While the intent of Article 118 may be good, the application could result in major problems for animal health and consumer safety. From a trade perspective, the application of these changes could give the European Commission multiple avenues to erect non-science-based restrictions on American agricultural goods.

NCBA applauds the U.S. Government for publicly opposing Article 118 at a recent meeting of the WTO Committee on Sanitary and Phytosanitary standards. The U.S. was not alone, with Paraguay, Australia, Canada, Japan, Argentina, and Brazil also registering formal complaints. If the EU does not address these concerns and enacts the proposed legislative changes, it may necessitate future WTO action.

- **Beware of Emerging Non-Tariff Trade Barriers in Climate Policy:** In order to achieve the goal of climate neutrality by 2050, the EU Green Deal includes a proposal to establish a carbon border adjustment mechanism (*i.e.,* carbon border tax) to reduce the risk of "carbon leakage" by assessing a tax on imported goods based on carbon content and origin of the good. "A carbon price imposes costs, and if foreign suppliers do not bear these costs, they will gain an advantage. Over time, production will shift to jurisdictions that do not impose this tax, and the country that imposed the measure in the first place will have punished its industry while doing little to limit (global) emissions. The solution to this problem, so far, has been to exempt industry from having to pay these costs by allocating emission rights to them for free. Now Europe wants to impose a cost on imported goods to offset whatever advantage they might have." By exporting EU regulations, the EU will use its economic power to strong arm the developing world into adopting its standards. This is an approach we have seen many times in international forums on animal health.

  Likewise, in response to media coverage of fires in the Amazon, the EU is considering new restrictions on imports of goods from Brazil and other countries where deforestation may occur. The concept requires companies to verify that their imported goods are not sourced from lands that have been deforested or from lands of displaced indigenous peoples. The theme of supply chain account-

ability is one that is gaining broader support in Europe, the United Kingdom, Japan, and the United States. Some legislative proposals in Congress would extend the Lacey Act to include imported goods from deforested lands.

The truth is we do not have a deforestation problem in the United States. While some may prefer to use measures like this to restrict beef imports from other countries, it would set a dangerous precedent that may be used against us in the future by simply substituting deforestation with another subjective term. In November 2020, NCBA submitted comments to USDA offering guidance to USDA's narrative in addressing the EU's proposed deforestation legislation. It is important that we commit to using objective, science-based standards at all times, and avoid following the European example of subjective trade.

(xiv) Ensure Proper Regulatory Oversight of Alternative and Imitation Products

Cattle producers welcome competition and consumer choice, but the regulations governing alternative protein products must protect consumer health and well-being, prevent false and deceptive marketing, and ensure a level playing field for real beef products and meat analogues alike. NCBA supports the critical role of USDA in the joint oversight of cell-cultured products and look forward to providing further input as USDA works to formally implement components of the dual regulatory framework, including efforts to establish mandatory labeling requirements that appropriately differentiate cell-cultured products from their conventional counterparts.

Cattle producers work hard to produce a safe, affordable and nutritious protein product—the word beef not only represents that product but is synonymous with a brand that has been cultivated through decades of hard work and investments made by farmers and ranchers across America. Unfortunately, a growing number of plant-based imitation products have turned to problematic marketing strategies in an effort to grow their market share. The Federal Food Drug and Cosmetic Act (FFDCA) and Federal Meat Inspection Act (FMIA) have nearly identical misbranding provisions. However, USDA's implementation of said provisions has more effectively ensured product labels are truthful and not misleading. NCBA believes the simplest solution to rectify misleading plant-based labels is for FDA to enforce the law as it stands and would encourage USDA to work with Agency to that end. Absent meaningful enforcement action against misbranded imitation products, NCBA supports legislative and regulatory strategies that will allow alternative protein products to appropriately differentiate themselves in the market without trading on beef's good name.

(xv) Promote a Secure Supply Chain through Increased Cyber Security

Recent cyber-attacks on companies such as Colonial Pipeline and JBS have encouraged American companies to review security systems for potential vulnerabilities and take necessary steps to prevent and deter future attacks. In particular, the attack on JBS gained attention from cattle producers who have experienced multiple supply chain disruptions due to weather and COVID–19, and the prospect of future cyber-attacks may result in further supply chain disruptions and market volatility.

Without question, securing the health and safety of the agriculture industry from terrorist groups and other negative influences is a serious concern, and protecting our agricultural industry is vitally important for a stable, self-sufficient food source for U.S. consumers. NCBA policy supports new initiatives concerning acts of terrorism against livestock to strengthen penalties for anyone involved in terrorist activities affecting the agricultural industry. NCBA policy also calls for increased coordination of local, state, and Federal officials to effectively monitor and respond to threats against the agriculture industry. It is important that any measures designed to protect and strengthen the cattle and beef supply chain from cyber-attack are created with stakeholder input and coordination.

(xvi) Recognize Industry Efforts to Adhere to Animal Disease Traceability Rules While Supporting Industry-led, Private-Sector Traceability Initiatives.

One common theme that spans the entire pre-harvest sector is the issue of animal disease traceability (ADT)—knowing where diseased and at-risk animals are located, and where and when they travel. ADT is key to the United States' ability to effectively respond to an animal disease outbreak. NCBA has long been supportive of traceability for animal health purposes and believes that the goal of any identification program should be to enable the cattle industry, state, and Federal animal health officials to respond rapidly and effectively to animal health emergencies. NCBA believes that ADT has the potential to reduce the

number of animals involved, to streamline response times, to safeguard the food supply chain, and allow unaffected producers to safely operate their businesses.

Published in 2013, USDA's ADT rule established minimum national official identification and documentation requirements for traceability of livestock moving interstate. Under this rule, and unless specifically exempted, livestock belonging to the species covered by the regulations and moving interstate must be officially identified and accompanied by an interstate certificate of veterinary inspection or other documentation. In September 2018, USDA published the APHIS Over-Arching Goals to Enhance Traceability, which include electronic identification tags for certain animals and increased data-sharing. NCBA's ADT goals are aligned with USDA's long-term strategy on this issue.

NCBA is working with cattle producers, USDA, and animal health experts to build traceability systems that operate at the speed of commerce, protect confidentiality, keep cattle identification data secure, and protect cattle producers from liability once the animals have left their control. NCBA supports the efforts of U.S. CattleTrace, a private-sector project that launched in August 2018. This nonprofit corporation collects just four data points—animal ID, date, time, and GPS location of the readers—and securely manages this data for animal disease traceability. The program began in Kansas and has expanded to Texas, Florida, and other beef-producing regions across the United States. Additionally, the program includes participation from key supply chain businesses and meatpackers. This is just one option for producers, and we are hopeful that more traceability systems will emerge that address similar goals and offer greater choices for producers. Traceability systems should prioritize animal health to function as an effective tool in strengthening our supply chain.

Conclusion

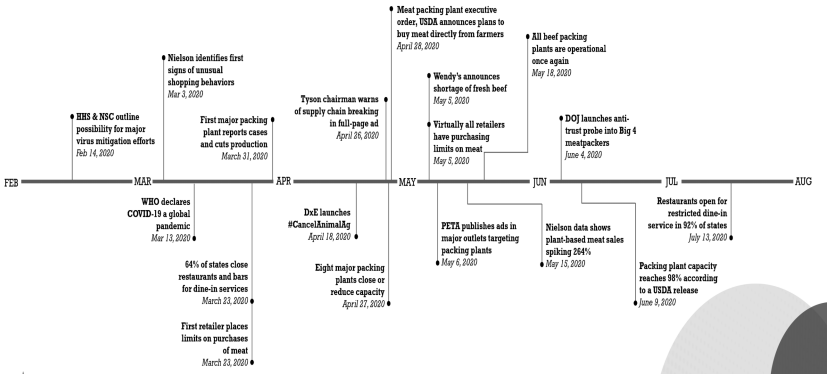
The U.S. cattle and beef supply industry has faced many unfortunate and unanticipated disruptions throughout our history, with COVID–19 as one of the most recent and significant examples. In response to each struggle we face, our industry's resilience and dogged determination prove that we can overcome obstacles and bounce back stronger than before—with the ability to pass on our knowledge, skills, and culture to future generations. NCBA appreciates USDA's significant undertaking of reviewing America's supply chains and listening to recommendations from stakeholders. The U.S. cattle and beef supply chain is strong, and we look forward to working with you to find practical, science-based, and proven solutions to build a stronger, more sustainable agricultural industry.

Sincerely,

ETHAN L. LANE,
Vice President, Government Affairs,
National Cattlemen's Beef Association.

COVID-19 Timeline

The COVID-19 pandemic began to heavily impact the beef industry when the first cases of COVID-19 infection among meat packing plant workers were reported. From this initial incident, the issues within the beef industry gained momentum, peaking the week of April 27, when the first packing plant closures were reported.



NATIONAL CATTLEMEN'S BEEF ASSOCIATION
CENTER FOR PUBLIC POLICY

Overview of DC Response - March

NCBA Center for Public Policy

→ **March 17** - Sent letter to White House requesting actions to stabilize the supply chain
- CFTC/USDA aggressive market oversight, DoT/FSIS flexibility, FSA no to low interest loans, DOI/Forest Service resource management

→ **March 18** - Sent letter to NAMI and Big Four packers to request higher cash bids/aggressive participation in cash market

→ **March 19** - Sent letter to Capitol Hill urging relief for cattle producers ($50 billion for CCC)

→ **March 20** - Sent letter to EPA requesting a 'no action' assurance

→ **March 25** - Urged passage of CARES Act

→ **March 27** - Sent letter to Sec. Perdue requesting meaningful aid for cattle producers through CARES Act funding

Trump Administration & Congress

✓ **March 17** – USDA FSIS, AMS & APHIS published response letter regarding various efforts to prevent supply chain & market disruptions

✓ **March 18** – FMCSA announced temporary hours of service exemption for livestock haulers in response to NCBA request

✓ **March 20** – Tyson Foods announced additional $5 to cash cattle prices

✓ **March 26** – EPA announced enforcement discretion policy changes in response to NCBA request

✓ **March 26** - Farm Service Agency made changes to farm safety net programs

✓ **March 27** – CARES Act signed into law
- ✓ Included PPP expansion, EIDL, $9.5b for livestock, specialty crops & farmers markets, additional $14b for CCC

✓ **March 31** – USDA released temporary guidance for veterinarians and producers

April

NCBA Center for Public Policy

→ **April 3** - Requested all 50 states adopt "critical infrastructure" guidelines for food/ag
→ **April 7** - Sent letter to VP Pence expressing concern about carbon dioxide shortage
→ **April 8** - Requested Pres. Trump expand USDA market investigation to include DOJ
→ **April 9** – Commissioned Beef Cattle Economic Impact Study published (estimated $13.6 billion in total losses)
→ **April 14** - Sent letter advocating needs of rural healthcare workers
→ **April 20** - Sent letter to Pres. Trump requesting additional engagement to ensure open plants
→ **April 23** - Sent letter to Sec. Perdue against CFAP payment limitations to cattle producers
→ **April 27** - Lead ag coalition letter urging improvements to PPP
→ **April 27** - Responded to CDC guidelines for packing plant workers

Trump Administration & Congress

✓ **April 1** - Bipartisan, bicameral letter to USDA reinforced NCBA cattle assistance priorities
✓ **April 8** - DOT extended Hours of Service waiver until May 15
✓ **April 8** – USDA announced via twitter expansion of cattle markets investigation in response to NCBA request
✓ **April 9** – USDA announced new flexibilities for Marketing Assistance Loans
✓ **April 15** – DHS & USDA announced temporary changes to ensure stable ag workforce
✓ **April 17** – USDA announced initial plan for distribution of CARES Act funding
✓ **April 22** – CFTC Ag Advisory Committee announced new Livestock Market Task Force & appointment of USDA liaison after 45-year vacancy
✓ **April 28** – Pres. Trump signed an Executive Order to keep packing plants open

NATIONAL CATTLEMEN'S BEEF ASSOCIATION
CENTER FOR PUBLIC POLICY

May – October

NCBA Center for Public Policy

→ **May 14** – Released a resource brief on cattle care during market disruptions

→ **May 15** – Sent letter to Congress asking for flexibility with CRP

→ **May 19** – Visited The White House and sent a press release about CFAP

→ **May 22-29** – Published CFAP FAQ sheets, hosted state affiliate CFAP webinar

→ **June 29** – Spearheaded coalition letter to close $630 million shortfall for AQI

→ **June 30** – Sent COVID phase 4 priorities letter to Congress

→ **June to Present:**

- → Advocated for additional transportation relief
- → Worked directly with USDA on CFAP implementation & regularly communicated with Administration to ensure equitable assistance delivered in CFAP2
- → Spearheaded legislative efforts to address processing capacity issues, from empowering producer ownership of packing facilities, expanding market access for state inspected processing facilities, to grants for small scale facilities to become part of the federal inspection system

Trump Administration & Congress

May

- ✓ **5/4** - SBA announced EIDL for ag expansion
- ✓ **5/6** – USDA sent letters to Governors on meat packing EO
- ✓ **5/19** – USDA announced details of CFAP
- ✓ **5/29** – House Ag letter to USDA re: CFAP cattle payments inequities

June

- ✓ **6/4**– Bipartisan, bicameral emergency grazing legislation introduced: Pandemic Authority Suitable To Utilize Reserve Easements (PASTURE) Act of 2020
- ✓ **6/30** – DIRECT Act introduced to allow state inspected meat to be sold across state lines via e-commerce

July

- ✓ **7/2** – Requiring Assistance to Meat Processors for Upgrading Plants (RAMP UP) Act introduced to provide federal incentives to improve beef processing capacity
- ✓ **7/22** – USDA announced update on Holcomb investigation

September

- ✓ **9/11** – FMCSA announces extension of emergency declaration for livestock through December 31, 2020
- ✓ **9/18** – USDA announced CFAP2
- ✓ **9/29** – HAULS Act introduced to provide Hours of Service relief

October

- ✓ **10/1** – PRICE Act introduced to address cattle market volatility/processing capacity
- ✓ **10/13** – USDA announced support for livestock industry amidst market challenges

NATIONAL CATTLEMEN'S BEEF ASSOCIATION
CENTER FOR PUBLIC POLICY

BEEF INDUSTRY
LONG RANGE PLAN

2021-2025

VISION

To be the protein of choice around the world, trusted and respected for our commitment to quality, safety and sustainability.

MISSION

Ensure the long-term prosperity of the U.S. beef industry by sustainably producing the most trusted, highest quality and consistently satisfying protein for consumers around the world.

INDUSTRY OBJECTIVES

1. Grow global demand for U.S. beef by promoting beef's health and nutritional benefits, satisfying flavor and unparalleled safety.
2. Improve industry-wide profitability by expanding processing capacity and developing improved value-capture models.
3. Intensify efforts in researching, improving and communicating U.S. beef industry sustainability.
4. Make traceability a reality in the U.S. beef industry.

DRIVE GROWTH IN BEEF EXPORTS

- **Negotiate and execute free trade agreements**
  Engage in negotiations to reduce trade barriers, secure free trade agreements and execute existing agreements.
- **Drive adoption of traceability**
  Invest in education, communication and other activities that drive the industry to unify efforts to achieve traceability (e.g. U.S. Cattle Trace).
- **Identify and address export customer needs and values**
  Invest in research to identify the attributes which are of most interest and concern to foreign customers.
- **Advocate for the adoption and use of international science-based trading standards**
  Partner with industry stakeholders in advocating for the adoption and use of international, science-based trading standards.
- **Collaborate with targeted partners to promote U.S. beef in foreign markets**
  Cultivate existing relationships and develop new relationships with industry partners who are willing to invest resources in promoting and marketing U.S. beef.
- **Invest in research, marketing and education programs**
  Identify high-potential markets and invest in product innovation, research, marketing and education programs that leverage the unique attributes of U.S. beef.

GROW CONSUMER TRUST IN BEEF PRODUCTION

- **Measure, document, improve and communicate the net environmental impact of beef production**
  Engage scientific experts in addressing the issue of greenhouse gas, creating data around carbon sequestration, and expanding our knowledge of the methane lifecycle. Aggressively explore alternatives for reducing methane emissions. Cultivate opportunities for the beef industry to participate in carbon credit markets.
- **Educate medical, diet and health professionals about beef and beef production**
  Expand educational outreach programs for professionals in the medical, diet and health communities focused on providing facts about nutrition and beef production.
- **Align and collaborate with traditional and non-traditional partners to tell the positive story of beef cattle production**
  Engage experts in developing fact-based messaging about animal care, beef industry sustainability, beef safety and beef nutrition. Identify, train and develop grassroots representatives to serve as trained industry spokespeople.
- **Engage positively in the sustainable nutrition conversation**
  Promote the positive contribution the beef cattle industry makes to nutrient dense, healthy and sustainable food systems with a particular emphasis on in-person and/or virtual engagements with k-12 students who are developing their dietary patterns and preferences.
- **Expand efforts in educating the general public about the BQA program and its impact on animal well-being**
  Broaden use of print, video, social media and virtual/in-person tours to educate consumers, influencers and the general public about the BQA program and its positive impact on animal care and well-being.
- **Expand BQA program to include verification**
  Create verification tools for each industry segment.
- **Develop a direct-to-consumer beef safety campaign**
  Develop a more direct-to-consumer campaign focused on improving consumer confidence in the unrivaled safety of U.S. beef by communicating the protocols and safeguards used to ensure beef safety (e.g. residue testing).

DEVELOP AND IMPLEMENT BETTER BUSINESS MODELS TO IMPROVE PRICE DISCOVERY AND VALUE DISTRIBUTION ACROSS ALL SEGMENTS

- **Increase packer capacity**
  Increase packer capacity to improve competition for market ready cattle, reduce the negative impact of supply chain disruptions and capitalize on opportunities to grow the U.S. beef industry.
- **Develop production/processing/marketing systems that result in more equitable margin distribution**
  Explore the feasibility and support the creation of production/processing/marketing systems that create opportunities for profit within all sectors of the beef supply chain consistent with the principles of free-market capitalism.
- **Explore business models and risk management tools that result in more sustainable producer profit opportunities**
  Educate producers on existing business/marketing models and risk management tools that improve profit opportunities and reduce volatility. Explore new business models and financial/risk management tools that create opportunities, reduce risk, attract capital and result in more sustainable profit opportunities for producers.
- **Use innovative methods and technologies to value carcasses based on eating satisfaction and red meat yield**
  Develop technology and methodologies needed to value individual carcasses based on the use of innovative methods of carcass assessment that more accurately measure and predict consumer eating satisfaction, red meat yield and other attributes that drive consumer demand.

PROMOTE AND CAPITALIZE ON THE MULTIPLE ADVANTAGES OF BEEF

- **Promote the role of beef in a healthy and sustainable diet**
  Expand marketing and education efforts specifically highlighting the role of beef in a healthy lifestyle and sustainable diet.
- **Implement a marketing campaign that communicates beef's advantage compared to alternative proteins**
  Conduct market research and develop a marketing campaign that defines and communicates beef's comparative advantages and effectively highlights attributes important to consumers (e.g. on-pack labeling, nutritional facts labeling and/or other point-of-purchase communication).
- **Develop targeted marketing programs focused on the highest opportunity market segments**
  Develop targeted messaging that positively resonates with highest opportunity market segments across media platforms to communicate beef's compelling value proposition.
- **Cultivate collaborative promotion partnerships**
  Cultivate opportunities to build collaborative beef promotion partnerships (e.g. complementary commodities, innovative retailers/food service organizations, etc.)
- **Promote innovative online marketing, packaging and shipping solutions to enable the direct marketing of beef**
  Promote online marketing solutions and identify ways to safely, efficiently and affordably deliver fresh and frozen beef directly to consumers.
- **Engage consumers in a memorable beef eating experience**
  Educate and encourage beef marketers to be more creative in developing and delivering a more robust and memorable beef eating experience (e.g. creation of virtual experience via kiosk at restaurants, waiter/waitress training, butchers, beef connoisseur program, etc.)
- **Develop a more interactive and exciting beef purchasing experience**
  Research and invest in innovative educational tools and expand the use of technology (e.g. QR codes) in designing a more interactive meat case. Partner with supply chain experts to engage customers in more interactive retail beef purchasing experiences.
- **Promote underutilized beef cuts and new variety meat products**
  Drive acceptance and use of underutilized beef cuts and the creation of new variety meat products while continuing to promote traditional beef cuts.

IMPROVE THE BUSINESS AND POLITICAL CLIMATE OF BEEF

- **Demonstrate beef's positive sustainability message and key role in regenerative agriculture**
  Work with environmental experts to identify opportunities to improve impactful measurements of the Beef Lifecycle Assessment. Stay engaged with USRSB and conservation groups to document and communicate, to policy makers and others, the regenerative benefit of cattle and their role in effectively stewarding our natural resources.
- **Defend beef's product identity**
  Defend beef's product identity and nomenclature from use by competing proteins including plant-based proteins and other meat alternatives.
- **Ensure beef's inclusion in dietary recommendations**
  Ensure the government and medical/health organizations utilize knowledgeable experts and trusted research in making nutrition-based dietary recommendations.
- **Manage the political and regulatory environment**
  Defend and protect producers from legislative and regulatory attempts to impose government restrictions on the business climate of beef production and marketing. Educate key influencers and advocate for public policy that can improve the overall business climate for the beef community.
- **Drive continuous improvement in food safety**
  Engage with government agencies, organizations and private entities to support research and develop proactive protocols that specifically help to reduce the risk of *Salmonella* spp. and antimicrobial resistance.
- **Protect and promote grazing on public and private land**
  Support agency regulations that protect targeted and broader landscape grazing on federal lands. Collaborate with conservation groups to advance ecological services on private lands.
- **Develop crisis management plans**
  Develop and/or update emergency management plans based on key risks and vulnerabilities facing the beef industry.
- **Collaborate with other organizations to advance policy priorities**
  Engage with other organizations, both inside and outside the industry, to identify issues/interests we can agree on and build consensus among those organizations to advocate for legislation and policies supportive of the beef industry.
- **Defend science-based production technologies**
  Engage with legislative bodies to ensure the use of science-based criteria to protect existing beef production systems, inputs and technologies.

SAFEGUARD AND CULTIVATE INVESTMENT IN BEEF INDUSTRY RESEARCH, MARKETING AND INNOVATION

- **Increase industry funds for beef marketing, promotion and research**
  Protect the historic success of the beef checkoff in creating beef demand and technologies. Explore new options for increasing beef marketing, promotion and research funding from the packing/processing/retail sectors. Encourage the development and growth of supplemental checkoff programs on a state-by-state basis while exploring strategies that effectively leverage existing checkoff funds (e.g. matching programs).
- **Attract innovation and intellectual capital into the beef industry**
  Establish beef industry innovation initiatives that create forums/conferences to showcase new technologies and attract capital with the goal of accelerating the discovery and adoption of new technologies while recruiting and educating talent for the beef industry.
- **Encourage the cooperation and collaboration of existing industry advisory committees to identify and prioritize research efforts**
  Establish and publicize beef industry research priorities by fostering collaboration between existing organizations and committees and ensuring that critically important research efforts are adequately addressed (e.g. AMR, food safety, microbiome and genomic research, gene editing, environmental/sustainability issues, traceability, big data, etc.).
- **Develop and implement new genetic/genomic tools and technologies**
  Improve the efficient utilization of natural resources in beef production systems by supporting the seedstock sector in researching, developing and using genetic/genomic tools to address sustainability issues and One Health priorities (e.g. gene editing technology, microbiome, carbon credit/methane EPD's, etc.).
- **Increase industry resources for production research**
  Generate support for vital industry research by:
  - Encouraging additional funds through voluntary or structured programs;
  - Engaging in collaborative efforts with universities, agricultural experiment stations and federally funded research agencies;
  - Cultivating support from philanthropic organizations, endowments, private parties, accelerators/incubators, etc.
- **Ensure that publicly-funded research and intellectual capital remains in the public domain**
  Advocate for legislation and policies to protect and increase funds for research and education through Agricultural Research Service (USDA) and Universities.
- **Explore and educate producers on creative land use alternatives to generate new revenue streams**
  Explore the use of land trusts, conservation easements and partnerships with private organizations to monetize the value of ecological services provided by progressive cattle management practices.

For backround information and more details about the Beef Industry Long Range Plan, visit
BeefLongRangePlan.com

ATTACHMENT 2

NCBA Fed Cattle Negotiated Trade Tracker—2021 Q1

Region	75% Threshold	Category	Week Ending: 1/10/2021	1/17/2021	1/24/2021	1/31/2021	2/7/2021	2/14/2021	2/21/2021	2/28/2021	3/7/2021	3/14/2021	3/21/2021	3/28/2021	4/4/2021
TX–OK–NM	9,750	*Neg. Cash*	7,239	7,331	4,988	6,800	6,929	6,441	6,390	8,376	8,742	6,669	2,774	8,657	4,642
		Neg. Grid Base	2,046	4,893	3,356	2,827	5,159	3,690	4,003	5,104	6,299	6,060	3,553	4,649	3,997
		Total Neg.	**9,285**	**12,224**	**8,344**	**9,627**	**12,088**	**10,131**	**10,393**	**13,480**	**15,041**	**12,729**	**6,327**	**13,306**	**8,639**
KS	15,750	*Neg. Cash*	13,754	12,481	20,591	10,598	18,085	8,531	8,310	10,830	14,859	17,952	13,259	17,093	13,486
		Neg. Grid Base	3,430	2,343	3,410	2,105	3,504	6,198	1,382	4,086	4,383	2,903	3,978	5,442	5,556
		Total Neg.	**17,184**	**14,824**	**24,001**	**12,703**	**21,589**	**14,729**	**9,692**	**14,916**	**19,242**	**20,855**	**17,237**	**22,535**	**19,042**
NE	27,000	*Neg. Cash*	23,816	31,081	29,738	30,547	30,312	25,664	25,512	29,886	19,807	34,422	22,850	30,549	21,930
		Neg. Grid Base	3,947	5,153	5,371	8,014	6,071	8,456	4,679	4,352	4,403	2,887	3,216	4,760	5,232
		Subtotal Neg.	*27,763*	*36,234*	*35,109*	*38,561*	*36,383*	*34,120*	*30,191*	*34,238*	*24,210*	*37,309*	*26,066*	*35,309*	*27,162*
CO *		*Neg. Cash*	1,573	5,485	2,419	4,333	—	—	—	—	5,422	4,083	5,097	6,311	728
		Neg. Grid Base	1,654	5,498	2,297	4,566	—	—	—	—	3,155	2,777	1,982	2,071	1,263
		Subtotal Neg.	*3,227*	*10,983*	*4,716*	*8,899*	—	—	—	—	*8,577*	*6,860*	*7,079*	*8,382*	*1,991*
		Total Neg.	**30,990**	**47,217**	**39,825**	**47,460**	**36,383**	**34,120**	**30,191**	**34,238**	**32,787**	**44,169**	**33,145**	**43,691**	**29,153**
IA–MN	12,000	*Neg. Cash*	19,414	27,355	18,887	24,220	26,081	21,443	20,342	18,668	19,844	18,875	26,397	21,961	26,291
		Neg. Grid Base	3,471	4,166	2,984	4,040	2,716	4,394	2,681	4,668	3,095	2,941	3,027	3,004	4,390
		Total Neg.	**22,885**	**31,521**	**21,871**	**28,260**	**28,797**	**25,837**	**23,023**	**23,336**	**22,939**	**21,816**	**29,424**	**24,965**	**30,681**
TX–OK–NM	9,750	*Pass/Fail*	(465)	2,474	(1,406)	(123)	2,338	381	643	3,730	5,291	2,979	(3,423)	3,556	(1,111)
KS	15,750	*Pass/Fail*	1,434	(926)	8,251	(3,047)	5,839	(1,021)	(6,058)	(834)	3,492	5,105	1,487	6,785	3,292
NE–CO	27,000	*Pass/Fail*	3,990	20,217	12,825	20,460	9,383	7,120	3,191	7,238	5,787	17,169	6,145	16,691	2,153
IA–MN	12,000	*Pass/Fail*	10,885	19,521	9,871	16,260	16,797	13,837	11,023	11,336	10,939	9,816	17,424	12,965	18,681

Sources:

Region:	USDA–AMS Report:
TX–OK–NM	*LM_CT156 (https://www.ams.usda.gov/mnreports/ams_2483.pdf)*
KS	*LM_CT157 (https://www.ams.usda.gov/mnreports/ams_2484.pdf)*
NE	*LM_CT158 (https://www.ams.usda.gov/mnreports/ams_2485.pdf)*
CO	*LM_CT134 (https://www.ams.usda.gov/mnreports/ams_2670.pdf)*
IA–MN	*LM_CT137 (https://www.ams.usda.gov/mnreports/ams_2672.pdf)*

*Zeroed cells denote unavailability of data due to confidentiality.

ATTACHMENT 3

NCBA Fed Cattle Negotiated Trade Tracker—2021 Q2

Region	75% Threshold	Category	Week Ending: 4/11/2021	4/18/2021	4/25/2021	5/2/2021	5/9/2021	5/16/2021	5/23/2021	5/30/2021	6/6/2021	6/13/2021	6/20/2021	6/27/2021	7/4/2021
TX–OK–NM	9,750	*Neg. Cash*	13,387	8,900	3,668	9,055	6,850	7,953	7,071	9,183	5,776	7,470	7,440	1,324	5,355
		Neg. Grid Base	4,750	5,643	5,561	7,764	4,998	5,778	6,190	7,936	8,771	7,573	6,990	7,534	5,029
		Total Neg.	**18,137**	**14,543**	**9,229**	**16,819**	**11,848**	**13,731**	**13,261**	**17,119**	**14,547**	**15,043**	**14,430**	**8,858**	**10,384**
KS	15,750	*Neg. Cash*	21,343	14,758	6,345	8,374	7,881	8,814	16,536	13,843	9,326	13,602	22,727	2,921	13,291
		Neg. Grid Base	5,395	4,984	4,127	8,206	8,350	10,318	7,496	11,021	10,864	9,624	7,499	7,115	12,075
		Total Neg.	**26,738**	**19,742**	**10,472**	**16,580**	**16,231**	**19,132**	**24,032**	**24,864**	**20,190**	**23,226**	**30,226**	**10,036**	**25,366**
NE	27,000	*Neg. Cash*	31,150	25,593	21,314	22,886	32,744	23,087	25,735	28,551	17,189	35,353	20,781	18,700	25,960
		Neg. Grid Base	6,841	4,338	2,945	5,762	3,371	2,563	10,683	13,562	13,248	16,922	10,141	8,437	7,410
		Subtotal Neg.	*37,991*	*29,931*	*24,259*	*28,648*	*36,115*	*25,650*	*36,418*	*42,113*	*30,437*	*52,275*	*30,922*	*27,137*	*33,370*
CO *		*Neg. Cash*	4,322	2,850	1,708	25,261	995	1,135	857	1,299	—	—	—	—	—
		Neg. Grid Base	2,451	2,061	553	2,545	265	210	1,664	2,263	—	—	—	—	—
		Subtotal Neg.	*6,773*	*4,911*	*2,261*	*27,806*	*1,260*	*1,345*	*2,521*	*3,562*	—	—	—	—	—
		Total Neg.	**44,764**	**34,842**	**26,520**	**56,454**	**37,375**	**26,995**	**38,939**	**45,675**	**30,437**	**52,275**	**30,922**	**27,137**	**33,370**
IA–MN	12,000	*Neg. Cash*	26,573	27,552	24,529	15,590	26,387	18,389	19,093	21,447	22,738	27,427	16,652	16,347	30,317
		Neg. Grid Base	3,053	3,903	2,308	2,998	3,269	4,516	4,413	7,047	4,484	5,195	4,975	3,414	6,035
		Total Neg.	**29,626**	**31,455**	**26,837**	**18,588**	**29,656**	**22,905**	**23,506**	**28,494**	**27,222**	**32,622**	**21,627**	**19,761**	**36,352**
75% Thresholds															
TX–OK–NM	9,750	*Pass/Fail*	8,387	4,793	(521)	7,069	2,098	3,981	3,511	7,369	4,797	5,293	4,680	(892)	634
KS	15,750	*Pass/Fail*	10,988	3,992	(5,278)	830	481	3,382	8,282	9,114	4,440	7,476	14,476	(5,714)	9,616
NE–CO	27,000	*Pass/Fail*	17,764	7,842	(480)	29,454	10,375	(5)	11,939	18,675	3,437	25,275	3,922	137	6,370
IA–MN	12,000	*Pass/Fail*	17,626	19,455	14,837	6,588	17,656	10,905	11,506	16,494	15,222	20,622	9,627	7,761	24,352
100% Robust (FYI Only)															
TX–OK–NM	13,000	*Over/Under*	5,137	1,543	(3,771)	3,819	(1,152)	731	261	4,119	1,547	2,043	1,430	(4,142)	(2,616)
KS	21,000	*Over/Under*	5,738	(1,258)	(10,528)	(4,420)	(4,769)	(1,868)	3,032	3,864	(810)	2,226	9,226	(10,964)	4,366
NE–CO	36,000	*Over/Under*	8,764	(1,158)	(9,480)	20,454	1,375	(9,005)	2,939	9,675	(5,563)	16,275	(5,078)	(8,863)	(2,630)
IA–MN	11,000	*Over/Under*	18,626	20,455	15,837	7,588	18,656	11,905	12,506	17,494	16,222	21,622	10,627	8,761	25,352
Sources:															
Region:	USDA–AMS Report:														
TX–OK–NM	*LM_CT156 (https://www.ams.usda.gov/mnreports/ams_2483.pdf)*														

ATTACHMENT 3—CONTINUED

NCBA Fed Cattle Negotiated Trade Tracker—2021 Q2

Region	75% Threshold	Category	Week Ending: 4/11/2021	4/18/2021	4/25/2021	5/2/2021	5/9/2021	5/16/2021	5/23/2021	5/30/2021	6/6/2021	6/13/2021	6/20/2021	6/27/2021	7/4/2021
Region:		USDA–AMS Report:													
KS		*LM_CT157 (https://www.ams.usda.gov/mnreports/ams_2484.pdf)*													
NE		*LM_CT158 (https://www.ams.usda.gov/mnreports/ams_2485.pdf)*													
CO		*LM_CT134 (https://www.ams.usda.gov/mnreports/ams_2670.pdf)*													
IA–MN		*LM_CT137 (https://www.ams.usda.gov/mnreports/ams_2672.pdf)*													

*Zeroed cells denote unavailability of data due to confidentiality.

ATTACHMENT 4

NCBA Fed Cattle Negotiated Trade Tracker—2021 Q3

(Incomplete Dataset)

Region	75% Threshold	Category	Week Ending: 7/11/2021	7/18/2021	7/25/2021	8/1/2021	8/8/2021	8/15/2021	8/22/2021	8/29/2021	9/5/2021	9/12/2021	9/19/2021	9/26/2021	10/3/2021
TX–OK–NM	9,750	*Neg. Cash*	7,480	5,930	6,182	6,561	6,713	5,582	5,757	3,874	3,125	5,838	3,810	4,145	
		Neg. Grid Base	8,497	7,193	5,474	7,406	6,439	5,231	4,386	5,790	7,255	6,610	8,107	6,687	
		Total Neg.	**15,977**	**13,123**	**11,656**	**13,967**	**13,152**	**10,813**	**10,143**	**9,664**	**10,380**	**12,448**	**11,917**	**10,832**	—
KS	15,750	*Neg. Cash*	18,921	10,162	12,882	12,406	11,089	15,200	10,514	7,806	6,472	10,087	8,396	9,058	
		Neg. Grid Base	12,703	11,197	11,924	13,297	12,791	14,222	11,770	10,808	13,059	11,590	13,988	14,971	
		Total Neg.	**31,624**	**21,359**	**24,806**	**25,703**	**23,880**	**29,422**	**22,284**	**18,614**	**19,531**	**21,677**	**22,384**	**24,029**	—
NE	27,000	*Neg. Cash*	18,717	25,916	23,752	21,649	33,886	22,013	35,257	17,024	17,034	22,184	19,287	27,002	
		Neg. Grid Base	11,735	8,534	6,174	7,609	8,231	6,418	8,387	5,847	7,618	5,380	7,762	8,653	
		Subtotal Neg.	*30,452*	*34,450*	*29,926*	*29,258*	*42,117*	*28,431*	*43,644*	*22,871*	*24,652*	*27,564*	*27,049*	*35,655*	—
CO*		*Neg. Cash*	—	—	—	—	—	—	—	—	—	—	—	—	—
		Neg. Grid Base	—	—	—	—	—	—	—	—	—	—	—	—	—
		Subtotal Neg.	—	—	—	—	—	—	—	—	—	—	—	—	—
		Total Neg.	**30,452**	**34,450**	**29,926**	**29,258**	**42,117**	**28,431**	**43,644**	**22,871**	**24,652**	**27,564**	**27,049**	**35,655**	—
IA–MN	12,000	*Neg. Cash*	24,433	18,897	22,497	23,545	29,319	20,305	26,701	19,472	23,851	20,471	16,671	13,913	
		Neg. Grid Base	8,084	6,766	6,412	5,880	8,460	6,900	6,432	3,754	4,154	3,771	5,026	4,281	
		Total Neg.	**32,517**	**25,663**	**28,909**	**29,425**	**37,779**	**27,205**	**33,133**	**23,226**	**28,005**	**24,242**	**21,697**	**18,194**	—

75% Thresholds															
TX–OK–NM	9,750	*Pass/Fail*	6,227	3,373	1,906	4,217	3,402	1,063	393	(86)	630	2,698	2,167	1,082	(9,750)
KS	15,750	*Pass/Fail*	15,874	5,609	9,056	9,953	8,130	13,672	6,534	2,864	3,781	5,927	6,634	8,279	(15,750)
NE–CO	27,000	*Pass/Fail*	3,452	7,450	2,926	2,258	15,117	1,431	16,644	(4,129)	(2,348)	564	49	8,655	(27,000)
IA–MN	12,000	*Pass/Fail*	20,517	13,663	16,909	17,425	25,779	15,205	21,133	11,226	16,005	12,242	9,697	6,194	(12,000)
100% Robust (FYI Only)															
TX–OK–NM	13,000	*Over/Under*	2,977	123	(1,344)	967	152	(2,187)	(2,857)	(3,336)	(2,620)	(552)	(1,083)	(2,168)	(13,000)
KS	21,000	*Over/Under*	10,624	359	3,806	4,703	2,880	8,422	1,284	(2,386)	(1,469)	677	1,384	3,029	(21,000)
NE–CO	36,000	*Over/Under*	(5,548)	(1,550)	(6,074)	(6,742)	6,117	(7,569)	7,644	(13,129)	(11,348)	(8,436)	(8,951)	(345)	(36,000)
IA–MN	11,000	*Over/Under*	21,517	14,663	17,909	18,425	26,779	16,205	22,133	12,226	17,005	13,242	10,697	7,194	(11,000)

Sources:

Region:	USDA–AMS Report:
TX–OK–NM	*LM_CT156 (https://www.ams.usda.gov/mnreports/ams_2483.pdf)*
KS	*LM_CT157 (https://www.ams.usda.gov/mnreports/ams_2484.pdf)*
NE	*LM_CT158 (https://www.ams.usda.gov/mnreports/ams_2485.pdf)*
CO	*LM_CT134 (https://www.ams.usda.gov/mnreports/ams_2670.pdf)*
IA–MN	*LM_CT137 (https://www.ams.usda.gov/mnreports/ams_2672.pdf)*

*Zeroed cells denote unavailability of data due to confidentiality.

ATTACHMENT 5

NCBA Meat and Poultry Investments RFI Comments (Docket No. AMS–TM–21–0058)

August 30, 2021

SARAH J. HELMING,
U.S. Department of Agriculture
Washington, D.C.

FR Docket No. AMS–TM–21–0058 (86 *Fed. Reg*. 37728)

Submitted via Regulations.gov

National Cattlemen's Beef Association Comments on Investments and Opportunities for Meat and Poultry Processing Infrastructure

Dear Ms. Helming:

The National Cattlemen's Beef Association (NCBA) appreciates the opportunity to submit comments in response to the Office of the Secretary's Request for Information (RFI) on Investments and Opportunities for Meat and Poultry Processing Infrastructure. NCBA is committed to partnering with the U.S. Department of Agriculture (USDA) and other Federal agencies on initiatives to bolster beef processing capacity under Executive Order 14036, "Promoting Competition in the American Economy."

NCBA is the oldest and largest national trade association representing the interest of the U.S. cattle and beef industry, with over 250,000 members represented both through direct membership and 44 state affiliate associations. Producer-driven and directed, the following comments largely focus on an array of pre-harvest matters. Given the complexity and diversity of domestic cattle and beef production and the varied issues facing each segment of production, it is important to note that these comments should not be considered all-inclusive but are reflective of our membership's priorities and the current challenges facing U.S. cattle producers in the beef processing sector.

Background

The U.S. cattle and beef supply chains are highly intricate and home to some of the most complex commodity markets on [E]arth (*Figure 1*). While there are various ways to determine the individual transaction value for both cattle and beef, the baseline value fluctuates with supply and demand. For cattle producers, our primary demand is derived from meatpackers' needs to procure cattle for processing into beef. This is true whether a cattle producer is a cow-calf operator, stocker, backgrounder, or feeder as all prices paid for beef cattle are a derivative of the expected fed cattle price.

For several decades, the availability of beef packing capacity (commonly referred to as "hook space") exceeded the supply of fed cattle. However, a 2020 study by Rabobank found that this excess operational beef processing capacity fell to zero in late 2016 and turned negative early in 2017 where it remains today.[1] Simply put, there is no longer sufficient hook space to process through cattle supplies. During the same time period, cattle herd inventories grew following price signals beginning in 2014.[2] As a result, the packing sector presently represents a bottleneck in the overall beef supply chain, which has had a negative effect on cattle producer leverage in fed cattle negotiations. When cattle supplies exceed the capacity to process them, the livestock become an economically less scarce resource and cattle prices decline. It is important to note that this is independent of demand for the end-product, beef. The most pointed examples of this can be found in the 2019 fire at Tyson Foods' Finney County beef processing facility in Holcomb, KS, and the COVID–19 pandemic. In both cases, operational beef processing capacity utilization dramatically fell following temporary closures of high-throughput beef plants. As a result, cattle prices declined, and boxed beef values drastically increased according to a report issued by USDA's Agricultural Marketing Service (AMS) in the summer of 2020.[3]

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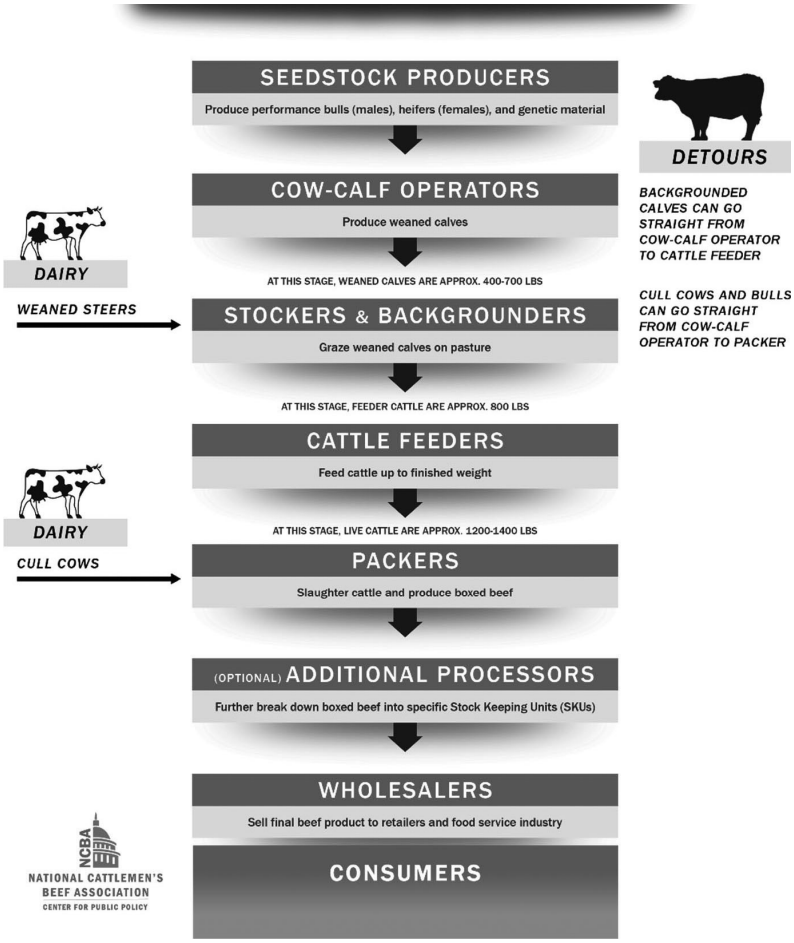
[1] Aherin, Dustin, Rabobank, September 2020 *https://research.rabobank.com/far/en/sectors/animal-protein/the-case-for-capacity.html*.

[2] See National Agricultural Statistics Service's semi-annual cattle inventory reports.

[3] *Boxed Beef & Fed Cattle Price Spread Investigation Report,* USDA–AMS, July 2020 *https://www.ams.usda.gov/sites/default/files/media/CattleandBeefPriceMarginReport.pdf*.

Figure 1
U.S. Cattle and Beef Supply Chain



To improve producer leverage in fed cattle negotiations, either cattle supplies must be reduced, or processing capacity must be expanded. Herd contractions and expansions occur naturally over the course of a somewhat predictable 10 year cycle. Currently, U.S. cattle inventories are cyclically high,[4] but beef demand is also high both domestically and in our major export markets.[5] Therefore, the clearest solution to meeting this demand while ensuring sufficient margin flow throughout the supply chain is to expand beef processing capacity.

NCBA greatly appreciates USDA's attention to this critical issue. Adequate beef processing capacity is critical to maintaining profitability in the cattle industry and a steady supply of essential food products to consumers.

Before addressing some of the specific questions posed by the Agency, NCBA encourages USDA to consider the following recommendations. First, the $500 million allocated toward the meat and poultry processing sector must be strategically invested via multiple means to ensure maximum impact. While there are some chal-

[4] *Cattle,* USDA NASS, January 2021 *https://downloads.usda.library.cornell.edu/usda-esmis/files/h702q636h/n009ww19g/9880wj45t/catl0121.pdf.*

[5] *Factors that drive beef, cattle prices to record highs,* Rabobank, June 2021 *https://www.meatpoultry.com/articles/25040-rabobank-factors-that-drive-beefcattle-prices-to-record-highs.*

lenges which plague meatpackers of all types, various constraints affect different processors based on several factors (*i.e.,* regionality, plant size, *etc.*). Second, constructing or expanding capacity will not in and of itself create resiliency in our supply chains. It is equally as important for every new hook to be attached to comprehensive business models which include robust risk management strategies. New and expanded facilities must be able to withstand the financial ebbs and flows inherent to commodity-based enterprises. Third, careful and thorough analysis of all potential investment strategies must be conducted to ensure that standards of food safety, animal welfare, and product labeling are not jeopardized in the name of haste. While the need to expand beef processing is immediate, we cannot afford to threaten consumer confidence in our product. Fourth, USDA should consider research and development of automation technology. Even recently, significant integration of automation technology at meat plants has not been feasible because machines could not self-adjust for heterogeneity between carcasses. That is no longer the case, and recent breakthroughs in artificial intelligence could be incorporated into meat processing machinery to make these necessary adjustments.[6] Maintaining a sufficient workforce is challenging for meatpackers of all sizes, and technology can greatly reduce the burden on human resources. Finally, USDA should reach out to sister agencies including the Department of Labor, Department of State, Department of Transportation, Small Business Administration, and others to identify ways in which their mission areas can support this important undertaking.

Again, we appreciate this opportunity to provide the cattle industry perspective to USDA on this important topic. Many NCBA affiliate organizations, allied industry entities, and individual members have also submitted comments to this docket, and we encourage the Agency to carefully consider the perspectives of those groups as well. Our responses to some of the questions posed in the RFI are italicized below.

General Considerations

- **What competition challenges and risks might new entrants face from high levels of market concentration or other relevant market conditions, and how can USDA and other Federal Government agencies assist new entrants in mitigating those risks? What resources exist at the state, Tribal, and local level, as well as at academic research centers, to assist new entrants in addressing competition challenges, and how can the Federal Government support the effectiveness of those resources?**

  The chief barrier to entry for a prospective packer is access to sufficient capital. The average cost of construction for a packing plant runs approximately $100,000 per hook of daily capacity,[7] meaning that a modest 25 head per day facility would require about $2.5 million in up-front capital just to turn on the lights. In addition to the high startup cash requirements, maintenance, regulatory compliance, competitive wages, and other overhead costs require immense levels of liquidity. The major meatpackers are well-established business entities with several options available to them for financing. Thus, new entrants in particular can struggle to access adequate lines of credit to ensure both long- and short-term financial viability. In addition to cash volume, the risk profile for packing facilities is quite high, which can result in unfavorable financing terms or inadequate credit offerings from traditional lenders. USDA can assist in this endeavor by distributing some of the funds available to qualified business entities via federally guaranteed, low-interest loans and, in some cases, grants.

  Economies-of-scale also play a substantial role in long-term profitability for meatpackers. Meat processing businesses are based upon a cost-plus margin model. The ability to keep costs down is directly tied to investments made to increase production and efficiency, reducing fixed costs to grow margin where the price for the final meat product is heavily commoditized. Well-established, high-throughput entities are therefore at a tremendous market advantage over new entrants who must still make efficiency-enhancing investments. USDA can assist new entrants by partnering with land-grant universities and cooperative extension to provide consulting services to qualifying business entities.

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[6] See for example: *https://scottautomation.com/assets/Sectors/Meat-processing/Resources/Beef-Processing/Beef-Rib-Cutting-Scribing-Brochure-EN.pdf*.

[7] Newlin, Lacey, *So you want to build a slaughter plant?*, HIGH PLAINS JOURNAL, June 2020, *https://www.hpj.com/livestock/so-you-want-to-build-a-slaughterplant/article_a033a44e-acaf-11ea-a32d-63beecbd5f05.html*.

- **What type of investor, developer, or new entrant would be best positioned to build a new facility, or expand an existing facility, and who could fund it? What level of experience is necessary for success?**

Prospective meatpackers must thoroughly research the market in which they plan to operate. Factors such as sufficiency of livestock supply, availability of workforce, transportation costs, transaction types, and potential sales channels must be considered. Those new entrants who will be most successful will be based in regions currently underserved by meat processing services and that have previously identified retail and/or foodservice channels into which their product can be sold. USDA can assist through the Office of the Chief Economist by conducting market research to identify those areas where more localized processing is most needed.

Meatpacking, like any commodity-based enterprise is a cyclical business. During periods of high beef demand and high cattle supply, as is currently the case, beef packing can be highly lucrative. On the other hand, when the reverse is true, maintaining profitability can be challenging. Understanding these cycles can be difficult for new entrants with minimal experience in either the livestock or meat industries. USDA can partner with land-grant universities and cooperative extension to provide training to new entrants on how to maintain solvency throughout these cycles. Further, USDA can enter into partnerships with groups such as the CME Group and/or Commodity Futures Trading Commission to educate prospective market entrants on mitigating risk through a comprehensive hedging strategy via futures and options markets.

- **What business and operating structures (*e.g.*, cooperatives, farmer-owned facilities, sole proprietorship, limited liability company, B corporation, *etc.*) can sustain these operations?**

There are a number of factors which may influence business structure in the meat processing industry, and NCBA is not aware of any data to support the assertion that a specific type of enterprise or operating structure is an indicator of long-term success. That said, it's helpful to be aware of the varying pro's and con's that exist relative to each operating structure. For example, sole proprietorships and partnerships are relatively easy to form but individual owners bear the burden for all business debt and liability. Limited Liability Corporations limit liability and are simpler to run than corporations but receive less favorable treatment than corporations. S corporations, C corporations, and cooperatives arguably require the most effort to form or incorporate and run but receive the benefit of various tax breaks (or in the case of cooperatives, may even be eligible for certain grant funding).

- **How can workforce recruitment, training, and retention needs be addressed to maintain or increase processing capacity?**

Across the country, the entire economy is experiencing a shortage of skilled workers. Farms, ranches, and processing facilities are no exception. Between the lockdowns and unemployment incentives caused by the COVID–19 pandemic, the labor situation has continued to worsen. We continue to see labor shortages for our livestock producers and processors. Many farmers and ranchers would like to use the H–2A program administered by the Department of Labor to fill critical labor gaps on farm and in the processing sector.

The biggest shortcoming of the H–2A program for cattle producers is its structure in covering only seasonal temporary workers. Raising livestock is a year-round job. To keep some workers on farm for part of the year, some producers will use H–2A in its current form, however as soon as that worker leaves that ranch, the high-skilled and trained worker has moved on to another seasonal job under a new visa.

While ranches are constantly confronted with labor shortages, the lack of a workable, year-round, no cap, H–2A program is also worsening existing bottlenecks at meat processing plants. As packing plants return to full operations, many jobs remain vacant simply due to a lack of applicants. H–2A workers can fill this need and help bring some stability back to the cattle supply chain, but it needs to be a year-round program with no cap. It must be accessible and workable for livestock producers and processors alike.

Another area that needs to be addressed in order to fill specifically the jobs within the packing industry, is one that we have not discussed in great detail in the past. The previous Administration placed a cap on the number of individuals entering the U.S. through the asylum and refugee visa system. The packing plants rely heavily on these visa holders for the processing plants. Fully recognizing that COVID–19 put a halt to many of these individuals entering the U.S., once the borders fully reopen, we need to take a hard look at these caps and de-

termine whether some of these restrictions can be lifted to help with our continued labor shortages.

- **What constitutes sufficient actual demand for small- and very-small-processing facilities to keep a business operational with appropriate cash flow? For context, USDA defines a "small" establishment as those with ten or more employees but fewer than 500 employees; a "very small" establishment is one with fewer than ten employees or less than $2.5 million in annual sales. Any establishment with 500 or more employees is considered "large"; there is no mid-scale size category.**

Demand for processing is highly regional, and includes not just commodity fed cattle but cull cows and program cattle as well. Therefore, demand can be difficult to ascertain—particularly areas that are not included in traditional market reports published via Livestock Mandatory Reporting. However, demand can simplistically be determined by examining the opportunity costs of adding hooks into a regional market. In those areas where processors, regardless of size, are significantly backlogged on harvest, livestock producers may be willing to accept different transaction terms in order to eliminate the variable costs associated with maintaining ownership of market-ready animals.

One method for evaluating actual demand for larger processing services can be determined by analyzing the regional currentness of the cattle feeding sector. Currentness refers to whether or not cattle are being marketed in a timely manner or whether they are being retained on feed for longer than necessary.[8] *Cattle feeders are considered to be current if they are able to sell fed cattle around the same time they achieve target weight. Currentness can be affected by factors such as weather and cattle prices, but the availability of operational processing capacity is a chief driver. USDA can evaluate the actual regional demand for more processing in part by analyzing* ***Cattle on Feed*** *reports published monthly by USDA's National Agricultural Statistics Service. By comparing seasonal on-feed levels in each region against historical datasets for the same time period, trends can be identified which may provide insights into what specific regions could sustain additional processing capacity. For example, comparing the late-summer on-feed levels in the Kansas region to previous years shows a decrease in seasonal currentness over the past years. This could indicate demand for more processing in this region.*

- **How do processing needs and challenges vary by species and by value-added product types (*e.g.*, organic, local, grass-fed, kosher, Halal)? Do these needs require special types of funding (*e.g.*, to encourage continued innovation)?**

While it is possible for very small and small meatpackers to successfully compete with more well-established entities in the production of "commodity beef," they are better suited to compete in niche markets (locally sourced, branded programs, ***etc.****). USDA can help support new entrants by working through AMS to educate processors on existing process-verified programs (PVPs) and, in some cases, establish new PVPs to suit the marketing objectives of the new entrant. Oftentimes, the funding needs for specialty products varies due to the unique regulatory and verification standards associated with each.*

Fair Treatment Of Farmers And Workers And Ownership Considerations

- **What health and safety standards would encourage a safe and healthy workplace?**

Food safety is of the utmost importance when operating a meat processing facility of any size. Costs associated with implementing effective food safety programs are sometimes financially challenging for small- and very-small-facilities. Many small processors lack the necessary resources and funding to implement and maintain the expected level of food safety measures. The 2016 National Beef Quality Audit found that food safety was the most important quality factor when surveying all segments of the beef supply chain.[9] *This points to the importance that must be placed on food safety protocols when operating a processing facility of any size. However, small plants find it difficult to obtain the necessary tools and training to develop sufficient food safety programs. In considering how funds are appropriated to expand meat and poultry processing capacity it is paramount that the implementation of effective food safety programs be incor-*

[8] Mark, Darrell R., *Interpretation of the USDA Cattle on Feed Report,* University of Nebraska Lincoln Extension, *https://extensionpublications.unl.edu/assets/pdf/ec850.pdf.*

[9] *2016 National Beef Quality Audit Executive Summary* (*https://www.bqa.org/Media/BQA/Docs/2016nbqa_es.pdf*).

porated. Specifically, USDA should consider allocating funds for food safety, education and training for the following:

- *Investment in sanitation equipment and installation of the equipment. New technologies and modern equipment increase the ability of processing facilities to adhere to FSIS standards and make it less likely that a plant will be subject to a product recall or identified as the source of a foodborne illness outbreak.*
- *Training and education for the development of strong Hazard Analysis and Critical Control Point (HACCP) plans. HACCP plans are highly technical documents that incorporate scientific knowledge and practical actions that smaller operators may not be able to develop themselves. Through a mix of private consultation, cooperative extension, and USDA technical assistance better, more effective, HACCP plans could improve food safety programs that are tailored to each facility.*
- *Workforce-related technical assistance that provides additional resources for employee training, and development for highly skilled technical workers and in-plant operators. Small processors shouldn't have to sacrifice production time and loss of income due to employees participating in necessary food safety and equipment training.*
- *Enhanced research for small and medium sized processing facilities to match the scale and scope of processing facilities. Science, data, and research are primary tools USDA uses to protect public health. Modern agriculture and food safety research has helped to build a modern public health system that meets the evolving needs of the food supply system. Large corporate processors have researchers and meat scientists at their disposal. Small processors are limited to data that pertains to their scale of operation. The need for food safety research conducted at small and medium sized facilities is essential to the long-term viability of these businesses and the overall supply chain.*

It is also vital that FSIS support inspection that has the capacity and flexibility to react to the demands of meat processing facilities of any size. Supply and demand can rapidly change, particularly for small processors, and inspectors need to be available and ready to accommodate such shifts. Any funding provided by USDA–FSIS should ensure that there are an adequate number of inspectors to allow facilities to operate and react to local needs and supply chain demands.

- **Should USDA have the ability to block the sale of processing facilities built or invested in through Federal funds to large or foreign-owned corporations? What other options should USDA consider in order to prevent new, expanded, and successful facilities from being acquired by the large corporations whose consolidated operations can suffer from bottlenecks and create significant supply chain vulnerabilities?**

If the ultimate goal of this effort is to eliminate or, at the very least significantly reduce, supply chain vulnerabilities for small- to mid-size processors then the immediate focus should be on ensuring these entities are viable businesses—both now and in the future. NCBA does not have a position on whether or not the Agency should be permitted to block the sale of processing facilities, but reiterates the importance of investing in sound business models that enhance competition and opportunities for U.S. cattle producers. USDA should make every effort to prevent further consolidation in this sector of the beef supply chain.

- **Should the process[o]r be required to purchase a minimum volume through auctions or other public transactions?**

The negotiated trade of fed cattle is the primary driver of price discovery in the cattle markets. The weighted averages of the cattle prices negotiated helps producers understand the value of their cattle at a specific point in time, and often is the mechanism used to establish base prices in other transaction types. However, under Livestock Mandatory Reporting, only the information from those federally inspected packers which process an average of 125,000 head of cattle per year (roughly 500 head per day) is included in those AMS reports. Therefore, the vast majority of processing entities established through USDA loans and/or grants will not contribute to price discovery in this traditional sense.

As previously noted, smaller meatpackers can be better suited to producing niche meat products. Because the costs associated with operating branded programs and PVPs are typically higher than more traditional beef products—both to the livestock producer and the processor—small packers need to be allowed the flexibility to enter into agreements that make sense for both the buy and sell side

of the ledger. Requiring a certain volume of specific transaction types would pose an unnecessary regulatory burden on these critical businesses.

- **If contracts are utilized, should practices like tournament systems that have been found to be prone to anti-competitive abuse be prohibited? Should contracts have at least a portion of the payments to producers be based on wholesale meat prices?**

It is important that prices paid by packers to cattle producers be fair and competitive with the market. In some cases, market participants may prefer to base pricing models off of wholesale meat prices. However, as previously stated, requiring a certain volume of specific transaction types or contract structures would pose an unnecessary burden on new entrants into the meatpacking space.

Loans and Other Financing Considerations

- **What financing tools facilitate access to capital for small meat and poultry processing companies? In your response, please consider the stage of corporate development (*e.g.*, startup, onsite expansion, restarting an idled facility, new location), the potential use of funds (*e.g.*, working capital, construction, credit lines, equipment), and the type of financing (*e.g.*, grants, installment loans, balloon payment loans, equity like investments). Please also consider the prospective borrowers' type of business model (*e.g.*, cooperative, farmer joint-ownership, employee-ownership, mobile meat- and poultry-processing operations).**

Guaranteed loans arguably represent the best opportunity to finance capital-intensive projects in the meat processing sector—from the construction of new facilities to significant upgrades or expansions to existing facilities. Through USDA Rural Development and the Small Business Administration (SBA), NCBA is aware of several existing resources such as the Business and Industry Loan Program and SBA 7(a) programs where rural businesses can work with lenders to provide the capital they need for their business. It is critically important that efforts be made to strengthen meat supply chain resiliency in a timely manner. Therefore, NCBA encourages USDA to consider building upon existing programs to address needs in the processing sector rather than establish a new program.

- **What barriers, if any, exist that reduce access to capital for very small and small meat and poultry processors? In your response, consider collateral, capital, capacity, and other factors.**

When working with a new customer, lenders will consider a host of factors before providing capital, regardless of the business venture, or even how that individual business is structured. Some of the most important considerations include the ability to repay and the risk of the venture. Beyond that, a lender will consider whether the borrower has experience in that particular business venture, if they have a sound business plan, and whether they have a legitimate market in which to sell their product. While the above factors need to be considered, it is important to note that risk is most often the greatest barrier to accessing capital.

- **What are the most pressing needs of the meat and poultry processing sector with regard to financing, and what action should USDA take in the immediate term to improve access to capital for small- and very-small-meat and poultry processors?**

As stated throughout these comments, construction or expansion of beef processing capacity requires immense capital, and oftentimes traditional lenders are not a suitable option for processing entities. USDA is uniquely positioned to distribute funds to entities at various stages of corporate development. Whether by utilizing existing loan programs, such as the Business and Industry Loan Guarantees program under USDA's Rural Development mission area, or establishing new loan and grant programs through other USDA bureaus, the Agency should most immediately make financing available to qualified entities demonstrating intent to expand processing capacity. Further, many new beef processing plants and expansions have been announced and are in various stages of construction. USDA should consider tools to support those business entities who have already engaged in capital raising efforts. In some cases, grants or loan guarantees offered retroactively for costs already incurred and paid may be appropriate to allow these small businesses to direct more resources toward business development undertakings such as scoping and efficiency enhancement.

- **What types of technical assistance or capacity building support would be useful to lenders interested in starting or expanding their meat and poultry processing lending?**

Existing processors and new business entities alike stand to benefit from enhanced training and assistance, and increased awareness of existing programs and resources is one important component of that.

USDA should also consider ways to support borrowers in the context of lending barriers—whether that be through direct efforts or grants to various entities for the purpose of assisting with everything from a basic understanding of credit, paperwork, and documentation needs to establishing a sound business plan and securing a dedicated market for their products.

To remain competitive, meat processors must continuously upgrade facilities for the purpose of upkeep, to implement new technology, and maintain adherence to stringent food safety standards. This support could come in the form of loan guarantees or grants depending on project size and resource requirements.

Historically, initial losses are inevitable in startup plants. And after the start-up phase, packer margins are typically narrower than pre-expansion. Due to the rapid pace of this expansion, liquidity needs may be greater than in previous cycles. Special funding considerations for these specific needs may be warranted.

- **How could Federal funds be best leveraged with state and local resources (matching funds, in-kind support, government assistance)?**

USDA should incentivize state, local, and Tribal governments to partner with the Agency in bolstering the meat processing sector, but should not require such participation for the purposes of determining an applicant's eligibility. Further, while many states have allocated Federal funds toward meat and poultry processing—such as those received under the Coronavirus Aid, Relief, and Economic Security Act (P.L. 116–136)—the previous receipt of aid should not necessarily disqualify applicants from receiving additional funding. These instances should be evaluated on a case-by-case basis.

Grant Considerations

- **Would a small plant expansion program structured similarly to USDA's Meat and Poultry Inspection Readiness Grant (MPIRG), but with a focus on expanding slaughter and processing capacity for small federally inspected plants, be beneficial? If so, at what award ($) level per grant and for what types of costs?**

While the new Meat and Poultry Inspection Readiness Grant program is beneficial for existing facilities seeking to participate in Federal inspection, a gap exists for facilities currently under construction that are not yet operational. These entities should not miss out on resources USDA will be providing through this effort simply because they were too proactive in addressing processing capacity needs in the beef sector.

- **Are grant funds (or other funds) needed for marketing or outreach activities, including recruiting new participants in the industry?**

There are many individuals and businesses who have expressed interest in entering the meat processing space. Thus, it is unnecessary for funds to be dedicated toward recruitment of potential operators. Funds will be better invested elsewhere.

- **Would pilot grants that provide awards to small plants for training and other support (*e.g.*, cover wage gap during apprenticeships) to develop their local workforce be effective to address some of the labor challenges associated with operating a current, expanded, or new facility?**

One of the difficulties with opening a new plant is attracting workers and the retention of those workers. There will need to be sufficient training to keep American workers employed at these small to medium sized plants. We believe that an apprenticeship type program has worked in other industries and should work in the packing space as well. We recognize that these plants need workers whether they are trained employees from here within the U.S., or whether they come in through a visa program already trained. This can be done through land-grant university programs as well as our extension agents and programs across the U.S. The workforce training is a step in the right direction towards solving our labor and retention concerns.

Technical Assistance Considerations

- **In what ways could technical assistance support best be deployed to enhance competition and address challenges in the marketplace, how is it best delivered, and by whom?**

As previously noted, those smaller plants which have the greatest potential for long-term viability will be those servicing niche markets. Due to economies of

scale and efficiencies inherent to larger production facilities, smaller processors may be better suited focusing on opportunities in branded programs and marketing into specific retail or foodservice distribution channels. For this purpose, AMS should play an active role in assisting borrowers and/or grantees in navigating existing programs. If necessary, AMS should partner both with cattle producers and smaller packers to develop new PVPs which give borrowers and/or grantees a chance to better serve their customers and maintain solvency.

- **What workforce-related technical assistance is most needed, how is it best delivered, and by whom (*e.g.*, best industry practices, training on equipment, new tools for safety)?**

While it is important to fill the positions at the plants and throughout the supply chain, there needs to be funding for workforce training programs at the plants. Some of those positions such as Food Safety Inspectors and USDA graders require more training than some of the positions on the fabrication floor for example. However, those highly skilled jobs on the fabrication floor are well paid positions and require further workforce training. With continued focus on workforce training, the goal would be to move more workers towards jobs in the packing industry that they may not have even been aware of, or training was a barrier to entry.

Partnerships and Combined Funding Considerations

- **Should loans and grants be combined to support these facilities? If so, what criteria should be used to determine what portion of the funds are offered as loans *versus* grants?**

Loans and grants should be combined to support facilities. USDA should determine on a case-by-case basis which method is the most appropriate means of support. However, NCBA strongly encourages the Agency to provide the same degree of technical assistance to grantees as it does to borrowers. While loans tend to incentivize a higher degree of partnership between lender and borrower, grant recipients will require equal access to resources in order to be successful.

- **What conditions should be placed on grants or loans? If those conditions are not met, should the grants require repayment? If the conditions are met, should the loan be forgivable?**

*The construction or expansion of any additional hook space is helpful to remedy the current supply and demand imbalances. Therefore, conditions for loan or grant eligibility should not be unnecessarily arduous or burdensome. Rather than conditions, priority should be given to applicants who are more likely to adopt those practices which maximize access to the market (**e.g.,** Federal inspection).*

Thank you for allowing NCBA to provide comments on behalf of our members—America's food producers. As mentioned, we look forward to continuing to partner with USDA on this critical undertaking. Please contact the NCBA Center for Public Policy at (202) 347–0228 for further information or assistance.

The CHAIRMAN. Thank you, Mr. Wilkinson. And now I recognize, for his 5 minutes, Mr. Léger. Please begin when you are ready.

STATEMENT OF FRANÇOIS LÉGER, OWNER, FPL FOOD, AUGUSTA, GA; ON BEHALF OF NORTH AMERICAN MEAT INSTITUTE

Mr. LÉGER. Good afternoon, Chairman Scott, Ranking Member Thompson, and Members of the Committee. Thank you for holding this hearing. I am François Léger, the owner of FPL Food, a family-owned beef business based in Augusta, Georgia. FPL is a member of the North American Meat Institute, based in Washington, D.C. The Meat Institute represents more than 350 packers and processors of beef, pork, lamb, veal, turkey, and processed meat products both large and small. Today I will discuss my business, and provide my perspective on challenges we face. I was raised on the farm in France. I pursued a degree in agriculture, and I have worked in the beef industry in France, Australia, South America,

and the U.S. for more than 38 years. In 2004 I purchased a processing facility and a grinding facility in Augusta, Georgia, and began FPL.

FPL's business has two parts. First, we slaughter cows and bulls. We source cattle directly from producers, and through auction barns, purchased across the Southeast from more than a dozen states from east Texas to the Carolinas, from Mississippi, Alabama, Louisiana, Virginia, to Florida, and, of course, Georgia. Our plant creates a critical market for many southeastern producers.

Second, we have a fed cattle operation. As the business grew, FPL purchased pasture and farmland in central Georgia in 2011, and built a cattle feeding operation that rivals anything in the Southeast. Today FPL's Chatel Farm has a herd totaling more than 8,000 head, including Angus and Akaushi, purebred stock animals, and feeder calf to support the FPL Food beef brand. Chatel Farm also buys feeder cattle from producers in the region through several arrangements. We work with producers committed to raise their calf according to the standard of our brand. We institute a buyback program for cattlemen who use our Chatel Angus genetic. For cow-calf producers who use our genetic in their herd, we will commit to buy their feeder cows. Our brand is built on the principle of quality, sustainability, traceability, and animal welfare, all intended to satisfy customer demand. Our structure and marketing options have a positive economic impact for the beef cattle industry in the Southeast.

The cattle and beef industry is driven by supply and demand, and the cattle market is cyclical. Not long ago the cattle market was the reverse of today. In 2013, 2014, and 2015 the herd was small, and producers were making record profit, while packers were losing money. In fact, I had to—our value at the plant for my company to survive. During the pandemic FPL worked with the Georgia Cattlemen's Association to help support the cattle industry in our region. We need cattle producers, and cattle producers need packers. And we need workers. Currently we see on average 20 percent of absentees in our plant. The labor shortage affects not only processing lines, but—warehouse where there is maintenance position, and other jobs are so critical to maintaining the supply chain, like truck drivers. For example, FPL is investing in tractor trailers just to help maintain our cattle supply.

In addition to the investment we are making regarding labor and physical capital, we seek to advance our industry in the industry sustainability. USDA announced plans to propose new Packers and Stockyards Act rules to regulate the interactions between packers and producers. Bills have been introduced in Congress that would place certain purchasing requirements on packers. Government intervention like this could jeopardize packers' ability to provide products customers and consumers desire, which does not help cattle producers.

Earlier this week Texas A&M University released an evaluation of today's cattle market, which included an important point about the importance of marketing agreement for providing better communication with producers and packers about beef marketing demands, such as—signals, costs, and scheduling, of—all which ultimately benefit consumers. My message today is the cattle and beef

industry need to be customer oriented. This is the only way to achieve a fair result for all the——

[The prepared statement of Mr. Léger follows:]

PREPARED STATEMENT OF FRANÇOIS LÉGER, OWNER, FPL FOOD, AUGUSTA, GA; ON BEHALF OF NORTH AMERICAN MEAT INSTITUTE

Chairman Scott, Ranking Member Thompson, and Members of the Committee, thank you for holding this hearing and providing me the opportunity to testify today about livestock market issues. I am François Léger, the owner of FPL Food (FPL), a family-owned beef business based in Augusta, Georgia.

FPL is a member of the North American Meat Institute (NAMI or the Meat Institute) based in Washington, D.C. The Meat Institute is the nation's oldest and largest trade association representing packers and processors of beef, pork, lamb, veal, turkey, and processed meat products. NAMI members include more than 350 meat packing and processing companies, large and small, and account for more than 95 percent of United States output of meat and poultry products.

The Meat Institute submitted detailed testimony for the record for the Livestock and Foreign Agriculture Subcommittee's hearing on the state of the beef supply chain on July 28. That testimony analyzes the meat supply chain, particularly regarding the repercussions of the COVID–19 pandemic.

Today, I will discuss my business and provide my perspective on challenges we face.

I was raised on a farm in France and wanted to continue my family's proud farming legacy. I pursued a degree in agriculture and worked in the beef industry in France, Australia, South America, and the U.S. for more than 38 years. In 2004, I purchased a processing facility and a grinding facility in Augusta, Georgia, and began FPL.

There are two parts to FPL's business. First, we slaughter cull cows and bulls. We source cattle directly from producers and through auction barn purchases across the Southeast from more than a dozen states, from east Texas to the Carolinas, from Mississippi, Alabama, Louisiana, Virginia to Florida, and of course Georgia. Our plant creates a critical market for many southeastern producers.

Second, we have a fed cattle operation. As the business grew, FPL purchased pasture and farmland in central Georgia in 2011, and built a cattle-feeding operation that rivals anything in the Southeast. My goal was to prove that great quality fed cattle could be raised and finished for beef production in the Southeastern United States. To achieve that goal, I sourced some of the best Angus genetics, and raised corn and other forage crops as feed sources. Today, FPL's Chatel Farms has a herd totaling more than 8,000 head including Angus and Akaushi (Wagyū), pure-bred seed-stock animals, and feeder cattle to support the FPL Food beef brands.

Chatel Farms also buys feeder cattle from producers in the region through a number of arrangements. Specifically, we work with producers who are committed to producing high quality, carcass-merit feeder cattle and who will raise their calves according to the standards of our brand. We've even instituted a buy-back program for Southeastern cattlemen who use our Chatel Ankony Angus genetics. For cow-calf producers who use our genetics in their herd, we will commit to buy their feeder calves. We also buy fed cattle on a cost-plus basis, providing more options to the producer.

Our brand is built on the principles of quality, sustainability, traceability, and animal welfare, all intended to satisfy customer demand. Being in the Southeast, far away from most of the nation's largest feedlots, we built a vertically integrated business model to achieve the company's goals, and we work closely with local producers on the supply of cattle that will produce the quality of beef our customers demand. Our structure, and the marketing options for producers, have a positive economic impact for the beef cattle industry in the Southeast.

To continue the vision of supplying high-quality southeastern U.S. beef, FPL purchased a further processing facility in 2012. This facility, in Thomasville, Georgia, enables FPL to produce case-ready retail beef cuts and portioned steaks and burgers for the retail and foodservice industry.

We continue to grow our business through our brands and high-quality boxed beef. With our fresh and frozen grinds program and case ready products from our further processing facility, FPL Food supplies a comprehensive portfolio of quality beef products that meet our customers' needs and supports cattle producers in the Southeastern region.

Today, we have more than 1,600 team members at three facilities throughout Georgia—our farm, production plant, and further processing facility. These facilities

supply multiple brands of beef products from cattle raised through a process that combines new innovations with traditional farming techniques.

FPL Food continues to grow: we are in the process of a major expansion of our plant to add cooler and deboning space to increase capacity, and we are rebuilding our rendering facility to better supply tallow for renewable and biomass-based diesel manufacturers.

The cattle and beef industry are driven by the supply and demand fundamentals of the free market, and the cattle industry is cyclical. Not that long ago the cattle market was the reverse of today—in 2013, 2014 and 2015, the herd was small, and producers were making record profits while packers were losing money. In fact, I had to sell one plant for my company to survive.

During the pandemic, with packing capacity operationally reduced and the cattle herd large, cattle prices dropped. FPL worked with the Georgia Cattlemen's Association to help support the cattle industry: we need cattle producers. And cattle producers need packers.

As Dr. Dustin Aherin, Vice President, RaboResearch Animal Protein Analyst, *recently testified before the Livestock Subcommittee* [1] at the July 28 hearing, "Cattle are one of several inputs into beef production. Other major inputs include labor, physical capital, and technology." I can tell you from my experience in operating and growing FPL, he is correct.

Production in meat packing and processing plants is tied to the number of employees working the line. Currently, we see on average 20 percent daily absenteeism in our plant. I come to work every day and the first decision I face is which line to run and how to staff it. We have increased our starting salary to $15 an hour, which also means we must increase all salaries up the chain. Our average salary is now $20 an hour for plant workers, and yet we still cannot run at full capacity because of absenteeism. Our costs in salary alone have increased by $7 million a year.

The meat industry has faced a labor shortage since before the pandemic, but it is acute today. The labor shortage affects not only processing lines, but also warehouse workers, maintenance positions necessary to keep production lines running, and other jobs also critical to maintaining the supply chain, such as truck drivers. For example, FPL is investing in tractor trailers just to help maintain our cattle supply. Moving cattle consistently and predictably is directly linked to slaughter capacity and, thus, producer sales. All these costs are in addition to higher costs for machinery parts and other materials FPL needs to maintain production levels.

In addition to the investments we are making regarding labor and physical capital, we are constantly evaluating how we advance our contributions to healthy people, healthy animals and a healthy planet. FPL is a strong supporter of the industry's advancement goals. In July, NAMI and 11 other organizations representing farmers and companies who produce the vast majority of America's meat, poultry, and dairy products, and animal feed and ingredients, unveiled the *Protein PACT for the People, Animals, and Climate of Tomorrow*.[2] The Protein PACT is the first joint initiative of its kind designed to verify progress toward global sustainable development goals across all animal protein sectors to ensure customers and consumers trust that meat aligns with their sustainability expectations.

Through the Protein PACT, Meat Institute members have developed robust metrics for continuous improvement and publicly committed to sustain healthy animals, thriving workers and communities, safe food, balanced diets, and the environment and align with the United Nations' 2030 *Sustainable Development Goals.*[3]

We cannot achieve these goals in a restricted market that does not allow companies like mine to produce products that meet consumer expectations. USDA has announced plans to propose new Packers and Stockyards Act rules to regulate the interactions between packers and producers, and bills have been introduced in Congress that would place certain purchasing requirements on packers. Government intervention could jeopardize packers' ability to provide products customers and consumers desire. The industry needs to be customer oriented; we must provide the products customers want. Thirty years ago, I saw first-hand in France the result of direct government intervention into the meat industry, and it was a failure. I hope we avoid the same mistake here.

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[1] *https://docs.house.gov/meetings/AG/AG29/20210728/113973/HHRG-117-AG29-Wstate-AherinD-20210728.pdf.*

[2] *https://www.meatinstitute.org/ht/display/ReleaseDetails/i/192863/pid/287.*

[3] *https://sdgs.un.org/goals.*

The CHAIRMAN. Thank you, Mr. Léger, I appreciate that. And now, Mr. Blubaugh, you are now recognized. Please begin when you are ready.

STATEMENT OF SCOTT BLUBAUGH, PRESIDENT, OKLAHOMA FARMERS UNION, TONKAWA, OK; ON BEHALF OF NATIONAL FARMERS UNION

Mr. BLUBAUGH. Chairman Scott, Ranking Member Thompson, and Members of the Committee, thank you for the invitation to testify on the topic that impacts the livestock industry, and myself directly. My name is Scott Blubaugh. I am a fifth-generation farmer and rancher from north central Oklahoma. Our family operation, we grow wheat, milo, soybeans, and raise purebred and commercial Angus cattle. I also serve as the President of the Oklahoma Farmers Union, an organization 60,000 members strong that represents farmers, ranchers, and rural citizens.

Farmers Union was started in part to help restore and enhance competition in agriculture. Today a fair market remains a central issue for our organization and for our economy. Over the last 50 years our food system has come under control of fewer and fewer multinational corporations. Today the four largest companies in each of these major sectors of the meat industry control 85 percent of the beef packing, 70 percent of the pork processing, and 54 percent of broiler chicken processing. Unchecked consolidation and vertical integration have created a dramatic imbalance of power between producers and corporations, allowing corporations to manipulate the marketplace, push down the prices paid to farmers and ranchers, and ultimately drive us out of business.

Last year I was honored to share my story with CNN's W. Kamau Bell at my ranch, where he filmed part of an agriculture episode, *The United Shades of America.* We talked about how the packers maximize their profits, overcharging consumers, and limiting farmers like myself to razor thin margins. Between 1980 and 2020 the retailer's percentage of the beef food dollar has grown by 65 percent, and the packer's share has increased even more, by 70 percent. During this same time, the farmer and rancher's share has fell by more than 40 percent. I ask you, how fair is this?

It doesn't have to be this way. Corporate consolidation of a food system, especially the livestock sector, is not inevitable. Regulators must consider the need for robust competition at all links of the livestock supply chain. One of the most important ways to achieve this is through stronger language and rules reinvigorating the Packers and Stockyards Act. Additionally, reliable information must be provided to farmers and ranchers through mandatory price reporting, and for consumers through accurate labeling. We appreciate the short-term extension passed last week on the price reporting, but Congress must pass a long-term reauthorization, with reforms to improve price discovery.

Furthermore, Federal and state governments should invest and support in more competition in both marketing and processing. USDA has started this process, and the State of Oklahoma has taken steps to increase resiliency in the livestock sector, ensuring greater value for our local and regional food systems. Through funding provided by the first CARES Act, Oklahoma launched a

grant initiative to fund new small meat processors, and expand existing plants. The effort increased our total in-state processing by 350 head of cattle and hogs per week. The additional capacity created 170 new jobs, which are vital to the success of our rural communities.

This is just one example in one state, but it is clear the need is to decentralize processing. It reduces the risk of the supply chain, and puts more funds in producers' pocket, and creates more jobs in rural America. Thank you for the opportunity to testify, and I look forward to answering your questions.

[The prepared statement of Mr. Blubaugh follows:]

PREPARED STATEMENT OF SCOTT BLUBAUGH, PRESIDENT, OKLAHOMA FARMERS UNION, TONKAWA, OK; ON BEHALF OF NATIONAL FARMERS UNION

Chairman Scott, Ranking Member Thompson, and Members of the House Agriculture Committee, thank you for the opportunity to testify today. My name is Scott Blubaugh. I'm a fifth-generation farmer and rancher from north-central Oklahoma. On our family operation, my father, my son and I grow milo and soybeans and raise purebred and commercial Angus cattle. I'm also the President of Oklahoma Farmers Union, a farm organization representing farmers, ranchers and rural citizens. We are 60,000 members strong and represent a broad cross section of Oklahomans from across the state. In today's proceedings, I represent both Oklahoma Farmers Union and National Farmers Union (NFU).

Last month, NFU launched the "Fairness for Farmers" campaign, an endeavor with clear goals: to promote competitive markets and address rampant corporate consolidation in the food and agriculture sectors and in rural economies. Promoting competition has been and continues to be a top priority for NFU because of the detrimental effects of consolidation on farmers, ranchers, and consumers. Today, most sectors in America's farm and food system are heavily consolidated and dominated by a small handful of multinational corporations, but even more so in the livestock industry. In fact, the four largest multinational meatpackers control *54 percent of U.S. poultry processing, 70 percent of U.S. pork processing, and 85 percent of beef packing.* Waves of mergers, acquisitions, and insufficient antitrust enforcement followed a shift in public policy attitudes towards antitrust law in the 1970s. As a result, farmers and ranchers have been deprived choices, innovation, fair prices, and fair treatment.

In late July 2021, NFU President Rob Larew testified at a Senate Judiciary Committee hearing focused on competition in the beef industry. Discussion during the hearing showed there is growing bipartisan support for measures seeking to strengthen competition in the nation's heavily concentrated meatpacking industry. We are encouraged by these developments as well as the Biden Administration's recent Executive Order 14036 "Promoting Competition in the American Economy", which is an important commitment to restore fairness to our economy.

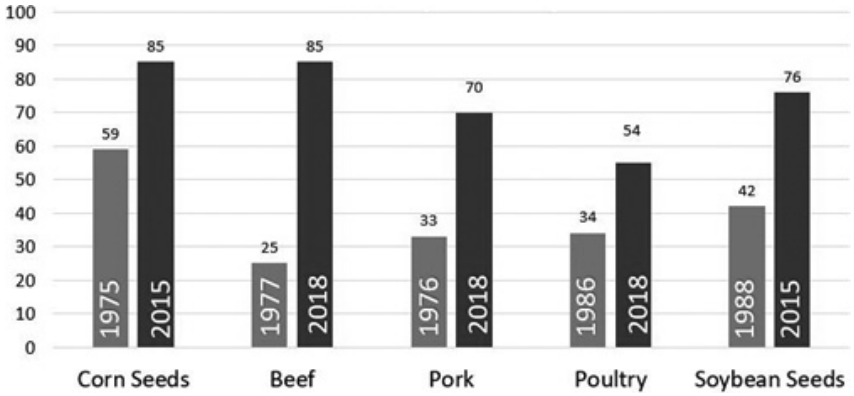
There are several ways to ensure a more resilient food supply for consumers and a competitive marketplace for family farmers and ranchers. Across the economy, there must be more scrutiny of buyer power, and regulators must consider the need for robust competition at all links of the supply chain. In the meat and poultry sector, rules must be implemented that reinvigorate the Packers and Stockyards Act (PSA), clearly delineate prohibitions on packers under the PSA, and create needed protections for farmers under contract. Market participants must be provided with reliable information through mandatory price reporting and accurate labeling. Congress must pass a long-term reauthorization of Livestock Mandatory Reporting (LMR), while also instituting reforms to the program to increase transparency and true price discovery. Furthermore, Federal and state governments should invest in supporting more market competition in marketing and processing to build a more resilient livestock sector and to ensure greater value accrues to local and regional food systems.

The State of Competition in America's Farm and Food Supply Chain

Today, a small handful of firms control the market for most farm inputs (such as seed, crop protection, fertilizer, and in equipment manufacturing), processing (including livestock slaughter and processing), food manufacturing, wholesale distribution, food service, and retail grocery. Family farmers and consumers sit on either end of this supply chain and are numerous and decentralized while a small set of

large, consolidated firms in the middle of the supply chain wield immense market power. The incentives for firms to merge or acquire rivals are strong, which can increase their bargaining power relative to customers and suppliers. Consolidation, both horizontal and vertical, can help firms exclude smaller rivals from accessing markets, increase barriers to enter markets and compete, allows large rivals to collectively manipulate markets to their shared advantage. The four-firm concentration ratio (CR4), a commonly used metric for measuring the market share of the top four firms in a sector, has risen precipitously among meat packers and poultry processors. Between 1977 and 2018, the CR4 for beef packers slaughtering steers and heifers rose from 25 to 85 percent;[1] for pork, the CR4 rose from 33 percent in 1976 to 70 percent in 2018;[2] for broiler chickens, the CR4 rose from 34 percent in 1986 to 54 percent in 2018.[3–4] While national-level industry consolidation may be lower for broilers, concentration is higher in localized markets.[5]

CR4 By Industry



*Data compiled by the National Farmers Union from multiple sources.

The rise in consolidation and decline in competition we see today in America's food supply chain has several explanations. In part, the issue has been the result of a shift in thinking regarding the interpretation of our existing antitrust laws.[6] This, in turn, has led to anemic merger enforcement across the supply chain. As companies have gotten larger and competition has declined, anticompetitive conduct by dominant firms has received insufficient scrutiny.[7] Additionally, with respect to livestock and poultry, the PSA has seen significant failures in enforcement.[8] Despite direction from Congress in the 2008 Farm Bill to develop new rules to clarify the PSA, the more robust regulations that were promulgated—the "Farmer Fair Prac-

[1] Cai, X., K.W. Stiegert, and S.R. Koontz, "Oligopsony Fed Cattle Pricing: Did Mandatory Price Reporting Increase Meatpacker Market Power?" *Proceedings of the NCCC–134 Conference on Applied Commodity Price Analysis, Forecasting and Market Risk Management.* St. Louis, MO. *https://legacy.farmdoc.illinois.edu/nccc134/conf_2011/pdf/confp24-11.pdf.*

[2] Clement E. Ward, "Economics of Competition in the U.S. Livestock Industry," January 2010. *https://www.justice.gov/sites/default/files/atr/legacy/2011/09/09/AGW-15639-a.pdf.*

[3] Joel Greene, "USDA's GIPSA Rule on Livestock & Poultry Marketing Practices." Congressional Research Service, 2016. *https://www.everycrsreport.com/files/20160107_R41673_e1d67b445c928f46a6b23a04c38d116fdb819c93.pdf.*

[4] USDA, Agricultural Marketing Service (AMS), Packers and Stockyards Division, "Annual Report 2019." *https://www.ams.usda.gov/sites/default/files/media/PSDAnnualReport2019.pdf.*

[5] James M. MacDonald, "Technology, Organization, and Financial Performance in U.S. Broiler Production" (U.S. Department of Agriculture Economic Research Service, 2014), *https://www.ers.usda.gov/webdocs/publications/43869/48159_eib126.pdf?v=0.*

[6] Tim Wu, *The Curse of Bigness: Antitrust in the New Gilded Age,* 2018.

[7] Diana L. Moss and Laura Alexander, "When COVID–19 is the Symptom and Not the Disease: Consolidation, Competition, and Breakdowns in Food Supply Chains," American Antitrust Institute, May 7, 2020.

[8] United States Government Accountability Office (GAO), Testimony before the Committee on Agriculture, Nutrition, and Forestry, United States Senate, "Packers and Stockyards Programs: Continuing Problems with GIPSA Investigations of Competitive Practices," March 9, 2006. *https://www.gao.gov/assets/gao-06-532t.pdf.*

tices" rules—were either not finalized or shelved,[9] and a subsequent rule that was finalized provides no meaningful protections for farmers.[10]

Last, the lack of competition in the livestock sector has a profound impact on consumers. Grocery prices are rising, and meat prices are rising higher than other retail food items. For the past 12 months, overall food prices increased 3.7%, led by increases in beef.[11] Despite the seemingly bounty of choices in food products and brands available to consumers at supermarkets, this is generally an illusion. For instance, Tyson's sells products under 38 separate retail brands.[12]

Examining Competition in the Livestock Sector

While there are some important differences between the structure of the industries that produce cattle, hogs, and poultry, farmers and ranchers raising these livestock all face a shared challenge: slaughter and processing sectors that are more concentrated today than they were several decades ago. In addition to the consolidation among the major packers and processors, the number of cattle feeding operations in the top 13 cattle feeding states declined approximately 40 percent between the 1970s and the 1990s, despite a relatively stable number of fed cattle marketed during this period.[13] There has also been a shift toward greater alternative marketing arrangements (AMAs) and a thinning cash or spot market which gives packers greater control over the cattle supply. AMAs in the form of formula pricing averaged nearly 65 percent of total fed cattle procurement, compared to about 45 percent a decade earlier. By comparison, the negotiated grid and cash market for fed cattle declined to an average of about 24 percent nationally in 2019, compared to over 45 percent in 2009.[14]

Heavy corporate consolidation in beef packing, and the shift toward fewer, very large plants, makes the industry more vulnerable to shocks. This puts producers at greater risk of experiencing lower prices and consumers are more likely to see high prices at retail. In the weeks and months following the fire that shut down the Tyson beef packing plant in Holcomb, Kansas, in August 2019, the spread between Choice boxed beef cutout values and fed cattle prices reached record levels.[15] The plant at the time ranked as one of the eight largest plants in the United States in terms of daily harvest capacity; the fire eliminated approximately 30,000 head per week of capacity. While the company was ultimately able to shift some production to other plants, the event precipitated market reactions that lowered prices paid to ranchers, and increased prices for consumers, for several months.[16–17] Additionally, in July 2020, following disruptions caused by the COVID–19 pandemic, the price received for steers and heifers dropped below $100 per cwt., which had not happened at any other time since 2012.[18]

While many variables influence the prices for farm products and the retail cost of food, the large price swings caused by recent disruptions are in large part a function of disrupted supply chains. The vulnerability of these supply chains to shocks is a feature of the extreme concentration in the middle of the supply chain between farmers and consumers. The rapid consolidation of packing and processing, driven by mergers and acquisitions by the Big Four, made the supply chain prone to breakdowns and bottlenecks. This, in turn, put more pressure on farmers and ranchers,

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[9] National Farmers Union, "NFU Deeply Disappointed by USDA Decision to Terminate Farmer Fair Practices Rules," October 17, 2017. *https://nfu.org/2017/10/17/nfu-deeply-disappointed-by-usda-decision-to-terminate-farmer-fair-practices-rules-2/*.

[10] National Farmers Union, "Rule Fails to Protect Farmers from Discriminatory Practices, According to Farmers Union," December 10, 2020. *https://nfu.org/2020/12/10/rule-fails-to-protect-farmers-from-discriminatory-practices-according-to-farmers-union/*.

[11] U.S. Bureau of Labor Statistics, *Consumer Price Index Summary of September 14, 2021. https://www.bls.gov/news.release/cpi.nr0.htm*.

[12] *https://www.tysonfoods.com/our-brands*.

[13] United States General Accounting Office, "Beef Industry: Packer Market Concentration and Cattle Prices," December 1990, GAO/RCED–91–29. *https://www.gao.gov/assets/rced-91-28.pdf*.

[14] USDA, Agricultural Marketing Service (AMS), Packers and Stockyards Division, "Annual Report 2019." *https://www.ams.usda.gov/sites/default/files/media/PSDAnnualReport2019.pdf*.

[15] USDA Agricultural Marketing Service (AMS), "Boxed beef and fed cattle price spread investigation report," July 22, 2020. *https://www.ams.usda.gov/sites/default/files/media/CattleandBeefPriceMarginReport.pdf*.

[16] "The smoldering impact of Tyson's Holcomb fire," *Meat+Poultry,* October 14, 2019. *https://www.meatpoultry.com/articles/22036-the-smoldering-impact-of-tyson-holcomb-fire*.

[17] Elliott Dennis, "A historical perspective on the Holcomb fire: Differences and similarities to the COVID–19 situation and other significant market events," September 11, 2020. *https://farm.unl.edu/historical-perspective-holcomb-fire-differences-and-similarities-covid-19-situation-and-other*.

[18] USDA, NASS, "Prices Received: Cattle Prices Received by Month, US," September 30, 2021. *https://www.nass.usda.gov/Charts_and_Maps/Agricultural_Prices/priceca.php*.

who often operate on razor-thin margins. Significant price declines and volatile markets can threaten their livelihoods.

Packers and Stockyards Act (PSA) Reform

The PSA is meant to assure fair competition, safeguard farmers and ranchers, and protect consumers, from unfair, deceptive, and unjustly discriminatory and monopolistic practices of the meat and poultry industries. Unfortunately, the PSA has been under-enforced.[19] NFU is heartened that President Biden's executive order on competition both reaffirms the government's commitment to the principles that led to the passage of the PSA and specifically mentions the need for the Secretary of Agriculture to initiative rulemakings under the PSA "to address the unfair treatment of farmers and improve conditions of competition in markets for their products."[20] Furthermore, USDA has signaled that it will take action to strengthen the PSA.[21]

USDA should establish and clearly state through the rulemaking process that it is not necessary to show a competitive injury broadly to find an action of a packer, swine contractor, or live poultry dealer to be unlawful under the PSA. As USDA has repeatedly argued in court cases, the unambiguous language of section 202(a) and (b) of the PSA does not require any proof of an adverse effect on competition or of restraint of commerce or trade. The legislative history of the PSA shows that Congress intended to prohibit actions that give undue and unreasonable preferences without regard to whether they restrain trade, create a monopoly or control prices.

Additionally, we were encouraged to see USDA released a recent FAQ Sheet on the steps they plan to take in revisiting the final rule with respect to "undue or unreasonable preference or advantage," which failed to provide meaningful protections for producers, instead enshrining unfair, anti-competitive behavior already employed by the industry.[22] Specifically, USDA should clarify that a "reasonable business decision" cannot justify an undue preference or advantage.

More generally, the update to the PSA should provide greater clarity about what practices in the meat and poultry industries constitute unfair, unjustly discriminatory, or deceptive practices, and thus violate the PSA. Especially close attention should be paid to prohibiting unfair practices regarding grower ranking systems or "tournaments." PSA rulemaking should also institute anti-retaliation protections that help ensure farmers' right to association and so that farmers can speak up about unfair treatment without fear of retribution.

Price-Fixing in the Livestock and Poultry Industries

Concentrated market structures also increase opportunities for market manipulation and coordinated behavior. There has been a spate of price fixing litigation brought against major livestock industry companies since 2016, with multiple indictments and guilty pleas. Allegations have touched all three major meat sectors—beef cattle, pork, and broiler chickens.

Accusations of collusion began to shadow the broiler chicken industry in late 2016 with the filing of the *Maplevale* lawsuit.[23] The suit alleged that large poultry companies coordinated prices between 2008 and 2016, resulting in a 50 percent price increase for broiler chickens, despite a roughly 20 to 23 percent decrease in input costs over the same period.[24] There have been several follow-on suits from other companies that purchase poultry making the same allegations.

The Department of Justice (DOJ) later intervened in the *Maplevale* case, and in June 2020 the first indictments of chicken-industry executives related to the case

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[19] United States Government Accountability Office (GAO), Testimony before the Committee on Agriculture, Nutrition, and Forestry, United States Senate, "Packers and Stockyards Programs: Continuing Problems with GIPSA Investigations of Competitive Practices," March 9, 2006. *https://www.gao.gov/assets/gao-06-532t.pdf*.

[20] Executive Order 14036 of July 9, 2021, "Promoting Competition in the American Economy," *Federal Register* Vol. 86, No. 132, July 14, 2021.

[21] "USDA to Begin Work to Strengthen Enforcement of the Packers and Stockyards Act," USDA, June 11, 2021. *https://www.usda.gov/media/press-releases/2021/06/11/usda-begin-work-strengthen-enforcement-packers-and-stockyards-act*.

[22] USDA Agricultural Marketing Service, "Frequently Asked Questions on the Enforcement of Undue and Unreasonable Preferences Under the Packers and Stockyards Act." *https://www.ams.usda.gov/rules-regulations/packers-and-stockyards-act/faq*.

[23] *Maplevale Farms, Inc.* v. *Defendants;* case: 1:16–cv–08637, United States District Court for the Northern District of Illinois, *https://www.locklaw.com/wp-content/uploads/assets/090216-complaint-maplevale-farms.pdf*.

[24] Leah Douglas, "Justice Dept. intervenes in major poultry price-fixing case," *FERN,* June 24, 2019.

were announced.[25] In October 2020, Pilgrim's Pride, which is majority owned by JBS, plead guilty to one count of conspiracy in restraint of competition, and agreed to pay a fine of $110.5 million.[26] Additional settlements by chicken companies about price-fixing claims followed,[27] and an indictment, of Claxton Poultry Farms, followed in May 2021.[28] Multiple lawsuits were also brought against beef packers[29] and the pork industry[30] in August 2019. In the case of pork, multiple settlements were subsequently announced, including $24.5 million from JBS in December 2020, another $20 million in March 2021, and $12.75 million in April 2021. It was announced in June 2021 that Smithfield Foods would pay $83 million to settle its case.[31] Most recently, Tyson Foods agreed to pay $221.5 million to settle several private lawsuits brought forward by poultry farmers.

These instances of market manipulation are a symptom of concentrated markets. While the pursuit of these cases by Federal regulators is a welcome development, the need for these actions is a product of the existing lax antitrust laws and their under-enforcement. In addition to buttressing the PSA, ensuring more transparency in markets, and promoting competition and new market opportunities, Federal regulators must vigorously enforce existing antitrust laws. We support legislative efforts to address these issues as well, most notably the Competition and Antitrust Law Enforcement Reform Act of 2021, authored by Sen. Amy Klobuchar of Minnesota, which would increase enforcement resources, strengthen prohibitions on mergers, and commission studies into past and future mergers.

Supply Chain Disruptions

Livestock slaughter and processing is heavily consolidated. Today, there are approximately 835 federally inspected slaughter facilities and 1,938 other slaughter facilities in the United States.[32] In 1968, there were nearly 10,000 total slaughtering establishments across the country.[33] As the number of plants decreased, many remaining plants have become bigger; for example, just 50 plants slaughter and process 98 percent of all cattle in the United States.[34] While these larger plants may create certain efficiencies, they also create serious supply chain vulnerabilities.

During the COVID–19 pandemic, extreme concentration in agricultural supply chains was most evident in the disruption in the meat and poultry industries, where the closures or slowdowns at several massive meatpacking plants resulted in lost markets for farmers, constrained supplies, and higher prices for consumers. As of September 2, 2021, nearly 60,000 meatpacking plant workers at 581 meatpacking

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[25] Brent Kendall and Jacob Bunge, "Chicken Industry Executives, Including Pilgrim's Pride CEO, Indicted on Price-Fixing Charges," *Wall Street Journal,* June 3, 2020. *https://www.wsj.com/articles/chicken-industry-executives-including-pilgrim-s-pride-ceo-indicted-for-price-fixing-11591202113*.

[26] Pilgrim's Pride Corporation, Quarterly Report Pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934, for the period ended September 27, 2020. *https://ir.pilgrims.com/static-files/4f802b29-38d5-4474-8581-6a12d0b545b1?source=email*.

[27] Lillianna Byington, "Pilgrim's Pride pleads guilty to price fixing with DOJ and agrees to pay $108M fine," *FoodDive,* January 11, 2021, updated February 24, 2021. *https://www.fooddive.com/news/pilgrims-pride-to-pay-75m-price-fixing-settlement-to-chicken-buyers/593154/*.

[28] Department of Justice, "Broiler chicken producer indicted for price fixing and big rigging," May 20, 2021. *https://www.justice.gov/opa/pr/broiler-chicken-producer-indicted-price-fixing-and-bid-rigging*.

[29] Leah Douglas, "Multiple lawsuits allege price-fixing by big beef companies," *FERN,* October 28, 2019. *https://thefern.org/ag_insider/multiple-lawsuits-allege-price-fixing-by-big-beef-companies/*.

[30] Leah Douglas, "More antitrust lawsuits hit the meat industry. This time, it's pork," *FERN,* November 7, 2019. *https://thefern.org/ag_insider/more-antitrust-lawsuits-hit-the-meat-industry-this-time-its-pork/*.

[31] Jessi Devenyns, "Smithfield Foods will pay $83M to settle pork price-fixing claims," *FoodDive,* Nov. 6, 2020, updated June 30, 2021. *https://www.fooddive.com/news/jbs-settles-a-portion-of-pork-price-fixing-lawsuit/588514/*.

[32] "Livestock Slaughter: 2019 Summary," USDA National Agricultural Statistics Service (NASS), April 2020, *https://downloads.usda.library.cornell.edu/usda-esmis/files/r207tp32d/34850245n/5712mr72x/lsan0420.pdf*.

[33] "Livestock Slaughter: 1969," USDA Statistical Reporting Service, April 1970. *https://downloads.usda.library.cornell.edu/usda-esmis/files/r207tp32d/ht24wp48q/9k41zj37t/LiveSlauSu-04-00-1970.pdf*.

[34] Michael Corkery and David Yaffe-Bellany, "The Food Chain's Weakest Link: Slaughterhouses," *The New York Times,* April 18, 2020, *https://www.nytimes.com/2020/04/18/business/coronavirus-meat-slaughterhouses.html*.

plants tested positive for COVID–19.[35] Many of these cases were part of outbreaks that led to temporary closures, greatly reducing processing capacity. At the peak of closures, beef and pork facilities were operating at 25 percent[36] and 40 percent[37] below average, respectively. This bottleneck stranded farmers with animals that were market-ready but had nowhere to go, leading to euthanized animals and depressed prices.

As noted earlier in this testimony, a telling example of the potential consequences of supply chain vulnerabilities, even before the COVID–19 pandemic, was the at Tyson Foods' Holcomb, Kansas, beef processing plant for months. A more recent demonstration of supply chain vulnerabilities was the cyberattack in late May and early June of 2021 that shuttered plants operated by the world's largest meat processor. JBS, which controls approximately ⅕ of U.S. cattle slaughter, was hacked by a Russian-based ransomware group, forcing all nine of its beef plants in the U.S. offline.[38] JBS's poultry and pork plants were disrupted as well.[39] Once again, we could see the effects of this break in the supply chain reflected by the higher consumer prices and backlogs that ultimately impact ranchers.[40]

Facilitating Competition and More Diverse Market Opportunities

The COVID–19 pandemic highlighted how large, seemingly efficient systems of production can falter when there are shocks to those systems. Local and regional food systems also faced disruptions but were often better positioned to adapt rapidly to new conditions and protect against shocks, given their shorter supply chains and more direct connection to consumers.[41] Thus, there is a need to strengthen infrastructure and grow linkages within local and regional food systems, which would promote greater competition in farm and food supply chains. In today's market, many livestock producers are forced to schedule access to slaughter facilities years in advance and have no choice but to transport their livestock hundreds of miles to the nearest facility. Farmers Union members and state divisions, including Oklahoma, have worked to achieve greater access to state and local funds for new marketing options.[42]

Thankfully, action is being taken on this front. Recently, USDA announced an investment of more than $150 million to help existing small- and very-small-processing facilities weather the challenges they have faced because of the COVID–19 pandemic as well as expand capacity.[43] USDA also announced its intention to invest $500 million in American Rescue Plan funds to expand meat and poultry processing capacity. Additionally, we salute Congress for the passage of legislation that includes the concepts of the RAMP–UP Act, shepherded in part by Oklahoma Congressman Frank Lucas, that will help fund the construction of new small-scale proc-

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[35] Leah Douglas, "Mapping COVID–19 outbreaks in the food system," *Food and Environment Reporting Network,* April 22, 2020, accessed October 1, 2021, *https://thefern.org/2020/04/mapping-covid-19-in-meat-and-food-processing-plants/*.

[36] Laura Reiley, "Meat processing plants are closing due to COVID–19 outbreaks. Beef shortfalls may follow." *The Washington Post,* April 16, 2020, *https://www.washingtonpost.com/business/2020/04/16/meat-processing-plants-are-closing-due-covid-19-outbreaks-beef-shortfalls-may-follow/*.

[37] Laura Reiley, "Tyson says nation's pork production is down 50%, despite Trump's order to keep meat plants open," *The Washington Post,* May 4, 2020, *https://www.washingtonpost.com/business/2020/05/04/tyson-says-nations-pork-production-is-down-50-despite-trumps-order-keep-meat-plants-open/*.

[38] Rebecca Robbins, "Meat processor JBS paid $11 million in ransom to hackers," *New York Times,* June 9, 2021. *https://www.nytimes.com/2021/06/09/business/jbs-cyberattack-ransom.html*.

[39] Julie Creswell, Nicole Perlroth and Noam Scheiber, "Ransomware disrupts meat plants in latest attack on critical U.S. business," *New York Times,* June 1, 2021.

[40] Jacob Bunge, "Meat buyers scramble after cyberattack hobbles JBS," *Wall Street Journal,* June 2, 2021. *https://www.wsj.com/articles/meatpacker-jbs-hit-by-cyberattack-affecting-north-american-australian-operations-11622548864*.

[41] Dawn Thilmany, Elizabeth Canales, Sarah A. Low, and Kathryn Boys, "Local Food Supply Chain Dynamics and Resilience during COVID–19," *Applied Economic Perspectives and Policy,* October 26, 2020. *https://onlinelibrary.wiley.com/doi/10.1002/aepp.13121*.

[42] *https://www.wisconsinfarmersunion.com/processing*.

[43] Approximately $55 million is dedicated to the new Meat and Poultry Inspection Readiness Grant (MPIRG) program and includes the Planning for a Federal Grant of Inspection (PFGI) project for processing facilities currently in operation and working toward Federal inspection, as well as the Cooperative Interstate Shipment (CIS) Compliance project for processing facilities located in states with a Food Safety and Inspection Service (FSIS) CIS program. Another $100 million is dedicated to helping small- and very-small-processing facilities deal with overtime inspection fees incurred due to increased slaughter and processing demand during the COVID–19 pandemic. More here: *https://www.usda.gov/media/press-releases/2021/06/21/usda-invests-552-million-grants-increase-capacity-and-expand-access*.

essing plants and the retrofitting of existing plants already online to required Federal inspection standards.

In Oklahoma, we have had a front-row view of how this type of targeted financial assistance can impact small processing plant capacity. With funds provided by the first Coronavirus Aid, Relief, and Economic Security Act (CARES Act), Oklahoma Governor Kevin Stitt dedicated $10 million towards this very successful effort. The grant initiative received 196 applications that represented more than $100 million in request needs.[44] Ultimately, the $10 million was awarded to 40 separate projects—nine brand new facilities and the expansion of 31 existing facilities.[45] The overall result is an increase in total in-state processing capacity of 350 head of cattle and hogs per week, plus the addition of poultry and small food animal processing. The additional capacity created a total of 170 new jobs, most of which are in rural areas of Oklahoma.

Dialing in on the impact this program has had on rural Oklahoma communities: Last year, an Oklahoma Farmers Union family opened a new small-scale processing plant in the tiny town of Council Hill, Okla. Watson Farms Meat Processing & Market, LLC, is a farmer-owned facility that created ten new jobs with a capacity of 128 head per month. The Watson family processes their own animals, along with the animals of their farmer neighbors, and the facility's retail counter only sells this locally-sourced beef and pork. The business has been so successful, the Watsons will soon open a secondary retail location.

Between the CARES Act funds and some additional private sector investment, it is expected—by the end of the year—there will be 19 new small and medium processing facilities online in our state.[46]

It is evident the initiative was very successful—we just need more of it. Based on the number of grant requests and the success of completed projects, it is clear the interest and the need is there to decentralize processing, spread the risk, put more funds in producers' pockets and create these jobs in rural communities that help stabilize and enhance rural America.

In addition to the CARES Act processing grants, additional state efforts to create and support small-scale processing include: funding positions for more state inspectors, training of skilled processing labor through CareerTech curriculum development and a mobile processing trailer, training of prison inmates, and enhancement of junior college processing facilities for educational training. All these efforts are in response to a workforce shortage in Oklahoma's meat processing industry.

Included in these efforts, CareerTech and the Oklahoma Department of Agriculture, Food and Forestry (ODAFF) launched a statewide program to provide both online and hands-on training in meat processing. Hands-on training is now offered at 11 high schools, three technology schools and five skills centers statewide.[47]

Also adding to Oklahoma's processing capacity are our Tribal neighbors. The Quapaw Nation led efforts before the pandemic with the construction of a state-of-the-art processing plant.[48] The Osage Nation has recently opened a new processing facility. Larger Tribes, including the Cherokee Nation, Choctaw Nation and Chickasaw Nation, are pursuing their own processing initiatives to first serve their own Tribal needs, then also assisting their neighbors in animal processing.[49]

Even with this increase in small-scale processing capacity, a great deal of frustration still exists with respect to lack of inspectors—both state and Federal. When new plants are waiting to go online, it is often the last roadblock to completing the mission. On the surface, the lack of inspectors may seem separate from the competition issue, but it's directly tied. Small- and medium-sized plants are competing for the same inspectors as larger plants, but large plants seem to get priority. Putting

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[44] Oklahoma Department of Agriculture, Food and Forestry, "195 Meat Processing Grant Applicants Received for $10 Million." August 18, 2020. *https://ag.ok.gov/195-meat-processing-grant-applicants-received-for-10-million/*.

[45] Oklahoma Farm Report, "CARES Act Money for Meat Processing Improvements Going to Forty Oklahoma Companies." September 2, 2020. *http://www.oklahomafarmreport.com/wire/news/2020/09/00088_ODAFFGrantMoneyMeatProcessing09022020_044803.php#.YVdn2JrMKUl*.

[46] Oklahoma Farm Report, "Ag Secretary Blayne Arthur Seees Two Big Hurdles for Oklahoma Beef Producers." July 28, 2021. *http://www.oklahomafarmreport.com/wire/news/2021/07/01256_BlayneArthur07282021Top_145434.php#.YVdodJrMKUl*.

[47] Oklahoma CareerTech, "Meat Processing Workforce Education." Accessed October 1, 2021. *https://www.okcareertech.org/educators/resource-center/meat-processing-workforce-education*.

[48] Allison Herrera, "The Quapaw Tribe hopes a cattle slaughterhouse will provide jobs in rural Oklahoma." *The World,* January 31, 2018. *https://www.pri.org/stories/2018-01-31/quapaw-tribe-hopes-cattle-slaughterhouse-will-provide-jobs-rural-oklahoma*.

[49] Greg Henderson, "Oklahoma Tribes Will Open Meat Plants." *Drovers,* October 16, 2020. *https://www.drovers.com/news/oklahoma-tribes-will-open-meat-plants*.

jobs at the local level and building greater rural capacity can only be achieved if an adequate number of inspectors are trained and working.

For beef producers hoping to find an alternative to selling their product to a major meatpacker, the lack of inspectors is just one more hurdle to success. There continues to be a tremendous backlog for processing. During the early stages of the pandemic, Oklahoma producers were waiting up to nearly 24 months for processing dates. That wait time has been reduced, but even with increased in-state processing capacity, it can still be from 6 months to 1 year to wait for a spot to have an animal processed.

Continued investment in local processing opportunities for cattle stockmen will help rural communities and give consumers additional choices at competitive or even lower prices. USDA should continue its work to develop detailed guidance to help new or existing small meat and poultry slaughter and/or processing establishments comply with regulations, and to evaluate how current regulations or fees may create unnecessary barriers for those facilities that may seek Federal inspection. Investment of financial and technical resources to expand meat processing training programs is sorely needed, and USDA should prioritize this in future efforts. The department should also facilitate the development of mobile slaughter units that can fill gaps in slaughter where appropriate. When offering financial assistance to the development of new processing facilities, particular emphasis ought to be placed on producer- or worker-owned cooperative business structures. Finally, USDA should ensure it is setting up new or expanded plants for success, including by taking steps to prevent the use of predatory practices by dominant market participants.

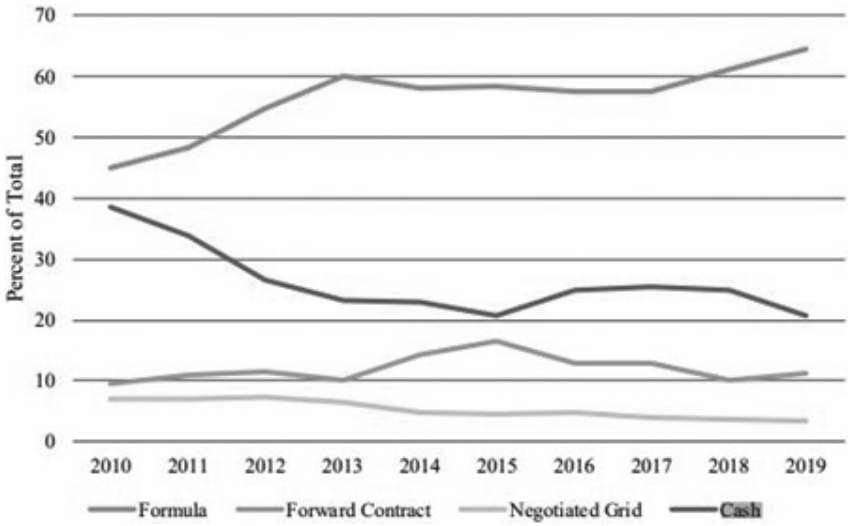
Reliable, Accurate, and Robust Market Information

Fair and competitive markets rely upon transparency and equitable access to reliable and accurate information. For farmers and ranchers to bargain effectively with packers and integrators, they need true price transparency in the marketplace. For consumers to make informed choices about the food they are buying, labels need to accurately represent the nature of the product. Shortcomings in price discovery and reporting must be addressed, as well as inaccurate origin labeling.

Fed cattle procurement has continued to trend toward formula pricing and other AMAs, and away from the cash market. Congress passed the Livestock Mandatory Reporting Act (LMRA) in 1999 in response to concerns about AMAs as well as rising concentration in the meat packing industry. LMRA resulted in mandatory price reporting of most transactions for livestock, and it has been renewed and amended multiple times.[50] While LMR has been beneficial for price discovery in general, the continued erosion of the cash market for cattle is undermining its benefits. There is also relatively little price transparency in hogs and poultry, where cash markets have dwindled or been eliminated altogether.

[50] Mathews, Brorsen, Hahn, Arnade, and Dohlman, "Mandatory Price Reporting, Market Efficiency, and Price Discovery in Livestock Markets," USDA, Economic Research Service (ERS), LPDM–254–01, September 2015.

Fed Cattle by Procurement Type: 2010–2019



*From: USDA, Agricultural Marketing Service (AMS), Packers and Stockyards Division, "Annual Report 2019."

USDA found that on a week-to-week basis higher levels of AMA procurement is associated with lower negotiated cash prices. Ultimately, AMA prices are also negatively impacted, because many packer pricing formulas and contract prices are based on cash markets prices. This trend toward thinner and thinner cash markets is eroding cash and AMA prices alike.[51]

Packers prefer AMAs because they can reduce procurement and transaction costs and allow plants to operate closer to capacity more consistently. AMAs can also help sellers lock in prices, guarantee market access, and reduce transaction costs. However, the fact that AMAs are eroding price discovery and depressing cash market prices for fed cattle (and in turn, AMA prices), is cause for concern. The near elimination of a cash market for hogs, and the complete elimination of a cash market for poultry—and the negative implications for growers—should also give cattle market participants pause.

Problems with price discovery in cattle markets and the erosion of prices due to the ascension of AMAs should be addressed, in part, by establishing a minimum level of cash transactions in the marketplace. Since AMAs are known to erode cash prices, and since base prices for AMAs are themselves typically based on the cash market, a too thinly traded cash market is susceptible to manipulation and will result in producer prices that are lower than they otherwise would be with a more robust cash market.

Furthermore, a cattle contract library should be established to help provide greater knowledge of the different contract provisions between packers and producer. This will help independent ranchers negotiate more favorable terms. Another concern in market openness is how a lack of consistency has reduced the effectiveness of LMR due to the withholding of information because of confidentiality concerns. These issues must be addressed for LMR to be an effective price discovery tool for producers.

Truth-in-Labeling

Fair and competitive markets also require product labels that are truthful. A supply chain that contains false or misleading product labels puts domestic producers at a competitive disadvantage while preventing consumers from making fully informed decisions about the products they buy. Farmers and ranchers want to provide consumers with accurate information about the origins of the food they purchase and consume, and Federal labeling laws should support farmers in achieving

[51] USDA, Grain Inspection, Packers and Stockyards Administration (GIPSA), "Investigation of Beef Packers' Use of Alternative Marketing Arrangements," July 2014.

that goal. Moreover, consumers consistently express a desire to know the origin of their food. A 2017 poll demonstrates that 89 percent of a representative sample of American adults favored requiring retailers to indicate on the package label the country-of-origin of fresh meat they sell.[52] More recently, a survey of a representative sample of American adults showed that 87 percent of American think that beef and pork should have a label listing its country-of-origin, with fairly consistent support across age groups, party identification, and areas of residence (rural, suburban, and urban).[53]

Truthful and accurate voluntary labels are important to producers and helpful for consumers, but voluntary labeling is not a replacement or substitute for mandatory COOL. The misuse of voluntary product label claims, including "Product of USA" and "Made in USA," are highly misleading to consumers and financially harmful to family farmers and ranchers.

Currently, the U.S. Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) Food Standards and Labeling Policy Book presents standards that do not require a meat product to be born, raised, and slaughtered in the U.S. to be labeled "Product of USA."[54] The standard allows imported animals that are processed in the U.S. at USDA-inspected slaughter facilities to be labeled as "Product of USA." Due to the significant number of cattle imported from Canada and Mexico, many beef products of foreign origin are being represented with some variation of a "Made in USA" claim.

We urge the Federal Trade Commission to finalize and enforce this rule; FSIS should then follow suit by amending its meat labeling standards to reflect FTC's recommendation that all or virtually all ingredients in a product must be made and sourced in the United States to carry a label that indicates it was 'Made in the U.S.A.[']

Furthermore, NFU has been a stalwart proponent of mandatory country-of-origin labeling (COOL) for meat. NFU policy states that mandatory COOL "is a valuable marketing tool for producers, and it allows consumers to know where the meat products they consume are born, raised, slaughtered, and processed."[55] We are particularly pleased to see renewed efforts to reinstate mandatory COOL, most notably represented by the American Beef Labeling Act, and look forward to working with this Committee to see to it that this important policy can be brought back into force.

Conclusion

The farm and food supply chain—and the meat and poultry sector in particular—has become highly consolidated and uncompetitive, much to the detriment of family farmers, ranchers, rural communities, and consumers in Oklahoma and across the country. Strong action by this Committee, other lawmakers, and the Administration is needed to address these serious problems.

Thank you for the opportunity to testify at today's hearing. I appreciate the Committee's attention to this important issue and look forward to answering any of your questions.

The CHAIRMAN. Thank you very much. Mr. Hays, now you are recognized for 5 minutes. Please begin when you are ready.

STATEMENT OF SCOTT HAYS, VICE PRESIDENT, NATIONAL PORK PRODUCERS COUNCIL, MONROE CITY, MO

Mr. HAYS. Good afternoon, Chairman Scott, Ranking Member Thompson, and Members of the Committee. My name is Scott Hays, a fifth-generation pork producer, and CEO of Two Mile Pork from Monroe City, Missouri. I serve as Vice President of the National Pork Producers Council, which represents the interests of America's 60,000 hog farmers. I am also active in the Missouri

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[52] Consumer Federation of America. "Large Majority of American Strongly Support Requiring Origin Information on Fresh Meat." July 24, 2017. *https://consumerfed.org/press_release/large-majority-of-americans-strongly-support-requiring-origin-information-on-fresh-meat/*.

[53] Lake Research Partners. "Results from a National Online Survey Around Rural and Agricultural Issues." Designed by Lake Research Partners, administered by CARAVAN in a national online omnibus survey. Conducted July 20–31, 2020, using a demographically representative sample of Americans 18 years of age or older.

[54] USDA–FSIS, Office of Policy, Program and Employee Development. *Food Standards and Labeling Policy Book.* August 2005. *https://www.fsis.usda.gov/wps/wcm/connect/7c48be3e-e516-4ccf-a2d5-b95a128f04ae/Labeling-Policy-Book.pdf?MOD=AJPERES*.

[55] National Farmers Union, *Policy of the National Farmers Union,* March 2021.

Pork Association. Before I get into any part of my testimony, I would like to thank Secretary Vilsack and the staff for committing $500 million to prevent and prepare for African Swine Fever, which was recently detected in the Dominican Republic and Haiti. I also want to thank the Members of this Committee who work to raise awareness of this important issue. These funds will help prevent this devastating disease from reaching the United States.

American pork producers continue to work tirelessly to provide a safe and consistent source of protein for foreign and domestic consumers. One way we are able to do that is by having access to timely, accurate information on market transactions, which keeps us competitive in selling hogs. We get that information through the Livestock Mandatory Reporting. LMR requires meatpackers to provide USDA with data on hog prices, and with other information. The agency then publishes twice-daily and weekly reports on hog prices, volumes, contracts, and product values. I frequently check the *National Daily Hog and Pork Summary* and the *Daily Slaughter Reports,* and use those to help negotiate any loads of hogs we sell on the cash market.

Although LMR has been a resounding success, there are several changes pork producers would like to see, such as including prices with discounts, not just with carcasses, not just for cuts. And, as the last few weeks have proved necessary, ensuring USDA staff who produce LMR reports are deemed essential workers during a government shutdown. While we would like to see these changes to the reporting program, the most important thing is to maintain its authorization and funding. We are grateful for this Committee's efforts to extend LMR through the next 9 weeks, and look forward to working with you on a longer-term reauthorization.

From the regulatory legal front, the pork industry was dealt a fairly big blow a Federal court struck down a provision for the New Swine Inspection System rule that let packers operate—faster processing line speeds. The court decision, which was made despite the fact that faster line speeds were tested for 20 years under a pilot program at five large plants, resulted in a 2½ percent loss of packing capacity nationwide, according to Iowa State economist Dermot Hayes. To put those losses in perspective, even if all the country's state inspected pork processing facilities were brought up to Federal standards, that would amount to less than one percent of the currently federally inspected pork packing capacity because packers push up prices to attract hogs to utilize that capacity. Conversely, we lose leverage when capacity decreases, so the line issue really needs to be fixed.

Finally, although I already mentioned African Swine Fever, I would like to give you a small look at the potential devastation this disease could wreak on the agricultural industry, particularly pork producers, if there were an outbreak in the United States. Tens of thousands of hogs likely would die, and many would need to be euthanized, creating significant disposal challenges. U.S. pork exports, which account of 25 percent of our production, would stop immediately. That is a $7 billion hit to pork producers. Corn and soybean farmers, who produce our feed, likely would see a significant drop in demand, and subsequent loss in revenue. Many of the

550,000 mostly rural jobs supported by the pork industry would be negatively affected.

Thank you, Mr. Chairman, and Ranking Member Thompson, for letting me testify on the needs of our nation's hog farmers—take any questions.

[The prepared statement of Mr. Hays follows:]

PREPARED STATEMENT OF SCOTT HAYS, VICE PRESIDENT, NATIONAL PORK PRODUCERS COUNCIL, MONROE CITY, MO

Introduction

Chairman Scott, Ranking Member Thompson, and Members of the Committee, I want to express my deepest gratitude for the invitation to speak to you today on the state of, and on the needs of, our nation's farmers—specifically, our nation's hog farmers.

My name is Scott Hays, and I am a fifth-generation pork producer and CEO of Two Mile Pork, a multi-generational farrow-to-finish farm in Monroe City, MO, with just shy of 40 hard-working employees. I also serve as Vice President of the National Pork Producers Council, the association representing our nation's 60,000 hog farmers. I am also active with the Missouri Pork Association, the Monroe City FFA chapter, and the Missouri Institute of Cooperatives.

Pork production in the United States remains a robust part of American agriculture. In fact, the United States marketed 131 million hogs and exported $7 billion of pork products last year. This success has been in spite of years of exceptionally difficult circumstances for producers, which included trade retaliation from China and Mexico, animal disease outbreaks, and COVID–19 supply-chain disruptions. Through all of this, producers have worked tirelessly to provide stability for both rural economies and American consumers.

Comments on Announced Funding for ASF Prevention

Before covering the primary topic of the hearing, I would like to first address the $3 billion in investments announced by Secretary Vilsack last week. Specifically, I would like to thank the Secretary and his staff on behalf of all American pork producers for directing $500 million toward efforts to stop African Swine Fever before it arrives in the United States. I would also like to thank the Members of this Committee who have raised awareness on this important issue. This funding represents a truly historic commitment by USDA to engage in prevention such as improved monitoring, detection, and depopulation efforts in the ASF-positive countries near our borders and at home if needed. ASF represents the single largest risk to American pork production, and we are extremely grateful for the Administration's proactive measures in this area. Pork producers also appreciate the simultaneous investments in relief from transportation disruptions and assistance for school nutrition.

Background on Hog Marketing

Over the last several decades, there has been a massive shift in the way hogs are marketed to processors. Where once was a robust negotiated market or spot market, now lies an overwhelming use of different marketing agreements and production contracts. This shift did not occur without reason. Volatile market conditions and external shocks to the industry have incentivized producers to seek arrangements that can insulate them from market risk.

The use of production contracts has expanded rapidly since the 1980s. In this arrangement, a pork producer pays a contract grower to house and care for his or her animals. This provides significant benefits to contract growers since the credit of the livestock's owner can be leveraged to make capital improvements that can last beyond the duration of any individual contract all while being paid on a per-pig-space basis that insulates the grower from market risk. To be clear, the pork industry does not utilize a tournament system and contract growers typically have several different livestock owners with whom they can choose to work.

The use of marketing agreements has also expanded rapidly over the last several decades. While initially used by packers to have producers raise hogs with specific attributes, the hog price crash of 1998 drove farmers to utilize them as a means of guaranteeing shackle space at packing plants in volatile market conditions. The prices paid under these agreements are often based on a blend of many inputs, including spot market prices, the lean hog commodity index, or even pork cutout prices.

Attached as an addendum to this statement, please find a paper prepared by Dr. Steve Meyer and Dr. Barry Goodwin that provides much more detail on the structure and operation of the U.S. pork industry.

Livestock Mandatory Reporting

Livestock Mandatory Reporting plays a crucial role in the price discovery process for hog farmers. The ability for any producer to access accurate market data at regular intervals allows farmers to assess the relative strength of their existing contracts with processors and formulate competitive new agreements.

Prior to 2001, livestock and meat price information were collected on a voluntary basis. Throughout the 1990s, the number of hogs sold on a negotiated basis declined and more and more animals were sold or contracted under marketing agreements that were not publicly reported. This made it difficult for farmers to assess "fair" market prices for livestock and eventually led to the adoption of Livestock Mandatory Reporting. In 1999, Congress passed the Livestock Mandatory Reporting Act (LMRA), and over time, amendments to the LMR rules have added important details and wholesale pork as part of the reporting.

As a pork producer, I frequently check the *National Daily Hog and Pork Summary* and the *Daily Slaughter* reports and pull those numbers into a spreadsheet. Looking at trends in weights, prices, and volumes helps us negotiate any load of hogs we sell on the cash market. Most of our pigs are sold on marketing agreements, and having daily prices from the LMR reports allows us to look at packer formula offers and how they would have performed in good and tough times.

LMR remains one of the most important tools in the arsenal of hog farmers today. So important, in fact, that I am going to be presenting alongside AMS later this month about the importance and use of the reports. That being said, there are a number of changes to LMR that would make the reports even more helpful to hog farmers, including:

1. **Amend the definition of "Reporting Day" to ensure that USDA LMR employees are deemed essential in the event of a government shutdown.** LMR data are the lifeblood of the hog and pork markets. Without them, producers, packers, processors, retailers, and foodservice operators are in the dark about the value of hogs and pork products. There simply is no context for commercial decisions affecting thousands of businesses and millions of end-users. Without timely and transparent publicly available dFexata, commerce can be significantly impaired.
2. **Amend the definition of Non-carcass Merit Premium to include discounts.** This would amend the current definition of "non-carcass merit premium" to also include discounts. Under current law only an increase (premium) from the base price of swine is required. The amendment would also require decreases (discounts). The change provides for the possibility that any pricing mechanism that offers premiums for certain non-carcass characteristics could also involve discounts.
3. **Amend the definition of "Packer" to require that new packing plants begin reporting LMR data within 6 months of starting operations.** This would have the Secretary of Agriculture require that a new processing plant that meets the definition of packer begin reporting LMR data within 6 months of starting slaughter operations. Under current law, there is no time requirement specified for determining the packer status of a new processing plant or person or requiring the new plant or person to begin reporting. In the past, although USDA had the information needed to make the determination, the process of including new plants in the LMR system lagged.
4. **Amend the definition of "Swine or Pork Market Formula Purchase" to split swine market purchases from pork market purchases.** This would amend the current definition of "swine or pork market formula purchase" into two distinct definitions of swine market formula purchases (which is based on a market for swine) and pork market formula purchases (which is based on a market for pork or a pork product). This is needed to provide clarity about how formula prices for hogs are derived. When LMR was passed in 1999, swine and pork market formulas were lumped together because (1) there were very few hogs priced off the cutout value or other pork value; (2) negotiated prices and the cutout value were highly correlated; and (3) it simplified reporting in the new program. Under current industry practices, neither 1 nor 2 still apply. The use of cutout value as the base price for hog formulas has grown dramatically in recent years, but the extent of that growth cannot be seen because the number of animals priced off the cutout and the value of those animals is masked by adding them in with swine market formulas.

5. **Expand the daily reporting of Barrows and Gilts of the Prior Day Report.** This would amend the information required from the prior business day of a packer relating to slaughter data for the total number of barrows and gilts slaughtered to include two additional items of information. The first is information concerning the average non-carcass merit premiums or discounts, and the second is information concerning the average net price without the average non-carcass merit premiums or discounts. At the time the Act was passed in 1999, non-carcass merit premiums were generally small and fit into very few categories, primarily transportation, specified genetics, and volume. Today, these premiums/discounts cover characteristics such as gestation stall-free, antibiotic-free, ractopamine-free, among others.
6. **New mandatory reporting of Wholesale Pork Cuts.** This would require the mandatory reporting of carcasses. Under current regulations, the definition of wholesale pork cuts does not include carcasses.

With that said, maintaining the program's authorization and funding are the most crucial aspects of Congress' work on LMR, and we appreciate the Committee Members' support for a year-long extension. I hope that in the near future these common-sense changes can be incorporated into the program.

Other Issues and Closing

Livestock Mandatory Reporting is far from the only issue on the minds of pork producers right now.

Earlier this year, a Federal court struck down a portion of the New Swine Inspection System (NSIS) rule that allowed participating packing plants to run at the higher speeds they've been safely operating at for over 20 years, causing a reduction in national packing capacity by an estimated 2.5%. Hog farmers are looking to policymakers to preserve that program and recover the capacity lost. By way of comparison, even if all 600+ state and municipal pork harvest facilities in the nation were brought up to Federal standards, it would amount to less than 1% of current federally inspected pork harvest capacity. (An analysis on state and municipal harvest capacity is appended to these comments.) Thus, the court decision on line speeds is significant because it shifts market leverage away from hog farmers. As hog farmers, we benefit from more harvest capacity as plants push up prices to attract hogs. Conversely, we lose market leverage when harvest capacity decreases. So, we are pleased that the Administration and Members of Congress from both sides of the aisle are looking for ways to expand pork harvest capacity. Obviously, rectifying the line speed issue is important. But, beyond that, NPPC has provided USDA with a menu of options in comments recently submitted, which are appended to this statement.

Another priority issue for pork producers is African Swine Fever, which now is in the Western Hemisphere for the first time in decades, with detection of the swine-only disease in the Dominican Republic and Haiti. While producers are thrilled by the quick response the Administration has taken to prevent ASF's spread to the United States, it is imperative that Congress maintain open communication with USDA, U.S. Customs and Border Protection, and others to ensure they are doing everything they can to prevent what could be a catastrophic event for our industry. An ASF outbreak in this country would have many devastating effects on U.S. agriculture, including the death of tens of thousands of hogs, significant disposal challenges associated with high volumes of hog mortality and euthanasia, the loss of U.S. pork exports (which account for over 25 percent of pork production and produce over $7 billion in value for pork producers), a significant reduction in demand for feed grains like corn and soybeans, and a negative impact on the 550,000 mostly rural jobs supported by the pork industry.

Yet another challenge for the U.S. pork industry—indeed for much of agriculture—is workforce availability. A shortage of labor was a problem before COVID–19 and has been exacerbated by it, with some farms facing vacancy rates as high as 30% despite offering record-high wages and benefits. Reforming the existing H–2A visa, which allows temporary seasonal agricultural workers, to include year-round labor, without a cap on the number of visas available, is the only solution given rural America's declining population.

The responsibilities before this Committee are and will continue to be of dramatic consequence to our industry and the rest of livestock production. I would be honored to answer any questions this Committee may have in pursuit of a successful future for American agriculture.

ATTACHMENT 1

August 30, 2021

SARAH J. HELMING,
Agricultural Marketing Service,
United States Department of Agriculture,
Washington, D.C.

RE: Comments of the National Pork Producers Council on *Investments and Opportunities for Meat and Poultry Processing Infrastructure,* **Docket ID AMS–TM–21–0058**

Dear Ms. Helming:

The National Pork Producers Council (NPPC), which represents the interests of America's more than 60,000 pork producers, submits the following comments on USDA's proposal to invest approximately $500 million of American Rescue Plan funds to improve infrastructure, increase capacity, and promote diversification across the meat processing industry.

Introduction

Pork production is a major contributor to the U.S. economy. America's pork producers in 2020 marketed 131 million hogs, providing more than $22 billion in farm-level income. Pork producers used roughly 1.1 billion bushels of corn and the soybean meal from 455 million bushels of soybeans last year. Based on 2016 data, Iowa State University economists estimated the pork industry was responsible for nearly 514,000 jobs in the United States.

U.S. hog operations tend to be heavily concentrated in the Midwest—Illinois, Indiana, Iowa, Minnesota, Missouri, and Nebraska in particular—near the corn and soybeans that are the main ingredients of pig feed. There are also a number of hog farms in eastern North Carolina, many of which send pigs after they've been weaned to farms in the Midwest for "finishing" and processing.

A major advantage the U.S. pork industry has in global markets and its competitive position relative to other U.S. meat proteins is the efficiency of the country's pork packing companies and plants. U.S. plants are, on average, larger than others around the globe and, according to industry sources, capable of converting hogs to value-added pork products at some of the lowest costs in the world.

The U.S. pork production system is characterized by robust competition, innovation, and efficiency, providing high-quality, affordable protein for consumers across the country and around the globe. Although five new, modern pork packing plants have come online over the past 5 years, industry capacity to harvest hogs sent to market remains inadequate. Adding capacity would benefit the entire pork industry—packers, producers and consumers. But that means much more than simply building new plants or expanding existing ones.

General Capacity Considerations

There are many factors, not just capital availability USDA should consider that impact capacity. Even with unlimited money, plants will continue to struggle with line speed limits, labor shortages, and issues with Federal inspection. NPPC urges USDA to consider and, if within its power, address these issues in conjunction with plans to increase domestic capacity.

A. NSIS Line Speed Decision and Impact

On July 1, 2021, a Federal court order went into effect, eliminating a provision of USDA's New Swine Inspection System (NSIS) that allowed pork packing plants to run faster processing line speeds.[1] (The Administration has until Aug. 31, 2021, to appeal the court ruling.)

Although implemented in 2019, the NSIS was more than 20 years in the making, with five pork plants operating faster line speeds through the HACCP-Based Inspection Models Project (HIMP)—a pilot program started in 1997 during the Clinton Administration. A sixth plant joined the original five in operating faster lines on implementation of the NSIS, which also lets some plant inspection tasks, such as sorting hogs and overseeing quality control, be performed by plant employees rather than USDA Food Safety Inspection Service (FSIS) inspectors. This arrangement allows the inspectors to focus on duties more directly related to food safety and animal welfare, but final inspection accountability and authority remain with USDA. At all six plants, the faster line speeds led to an increase in capacity. HIMP—and later, NSIS—modernized an inspection system that had remained unchanged for more than 50 years.

[1] *https://www.porkbusiness.com/news/ag-policy/pork-industry-seeks-waivers-plants-impacted-line-speed-ruling.*

According to Iowa State University economist Dr. Dermot Hayes, slowing line speeds to the pre-1997 rate at the six plants affected by the court ruling—facilities that process ⅕ of the approximately 130 million hogs marketed each year—reduced nationwide processing capacity by three percent, with impacted facilities able to reduce that to 2.5 percent by adjusting operating hours. In turn, pork producers' market power has diminished, leaving them with fewer options for selling their hogs and disproportionately impacting smaller producers located near affected plants.[2]

With more pigs and less capacity, the value of hogs likely will fall over time, reducing margins throughout the pork chain. Compounding that market response, the court's ruling gives processors the ability to cancel contracts with producers, forcing them to scramble to find processing plants with capacity and likely requiring many to transport their hogs long distances. According to Hayes, long-haul deliveries would add $10 per hog to the cost of production for farmers already faced with razor-thin margins.

If the Administration decides not to appeal the court decision, to avoid that potentially catastrophic outcome, NPPC recommends USDA grant waivers from the court ruling to the six plants that had been running faster line speeds.

Without the ability to operate faster line speeds, packers will likely take other steps to preserve existing capacity if they have the available labor to do so, including mandatory overtime, a measure that could be counterproductive if carried out for a sustained period. Employees required to work longer days or all day on Saturday are more likely to resign, which would exacerbate an already tenuous labor situation. More importantly, worker safety risks could be elevated with long shifts.

B. Labor Shortages

The pork industry—like other agricultural sectors—is facing a severe labor shortage. Anecdotally, producers report that shortages range from 10 to 20 percent for sectors with well-established visa pipelines for skilled-workers to about 30 percent for those, including packing plants, that require less-skilled labor. The lack of available workers throughout the pork industry has been a long-standing issue and is one of the reasons packing plants have had capacity issues.

Part of the problem—albeit a good one in many respects—has been the strengthening of the broader U.S. labor market, with the U.S. unemployment rate falling from ten percent in 2009 to 3.5 percent in early 2020.

Unemployment rates spiked in early 2020 but have shown a steady decline this year as many returned to work. These national unemployment trends still understate the tight labor supply in most of the largest hog-producing states, where unemployment is typically below the national level, even during the March 2020–April 2021 period of COVID–19 shocks. During that time, the nation's top eight hog-producing states averaged an unemployment rate 1.3 percent lower than the national rate. Even before the pandemic, five of those eight states experienced a shrinking labor force, with losses from 2014 to 2019. Furthermore, in the largest hog-producing states, the labor force participation rates are generally well above the national average, indicating little or no slack in these local labor markets.[3]

The most troublesome trends facing the pork industry in the longer term are the demographic realities in non-metropolitan counties, where pork operations are overwhelmingly located. Population growth has been slowing in U.S. non-metro counties for decades, and large swaths of rural America have had negative growth or loss. From 2010 to 2016, the overall non-metro population growth rate became negative for the first time, and although growth has been slightly positive or neutral from 2017 to 2019, non-metro populations in agricultural regions continue to see losses.

Additionally, the aging rural workforce is increasingly unable or unwilling to do the strenuous labor that agricultural work demands. (The average age of U.S. farmers is 57.5, up more than a year from 2012, according to the *2017 Census of Agriculture.*) As more rural residents age beyond their childbearing years, this negative trend in population and labor force likely will accelerate.

Those macroeconomic and demographic realities prompted the pork industry, particularly the packing sector, to rely increasingly on foreign-born workers. Indeed, many plants now have immigrant workforces of as much as 50 percent.

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[2] *https://nppc.org/wp-content/uploads/2021/05/Impacts-of-NSIS-Decision-on-Pork-Producers-Dr.-Hayes.pdf.*

[3] *https://nppc.org/wp-content/uploads/2021/08/August-2021-Labor-Study.pdf.*

Overall, according to the latest U.S. Census figures, more than 37 percent of meat-processing workers are foreign-born.

But here, too, the industry faces significant challenges that must be addressed in tandem with any capacity building. (It would do no good to building new or expand existing pork processing capacity if there are not enough workers to fill the jobs necessary to run a plant. In fact, many of the nation's pork packing plants already do not have enough available workers to run weekday second shifts or Saturday shifts, according to industry economists and analysts.)

While over the last 30 years foreign-born workers offset some of the decline in rural native-born population and labor force, that trend likely had reversed even before the recent emergence of political sentiment toward stricter immigration controls and increased enforcement. Furthermore, an increasing proportion of the large influx of immigrant workers who came to the United States in the 1980s and 1990s are aging beyond their prime working years.

Also, improving economies and declining population growth in countries that were sending immigrants to the United States are changing the calculus of potential immigrants. There are more and better jobs in many of those countries, and the baby booms are over in those nations that fed the immigration waves of recent decades.

Unless action is taken to address the labor shortage in the U.S. agriculture industry, there will be decades of increasingly difficult labor market conditions for all rural industries, including the pork industry.

To address the labor shortage, NPPC recommends expanding the existing H–2A visa program, which currently is limited to temporary and seasonal foreign-born workers, to year-round agricultural workers, without a cap on the annual number of visas issued. Alternatively, the pork industry has backed creation of a new visa category to allow year-round immigrant agricultural laborers.

The tight labor market is affecting every aspect of the pork supply chain, including transportation of hogs. There has been for several years a significant lack of commercial driver's license truck drivers. According to a recent estimate, the trucking industry needs an additional 60,800 drivers immediately, and with anticipated driver retirements and expected post-COVID increases in the production of goods, it will need about 1.1 million new drivers over the next decade.[4]

C. The Status, Utility, and Role of State-Inspected Packing Plants

Following the COVID–19 disruptions of 2020, one proposed solution for increasing resiliency in the U.S. pork supply chain has been to invest in state-inspected packing plants. There are an estimated 1,900 state-inspected slaughter and processing facilities in the United States, and approximately 600 establishments are hog slaughter facilities. While small in scale, state-inspected plants are great assets to rural communities and often play an important role in local meat supply chains. However, they contribute a small share of the total pork supply and are not able to capture cost efficiency benefits from economies of scale. Nearly all state-inspected plants fall into the "small" or "very small" size classification, and many have between just one and 20 employees.[5] It is very common for state-inspected slaughter and processing plants to also offer custom processing exempt from inspection, where producers can get their animals processed for private meat consumption, but the meat cannot be sold commercially or served to the public.

In 2020, non-federally inspected hog slaughter accounted for less than 0.6 percent of total U.S. commercial hog slaughter. A recent study at Iowa State University found that the proportion of state-inspected hog slaughter is especially small in top hog-producing states.[6] Harvest totals in Iowa, for example, were more than 40 million head in 2020, and just 5,200, or 0.01 percent of those hogs were slaughtered under state inspection. In Minnesota, total commercial slaughter last year was more than 12 million, and state-inspected slaughter totaled 8,500 head, or 0.1 percent of that. To put this in perspective, one large plant with a capacity of 20,000 head per day can process nearly four times in 1 day what all state-inspected facilities in Iowa processed in 1 year.

The fact that more than 600 hog slaughter facilities contribute such a small portion of the total pork supply is a strong testament to just how small these

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[4] *https://www.ttnews.com/articles/data-shows-there-are-more-truckers-ever-experts-say-driver-shortage-still-issue*.

[5] FSIS defines "small" facilities as those with between 10 and 499 employees and "very small" facilities as those with less than 10 employees.

[6] *https://www.card.iastate.edu/products/publications/pdf/21pb34.pdf*.

facilities really are. In the same Iowa State University study, a survey of state-inspected hog slaughter facilities in Iowa, Illinois, Indiana, Minnesota, Missouri, North Carolina, Ohio, Oklahoma, and Wisconsin gathered information on average weekly capacity and annual production levels. On average, weekly slaughter capacity in 2020 was between 16 and 42 head for state-inspected plants in those states, and average annual production was between 397 and 862 head.[7] Several respondents indicated they only process hogs 1 or 2 days each week, focusing on further processing activities the remaining days.

In response to COVID–19 supply chain issues and an increased demand for local meat products, survey respondents indicated their state-inspected facilities were able to increase weekly slaughter capacity by 25 percent on average from 2019 to 2020. For some plants, this may have been as simple as increasing from 10 to 12 hogs per week, but many plants also received grants through state CARES Act allocations and made lasting improvements that permanently increased weekly capacity. In total, state-inspected plants have been eligible for more than $100 million in funding since the spring of 2020. While non-federally inspected processing totals increased by 11 percent nationally from 2019 to 2020, this was still just 0.6 percent of total hog processing.

One of the biggest drawbacks of further investment in state-inspected plant capacity is the restriction on interstate commerce. State-inspected plants are prohibited from selling or distributing products outside of the state where the meat was produced. Incentivizing the expansion of state-inspected plants will do little to alleviate current supply chain issues, as many state-inspected facilities are located in top pork-producing states. Therefore, without interstate shipment eligibility, these plants would be unable to distribute pork products to the rest of the country and would be supplementing an already steady pork supply within their home states. State-inspected pork products are also not eligible for export.

To help expand their marketing opportunities, USDA's Meat and Poultry Inspection Readiness Grant (MPIRG) program has made more than $50 million available to state-inspected plants for obtaining Federal inspection status or participating in the Cooperative Interstate Shipment (CIS) program. The CIS program allows plants meeting FSIS standards to achieve interstate shipment eligibility while remaining under state inspection. Considering that the goal of USDA's capacity proposal is to meaningfully expand capacity nationwide, it seems clear that investing in plants that have the ability to sell outside of a single state is preferable for the sake of efficiency.

Based on 27 survey responses, the average estimated cost of transitioning from state to Federal inspection standards is about $52,000, with the highest estimates exceeding $200,000. If these survey responses are representative of all state-inspected hog slaughter plants, the current funding support level is likely sufficient for the number of facilities that are interested in pursuing Federal inspection or CIS certification. Additionally, many survey respondents indicated they are not interested in transitioning away from their state's inspection system.

As mentioned previously, state-inspected plants are a valuable piece of local food supply chains, but they are limited in their ability to contribute to the greater industry supply chain. Because state-inspected plants operate on such a small scale and often do a significant share of custom exempt meat processing, their business model makes them best suited to continue serving their local communities rather than assuming—through expansion—the additional overhead costs associated with larger facilities. Many survey respondents also noted they are more concerned about sourcing enough reliable labor to operate their plant efficiently at its current size than about securing enough capital to expand the facility. The results of the survey would suggest that any further USDA investment would be best directed toward other methods of increasing capacity.

D. Shortage of FSIS Inspectors

Federal inspection of meat processing plants is done by FSIS, with inspectors on site at all times during processing. These inspectors ensure that animals are fit for both processing and human consumption and that products are correctly labeled and packaged. While some requirements do differ between NSIS and non-NSIS plants, the requirement that inspectors be physically present is universal for federally inspected plants.

[7] These results are based on 49 survey responses, excluding the sole respondent from North Carolina, which reported a weekly capacity of over 200 head.

As stated previously, some meat that is not federally inspected may still be sold out-of-state if the state that manages the inspection participates in the CIS program, which requires that inspection standards be "at least equal" to that of Federal inspection. State-inspected meat that does not participate in such a program cannot be sold outside of that state.

Currently, FSIS faces a shortage of inspectors that threatens to hamstring efforts to expand packing capacity. Federally inspected plants cannot operate without continuous inspection from an FSIS inspector and, should FSIS be unable to assign one to a plant, new operating hours or even operation itself may be blocked. This has been proved anecdotally by claims from NSIS packers who, in light of the recent line speed court decision (see NPPC's previous comments), faced significant challenges in adding hours of operation because they could not find inspectors to cover the additional hours. Over the last several years, including pre-COVID–19 pandemic, meat processors have increased wages to attract hard-to-find labor. FSIS must similarly act to attract new inspectors to cover the processing capacity USDA intends to create through this program.

Distribution of Funds

The two fundamental questions of this RFI are: "How will the money be spent?" and "Who will be spending it?" NPPC understands that USDA's goal is not only to expand capacity but to do so in a manner that increases resiliency with regard to impact on competition and concentration. To do that, USDA will need to balance the desire to have a diversity of recipients of the proposed investment with the need to ensure that new capacity is significant enough to justify the expense.

A. What $500 Million Can Buy and Consideration of Efficiency

While the relationship between investment and output appears to be linear, the average output per worker tends to increase for larger processing facilities. For instance, a very small plant with ten or fewer employees may have a weekly output of 20 head (2 output/employee), a small plant with 200 employees may have a weekly output of nearly 4,000 head (20 output/employee), and a large plant with 2,400 employees may have a weekly output greater than 110,000 (46 output/employee). The relationship between number of employees and output is demonstrated in *Figure 1* where output per worker is represented by the green line and weekly slaughter capacity is depicted by the blue columns.

In *Figure 1,* output per worker is less than 20 for plants with fewer than 200 employees but increases sharply for plants with between 200 and 1,000 employees. Because of differences in value-added processing activities, equipment, and line speeds, output per worker varies between 36 and 57 for plants with more than 1,000 employees.

Figure 1: Average Weekly Output per Employee

Worker Productivity and Weekly Slaughter Capacity

Source: Daily capacity estimates by Dr. Steve Meyer of Partners for Production Agriculture,[8] employment estimates from company websites and local news reports, and small plant data from previously mentioned ISU study.

Note: *Figure 1* represents 25 medium-to-large-sized plants and 40 plants with between 1 and 20 employees.

As previously highlighted, labor availability likely poses a larger barrier to increased capacity than available capital. Indeed, in personal discussions with meatpackers, local workforce availability is as important a consideration as the availability of hogs when it comes to deciding where to build a new facility. Because of this, NPPC suggests that USDA fund large projects through either construction of new facilities or expansion of existing plants, subject to the availability of hogs and labor. Doing so will result in the largest increase in total national capacity, which in turn will create the greatest impact on prices for producers. In addition to benefits of scale outlined above, it is important to note that fewer, larger plants would rely on fewer FSIS inspectors. Given the intense shortage of inspectors, which is unlikely to be relieved given the recent NSIS line speed decision, USDA will need to invest only in projects for which it will be able to provide inspectors. It is important to note, however, that the need to invest in large projects does not necessitate a need to invest through existing large processing firms. Different recipients, including producers or small packers, can undertake these projects.

Table 1 (below) adds the potential increased capacity at different plant sizes and funding levels, assuming $125 million in investment targeted at pork processing (based on the per-pound proportion of U.S. pork processing compared with other meats domestically.)[9–10]

Table 1: Estimated Cost per Plant at Varying Subsidy and Output Levels

Capacity (Head/day)	Annual Output	Total Cost	10% Subsidy	# of Plants at 10% Subsidy	20% Subsidy	# of Plants at 20% Subsidy
2,500	650,000	$50,000,000	$5,000,000	25	$10,000,000	12.5
4,000	1,040,000	$80,000,000	$8,000,000	15.6	$16,000,000	7.8
5,000	1,300,000	$100,000,000	$10,000,000	12.5	$20,000,000	6.3
8,000	2,080,000	$160,000,000	$16,000,000	7.8	$32,000,000	3.9
10,000	2,600,000	$200,000,000	$20,000,000	6.3	$40,000,000	3.1
Capacity (Head/day)	Annual Output	Total Cost	30% Subsidy	# of Plants at 30% Subsidy	40% Subsidy	# of Plants at 40% Subsidy
2,500	650,000	$50,000,000	$15,000,000	8.3	$20,000,000	6.3
4,000	1,040,000	$80,000,000	$24,000,000	5.2	$32,000,000	3.9
5,000	1,300,000	$100,000,000	$30,000,000	4.2	$40,000,000	3.1
8,000	2,080,000	$160,000,000	$48,000,000	2.6	$64,000,000	2
10,000	2,600,000	$200,000,000	$60,000,000	2.1	$80,000,000	1.6

Note: Estimated number of plants assumes $125 million total subsidy allotted to pork processing.

Ultimately, the level of assistance through a grant or low-interest loan for a project will be dependent on who will be building the new or expanding the existing plant. Some recipients, such as large packers or outside investors, will likely have significantly more available capital than other parties, which would allow USDA's investment to go further in terms of new capacity. Other investors, such as small packers or producers investing in a co-op plant, may require more funding but come with resiliency and competitive benefits.

B. Different Potential Recipients

I. Producers

Producer-owned packing plants, while not making up a majority of packing capacity, have steadily increased their market share over the last couple decades. That trend continues to be shown through the announcements of new projects such as the upcoming $500 million pork processing facility in Sioux Falls, SD, commissioned by producer-owned Wholestone Foods.[11]

[8] *https://cet.gcp.informamarkets.com/sites/cet.com/files/nhf-porkpackerreport_0.pdf*.
[9] Base data sourced from Dr. Dermot Hayes of Iowa State University.
[10] *https://www.meatinstitute.org/index.php?ht=d/sp/i/47465/pid/47465*.
[11] *https://www.siouxfalls.business/pork-producer-owned-company-plans-to-build-500m-sioux-falls-facility/*.

Wholestone, Triumph, and other producer-owned plants have seen phenomenal success over the last fifteen years, leading to more producers considering engaging in packing operations.

Producer investments in new packing capacity provide several benefits. Firstly, for the producers who own and supply these plants, prices received are generally more stable, as return is based not on the fluctuating value of the hog but rather of the meat sold to retailers or distributors. Secondly, producer ownership inherently addresses the question of adequacy of nearby supply—particularly in closed plants where hogs are supplied exclusively by the owners—since a facility's required number of hogs is known to plant owners/suppliers and thus hogs are produced to meet the plant's delivery requirements. Last, investment in producer-owned facilities is likely to achieve USDA's goals on the money's impact on concentration and consolidation.

Investment in producer-owned facilities does come with some drawbacks. Firstly, producers generally have less available capital compared with other potential groups, requiring that USDA either provide more cash or allow for non-producers to take a minority stake in exchange for supplemental start-up costs (this is not an uncommon practice.) Secondly and like other potential recipients, new producer-owned plants will likely require substantial technical assistance. Lastly, finding enough producers at a significant enough investment level in a concentrated area may prove to be a logistical challenge if not properly broadcasted.

II. Small Packers

The shutdown and slowdown of large packing plants in 2020 highlighted the value of small meat processors in local food supply chains. When there was nowhere else for market-ready hogs to go, small processors made efforts to increase processing capacity and meet consumer demands for locally sourced meat. Even now, more than a year after the shutdowns, small meat processors are operating as close to capacity as they can, only constrained by labor shortages and administrative challenges. In some instances, wait times at local locker plants exceed 18 months.

Investing in small meat packers, whether through grants or low-interest loans, could help small plants increase capacity through equipment purchases or facility modifications, especially those that would increase automation and alleviate current labor capacity constraints. In many cases, small plants may be able to increase volumes simply by improving efficiency. Small plants would also benefit from USDA's investment in training or technical assistance programs.

Although small meat processors provide great value to their communities and local economies, investing in their expansion is certainly not the most efficient way to increase overall capacity. There is no well-defined "minimum efficient scale" for pork processing plants, but many studies suggest that larger plants significantly benefit from economies of scale. As University of Alberta economist James Rude points out in his study of supply chain resiliency, this is largely due to the presence of substantial fixed costs that must be spread over more units of output to be efficient and optimize profitability.[12]

The scale-related drawbacks of investing in small meat packers include lower productivity per worker, higher overhead costs per unit, and inconsistent capacity utilization. Small packers also lack many processing capabilities such as the recovery of non-traditional parts, including intestines and hearts, *etc.* Despite these challenges, increasing the share of total processing at smaller plants would benefit rural communities while contributing to USDA's goal of increased competition and resiliency.

III. Large Packers

Over the past several decades, the vast majority of meat processing in the United States has shifted to fewer, larger packers. This is not by mistake. As detailed earlier in the comments, larger processors enjoy significant benefits of scale compared with their smaller counterparts. Significant technological investments—only available to firms with greater access to capital—

[12] *https://www.researchgate.net/profile/James-Rude/publication/349949013_Resilience_versus_Efficiency_The_feasibility_of_small_local_meatpacking_plants_in_Canada/links/6048dd3192851c1bd4ded671/Resilience-versus-Efficiency-The-feasibility-of-small-local-meatpacking-plants-in-Canada.pdf.*

enable plants to increase their per worker efficiency and decrease their per pound production costs. As Dr. Glynn Tonsor alluded to in his testimony to the Senate Agriculture Committee on June 23, the efficiency created by these plants has in many ways led to the consistent growth of the livestock industry.[13]

Considering large packers are generally more likely to be at or near the 1,106 head per hour line speed limit, investment in the existing infrastructure of large pork processors is unlikely to result in any increased capacity. Rather, investment in large packers may be best served by the creation of new facilities through grant or low-interest loan programs.

In that case, USDA may be able to maximize the increase in capacity per dollar spent given that large packers may need less granted or borrowed capital to economically justify their own investment in new infrastructure. Moreover, large packers are the most experienced with the requirements of federally inspected meat production and would require little to no additional training or technical resources from USDA. The ability of large packers to attract labor is also better than that of other groups, since they are more likely to enjoy both better per worker efficiency and greater flexibility to increase the wages and benefits paid to workers. These firms are also more likely to have human resources departments with expertise in both domestic recruitment and visa requirements for foreign-born employees.

The drawbacks to investing in large packers mostly relate to the impact on competition. Further concentrating the proportion of processing capacity among any major packer could result in an even further erosion of producer market power. Moreover, as stated earlier, it is crucial that USDA invest this money in a manner maximizing the amount of new capacity. Doing so will result in fewer, but higher output new facilities. Investment through existing large packers in accordance with those necessary principles will result in even further consolidation. It is unclear whether increased hog prices resulting from increased capacity would be enough to negate any price pressure resulting from a shift in the balance of economic power.

IV. Outside Investors

Investors completely outside of the business of livestock production could be eligible to build new capacity using USDA's assistance. Without knowing the specific recipient, though, it's difficult to assess the benefits and drawbacks of such a program. If the investor is not involved in any part of the supply chain, the program would help diversify the industry and achieve the competition aims of USDA. However, technical assistance needs would likely be greater than any other recipient. NPPC believes that outside investors, if included at all, should have their ownership limited to a non-majority stake in a new operation for the purposes of augmenting the starting capital on hand.

Answers To Questions Listed in the Public Notice

Below are NPPC's responses to some of the questions listed in the public notice.

A. How can workforce recruitment, training, and retention needs be addressed to maintain or increase processing capacity?

As stated earlier in our comments, labor availability is perhaps an even larger barrier to increased packing capacity than available capital. For instance, in the wake of the recent ruling on NSIS line speeds, many packers have indicated they were unable to even increase operating hours because of a lack of available labor. This is not a new phenomenon, or one caused by COVID–19. Meatpacking plants are often located in rural regions with a high density of producers. Aging and out-migration have led to a smaller pool of prime working-age individuals, creating an incredibly tight labor market in those regions. From 2014 to 2019, the rural county labor force declined in five of the eight top pork-producing states, where much of the country's meat processing activity takes place.[14]

Unfortunately, an increase in pay and/or benefits has not offset these labor shortages. Data from the Bureau of Labor Statistics shows that from 2016 to 2020, weekly wages increased by 30.5 percent in the animal processing industry, while the number of people employed in the industry increased by just 7.8 percent, or about 1.6 percent per year on average.[15] This indicates an inelastic

[13] *https://www.agriculture.senate.gov/hearings/examining-markets-transparency-and-prices-from-cattle-producer-to-consumer.*

[14] *https://nppc.org/wp-content/uploads/2021/08/August-2021-Labor-Study.pdf.*

[15] Bureau of Labor Statistics, Quarterly Census of Employment and Wages, NAICS 311611.

supply of labor, where changes in wages have little effect on the quantity of labor supplied. The challenges that plague existing plants with regard to labor availability are the same that will face new or expanded plants resulting from USDA's capacity initiative—not one of available capital for recruitment or training but one of labor access.

Foreign-born workers are the only available pool of labor at a scale equal to that of the shortage. One visa that may be modified to allow for use by meatpackers is the H–2A visa. Meatpacking is neither seasonal nor considered to be agricultural labor for purposes of H–2A, but by opening the program to non-seasonal labor and including meatpacking in the definition of agricultural labor, plants may be able to access significant labor through a program that already accounts for domestic labor availability and wage impact.

*B. What information is available to help guide USDA's understanding of workforce needs of very small, small, and larger processors (**e.g.,** access to labor, training, safety considerations), particularly as related to regional considerations and solutions?*

While production styles vary greatly from small to large plants, all meatpacking establishments require a steady, reliable workforce to remain profitable. A 2018 *National Hog Farmer* article authored by economist Dr. Steve Meyer reported that labor constraints have often limited the ability of small plants to fully utilize capacity, with many plants operating around 80 percent of their potential even before any pandemic-related labor issues.[16] While large plants have more ability for automation, for several years many packers have reported labor shortages restricting their ability to add value through downstream tasks, such as boning or offal recovery, which in turn lowers packer margins and, ultimately, the value of hogs. Recently, as the nationwide labor shortage intensified, some of the country's largest plants limited their operations by 20 to 30 percent of maximum capacity.[17] As Dr. Meyer reported, "these shortfalls could, of course, disappear if workers can be secured and attendance improved."

Workforce training needs also vary depending on the scale of the plant. Smaller plants tend to require employees with a higher average "skill level" than larger plants. This is because small plants tend to lack automation and rely on workers who have specialized training and meat-cutting experience. Employees at smaller plants may also be asked to perform a wider variety of tasks within the business, and the relatively low productivity per worker in small plants makes it hard for plant owners to pay high wages, especially during the training period. Furthermore, the relative importance placed on each individual employee puts smaller plants at a higher risk of operating below full capacity. As Dr. Meyer noted, "five workers in a workforce of 800 are not nearly as important as five workers might be in a workforce of 50."

C. What regions show demonstrated processing needs, at what levels, and for which species?

The most urgent processing needs are demonstrated in regions affected by the NSIS line speed ruling. An analysis by Dr. Dermot Hayes of Iowa State University estimated that the ruling would force six affected plants in Guymon, Okla.; Beardstown, Ill.; Hatfield, Pa.; Coldwater, Mich.; Fremont, Neb.; and Austin, Minn., to decrease their line speeds by up to 25 percent.[18] While three of the affected plants are located near the top pork-producing areas of southern Minnesota, Iowa, and Illinois, the other three are in less hog farm-intensive zones, where producers have fewer processing options if their pigs can no longer be delivered to either the Hatfield, Coldwater, or Guymon plants. Producers in these regions may now be required to ship market hogs hundreds of miles if the nearby plant cannot accept their pigs, which Dr. Hayes estimates could increase transportation costs by up to $10 per head in some cases.

In addition to higher costs, longer transport times can increase the risk for "in-transit loss" of hogs on board. Ensuring that hog-producing regions have a proportionate level of shackle space can help alleviate this concern. Using USDA's regional federally inspected slaughter data and Dr. Steve Meyer's estimates of packing plant capacity, it is possible to estimate which regions' processing levels tend to exceed capacity. *Table 2* shows the regions with available

[16] *https://www.nationalhogfarmer.com/marketing/us-slaughter-capacity-settles-even-keel*.
[17] *https://cet.gcp.informamarkets.com/sites/cet.com/files/nhf-porkpackerreport_0.pdf*.
[18] *https://nppc.org/wp-content/uploads/2021/05/Impacts-of-NSIS-Decision-on-Pork-Producers-Dr.-Hayes.pdf*.

data and the number of weeks spent above 90 percent and 100 percent capacity in 2019. Note that for all regions, capacity utilization is highest from September to December. As shown in *Table 2,* the regions in the first four rows most frequently reach their weekly capacity level and would benefit most from increased processing capacity.

Table 2: 2019 Estimated Regional Capacity Utilization (Measured in Head)

Region	Average Weekly Slaughter (FI)	Weekly Capacity	# Weeks Above 90% Capacity	# Weeks Above 100% Capacity
IA, KS, MO, NE	1,077,380	1,157,895	37	10
AR, LA, NM, OK, TX	114,949	119,880	35	17
IL, IN, MI, MN, OH, WI	711,686	797,850	15	4
DE, MD, PA, WV, VA	111,133	135,810	12	3
AZ, CA, HI, NV	45,684	65,610	0	0
AK, ID, OR, WA	6,661	9,747	0	0

Note: 2019 slaughter totals and capacity were used to represent a more "typical" capacity utilization cycle than 2020.

The region containing North Carolina could not be included due to lack of USDA data.

D. How can USDA support access to processing services for smaller-scale producers? Are there opportunities for producers to engage in cooperative or collaborative arrangements with each other or other facilities to both ensure access and provide a sufficient supply for a plant to operate? If so, what government assistance would be needed to facilitate that type of arrangement?

Producer-owned processing facilities have been very successful on a large scale, with examples including Triumph Group, Prime Pork, Clemens Group, Prestage Foods, and Wholestone Farms. It is likely that with adequate technical assistance and capital, this model could be adopted by smaller-scale producers as well. The biggest potential challenge for new small, producer-owned processing facilities is the considerable fixed capital requirements and other startup costs associated with building a facility. Because smaller producers are likely to have less available capital than large producers, this type of cooperative would require more contributors and would come with more organizational and administrative challenges. USDA could assist small producers with startup costs through loans and grants while also working with state agriculture departments to administer technical assistance and help producers with the formation of cooperative meat processing systems.

E. What metrics illuminate the extent of the competitive environment for the products or services that producers and growers offer, including at the local level? What factors up and down the supply chain affect that competitive environment?

A competitive environment is defined by various businesses competing on several factors such as product development, product quality, promotion, and price. Naturally, the extent of competition on each of these factors is dependent on the number of businesses in a given region, retail consumer demand, access to capital, and capacity. Within the meat supply chain, the metrics that illuminate the extent of the competitive environment include the size and quantity of hog producers in the region, their geographical proximity to a meat processing facility, the size and quantity of meat packers in the area, the national/regional supply of hogs, relationships with retailers, and current capacity utilization. Because of the economies of scale that exist throughout the meatpacking industry, relative market share of large packers also affects the competitive environment.

*F. What seasonal throughput issues (**e.g.,** under- and over-utilization during parts of the year) or regional challenges need to be considered for plant expansion or development?*

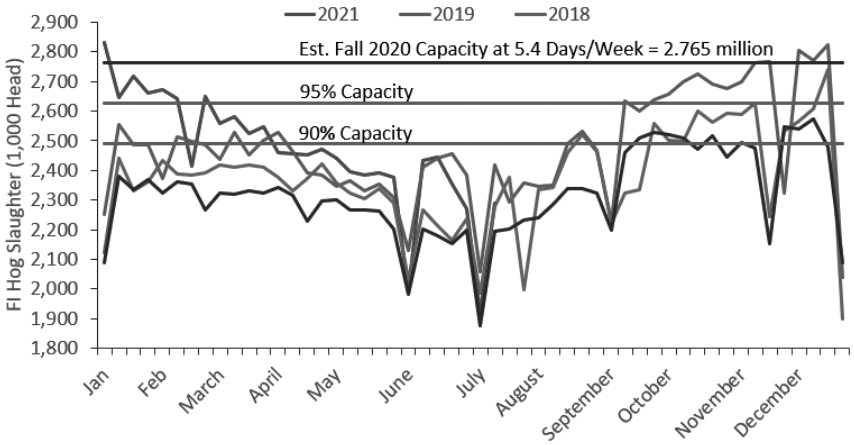
While hog production is a year-round business, production levels are affected by a few seasonal factors. For example, breeding efficiency and herd health may be more difficult to manage during the winter months, and pigs born during this time are ready for market in the summer. Conversely, pigs born in the summer when the environment is more conducive to efficient production are ready for market in the winter months. Therefore, there are more pigs available for delivery to packers in the winter than in the summer, and throughput levels are not consistent every week of the year.

As depicted in *Figure 2,* capacity utilization typically dips lower in the summer months and is higher in the late fall and winter. This national trend has

been consistent for years and is experienced on a smaller scale by all of the regions defined in the comment related to regional capacity utilization.

Figure 2, Weekly Federally Inspected Hog Slaughter and Capacity Utilization

Weekly Hog Slaughter, Federally Inspected



Source: Center for Agriculture and Rural Development (CARD) and the National Agricultural Statistics Service (NASS).

G. Should the process[o]r be required to purchase a minimum volume through auctions or other public transactions?

While minimum spot market purchase requirements may seem like an alluring way to level prices, this requirement could lead to significant negative consequences for small producers. On the side of the packing plant, meatpackers are likely to use their allowable contracted hog quota on fewer, larger producers as a means of lowering transaction costs, as well as ensuring a steady supply of hogs. As a result, smaller producers will largely be the ones selling on the spot market, creating a risk-management disparity as fewer small operations will have the relative safety of a contracted sale. Should hog prices collapse, it is likely to be spot-dependent producers without a guaranteed sale who will face the most significant damage. Smaller farms, already least able to weather negative price shocks, will bear a disproportionate amount of harm. In some cases, this could lead to large producers purchasing struggling smaller operations, driving industry consolidation.

Additionally, should the new plants be producer-owned, this requirement could negate many of the benefits of producer-owned processing. Currently, producer-owned plants work well in a "closed" system, meaning the plant owners comprise the totality of its supply by controlling delivery requirements. In this situation, the capacity of the plant is perfectly met because its suppliers know exactly how many hogs to raise and when. This maximizes efficiency and stabilizes profit for the farmers. Should a minimum spot market requirement be mandated for these plants, that will throw a portion of that output into uncertainty, with some weeks falling short of 100 percent of capacity.

H. If contract grower relationships are used that require a purpose-built production facility, should contract be required to cover at least the length of the loan term?

In this case, it is likely that the experience of the pork industry differs dramatically from that of poultry and other livestock industries. As the pork industry continues to expand, the demand for grower services increases and payments for those services increase alongside. Moreover, pork contract growers generally enjoy a greater degree of choice and competition for their services than do poultry growers, with several buyers for pork services compared with one to two for poultry.

As a result, pork contract growers can opt for a shorter contract and almost always find a more lucrative arrangement shortly after. While pork contract growers would be able to guarantee they have a deal that pays off required cap-

ital investments, they will miss out on the better available pig space rates that likely accrue in the meantime. Because of this, it would not be an issue to require that the option be given to a contract grower for a loan-term-length contract. However, a universal requirement may actually result in a severe opportunity cost for pork contract growers.

I. What type of upstream analysis of customers/product demand is needed to justify the level of lending or financial support?

To maximize the efficiency of each dollar spent, it is important for a plant to operate as close to capacity as possible. With regard to evaluating upstream (producer side) markets, new plants will likely need to evaluate whether there is sufficient upstream hog supply in the region of a proposed build site to justify USDA's financial engagement. As mentioned in a previous comment, there are several regions that have demonstrated an excess of market hogs relative to processing capacity at several points throughout the year. However, these estimates are based on the available region-level data and estimated weekly capacity. For a more detailed analysis of specific areas, it will be incumbent on USDA to compare its confidential processing data with the known processing capacity present in an area.

To evaluate downstream (consumer/buyer) side markets, applicants should demonstrate plans/strategies for likely buyers of newly produced meat products. What this looks like, however, will largely depend on the scale of the investment. For larger plants, this may mean showing preliminary commitments with retailers, foodservice firms, or export distributors (for FSIS plants). For smaller firms, this may simply mean sharing the current sales figures and future marketing strategy for the product lines they intend to expand. In either case, it is important that this, or any other information on strategy, be kept confidential.

It is also worth noting that the importance of demonstrated demand may depend on whether USDA pursues a grant or loan scheme. Should the money for increased capacity be distributed under a loan program, it would be more important for recipients to show solidified agreements rather than just proof of demand or current sales figures. Any issues with sales—and as a result, a new plant's ability to pay back a loan—could threaten the life of USDA's program.

J. Would a small plant expansion program structured similarly to USDA's Meat and Poultry Inspection Readiness Grant (MPIRG), but with a focus on expanding slaughter and processing capacity for small federally inspected plants, be beneficial? If so, at what award ($) level per grant and for what types of costs?

There are several components of USDA's MPIRG program that should help guide the development of any new small plant expansion program. Generally, the new program should provide funding for eligible expansion activities and specify a timeframe for project completions. Like the MPIRG program, the funding would be most impactful if grant eligibility were limited to existing plants rather than new construction projects.

Consistent with the MPIRG program, eligible activities should be related to the modernization or expansion of existing facilities (including expansion modifications to existing buildings and/or construction of new buildings at existing facilities) and the modernization of processing and manufacturing equipment (including cutting equipment, mixers, grinders, sausage stuffers, smokers, curing equipment, pipes, motors, pumps, and valves).

In terms of award levels, it is important to note that all dollars invested in small, federally inspected plants will be put toward expansion rather than achieving FSIS compliance. The capital expenditures that come with increasing processing capacity will exceed the average costs associated with transitioning from state to Federal standards. Therefore, any future grant program should ensure that maximum award levels are sufficiently high enough to support meaningful expansion efforts.

*K. Would pilot grants that provide awards to small plants for training and other support (**e.g.,** cover wage gap during apprenticeships) to develop their local workforce be effective to address some of the labor challenges associated with operating a current, expanded, or new facility?*

As mentioned previously, the primary workforce concern is labor availability. While assistance for training would no doubt alleviate some of the costs of onboarding workers at smaller plants, it will not help address the most significant challenge of labor access.

L. Should loans and grants be combined to support these facilities? If so, what criteria should be used to determine what portion of the funds are offered as loans versus grants?

Loans and grants have different advantages relative to each other. Ultimately, it is important to remember that $500 million is not a large amount of money when considering the general costs of new processing facilities. By opting for a loan program, USDA may be able to extend the utility of each dollar beyond a single project. Moreover, regardless of whether USDA issues the loans itself or works with existing ag lenders, a mandate to take on more risky projects at lower rates may still entice a wider group of potential investors/borrowers to engage and build new processing capacity—though it will have trouble doing so with current interest rates. By engaging with a wider group, USDA avoids the economic hazard of picking a smaller group of "winners" to receive grants at amounts necessary to justify investment.

For a loan program to succeed, it is imperative that the rates and risk acceptability match the needs of the target users. For instance, if USDA wants to expand capacity working through producer-owned or small packers, loans will need to be available not just at a below-market rate but to borrowers with less up-front capital than might normally be expected. If not, USDA simply mimics the role of traditional lenders, which would encourage little in the way of new projects.

Another issue to consider should USDA pursue a loan path is working with existing lenders that deal with the target audience, such as traditional banks for large packers, Farm Credit System lenders for producers, and regional and local banks for small packers. In this structure, USDA could simply set rules for minimum/maximum investment per project, rate caps, *etc.* while allowing financial institutions with existing expertise in lending for these projects to administer the support.

A grant program would likely be able to only help jumpstart a few, smaller projects. However, access to free cash would broaden the types of entrants—specifically those with the least access to capital. Moreover, there is some question as to whether the current interest rate environment would allow for a loan program to make any real impact on motivating new entrants into the market. Loans are already available, and a grant would go much further in enticing new investors to build processing capacity.

A grant program would also allow USDA to have firm knowledge of how much it intends to spend, without the life of the program being threatened by new ventures that do not survive. It is often noted that packing plants can take years to become profitable, and if they can operate with fewer costs (in this case, a loan payment), it can increase a plant's chances of long-term viability.

M. What conditions should be placed on grants or loans? If those conditions are not met, should the grants require repayment? If the conditions are met, should the loan be forgivable?

To best support supply chain resiliency, it is important that new or expanded plants be eligible for interstate shipment either through Federal inspection programs or participation in the CIS program. An Iowa State University study on state-inspected meat processors found that over 90 percent of U.S. hog inventories exist in states with state meat inspection programs.[19] If significant investment is made in state-inspected rather than USDA-inspected plants, any additional pork processed through these channels will be limited to distribution within the state of origin.

Since the start of the COVID–19 pandemic, state-inspected plants have been eligible for nearly $100 million in funding support from their respective states through the CARES Act. USDA has also made more than $50 million in funding available through the MPIRG program, where state-inspected plants can receive up to $200,000 in grants to help them meet Federal inspection standards. While these programs have targeted the needs of state-inspected plants, USDA's next capacity investment would be most efficiently targeted toward new or existing federally inspected plants.

NPPC strongly urges that any project that receives financial assistance from USDA as part of its proposal to expand capacity be federally inspected or participate in a cooperative agreement with FSIS, ensuring that inspection standards meet or exceed Federal standards.

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[19] *https://www.card.iastate.edu/products/publications/pdf/21pb34.pdf.*

Conclusion

NPPC supports USDA's commitment to increasing meatpacking capacity in the United States. For producers, the economics are simple: more capacity means better prices for hogs. With that said, it is important to remember that barriers such as labor availability and the NSIS line speed decision are major—if not the primary—contributors to restrained capacity. Lasting and ongoing increases in capacity will only happen if issues such as those are addressed in tandem with new access to capital.

USDA has many choices with regard to how it uses $500 million to spur capacity growth. While NPPC represents hog growers, not meat processors, our industries are inextricably linked. Larger, more sophisticated plants are capable of significant output relative to labor and other expenses, and we urge the Administration to use each dollar spent through this program as efficiently as possible.

NPPC appreciates the opportunity to comment on USDA's efforts, which will enable the pork industry to continue leading the way as a vibrant American farm sector that is critical to the rural and overall U.S. economy.

If you have any questions, do not hesitate to contact NPPC Manager for Competition, Labor, and Tax Policy Jack Detiveaux at detiveauxj@nppc.org.

Sincerely,

JEN SORENSON,
President,
National Pork Producers Council.

ATTACHMENT 2

Structure and Importance of the U.S. Pork Industry

Dr. STEVE R. MEYER, Partners for Production Agriculture

Dr. BARRY GOODWIN, North Carolina State University

Disclaimer: The opinions expressed in this document are held solely by its authors and do not represent the views or opinions of any other organization, regardless of affiliation.

Executive Summary

Pork production is a major contributor to the U.S. economy. While there are only 66,000 pork producers, the 131 million animals they marketed in 2020 provided over $22 billion in cash receipts in 2020. In a report based on 2016 data, Iowa State University economists found that the industry was responsible for nearly 514,000 jobs in the United States. Pork producers used roughly 1.1 billion bushels of corn and the soybean meal from 455 million bushels of soybeans in 2020. Much of this impact is centered in major production states from the Dakotas and Nebraska eastward across the Corn Belt all the way to Pennsylvania. In addition, North Carolina is the third largest hog producing state and there is a major production and processing area in the Oklahoma and Texas panhandles and southwest Kansas.

The number of U.S. hog operations has fallen sharply since the 1950s but has stabilized since 2000. Small operations with less than 100 pigs still account for the vast majority of farms, but 97.2 percent of all hogs are owned by operations with 1,000 head or more. Large farms own and produce most of the hogs in the United States, but most of these large farms are still owned by family enterprises. While "corporate" production does exist, it does not account for nearly as high a percentage of total production as media reports purport.

The United States is a global leader in pork production. Its modern, efficient packing plants with sterling food safety track records are a differentiator relative to other protein suppliers domestically and around the world. The U.S. pork industry has added many modern plants since the 1990s, including three brand new, state-of-the-art facilities since 2017. The pork packing sector is indeed concentrated with the largest four firms holding about 64 percent of total capacity in 2020. But the sector's Herfindahl-Hirschman Index, the metric used by the U.S. Department of Justice to gauge concentration and the potential for non-competitive behavior, was roughly 1,345 in 2020, well below the DOJ's critical level of 1,500 to demark a competitive industry.

Pigs are produced in many manners, all of which have the goal of providing the best environment for the animals and their caretakers and producing safe, wholesome pork. These range from pasture production to climate-controlled barns. Some genetic lines are aimed at cost-efficient production of lean pork products preferred

by many consumers. Others are designed for superior meat quality favored by other more flavor-influenced consumers. There is no right or wrong way to raise a hog—just better or worse ways depending on climate, available feed ingredients and specific end uses and grower and customer preferences.

USDA's Economic Research Service estimates that just over 60 percent of all U.S. hogs were produced using some form of production contract in 2017. Under these contracts, growers agree to provide facilities, labor, utilities, and waste-nutrient management to contractors/integrators who own pigs. Contractors/integrators provide the animals, feed, management oversight, veterinary/medical supplies and services and transportation. Growers face no market risk and very little, if any, production risk. Contractors accept all of those risks. Contractors gain access to land, labor and modern facilities while growers get steady income that will pay them a wage and retire any debt incurred. Once the debt is repaid, contract facilities generate significant cash flows. Contract hog production has allowed many families to remain on their farms earning a good living while playing important roles in their rural communities.

Hog production contracts differ dramatically from poultry production contracts. Hog growers are normally paid on a pig space per year basis with possible premiums for better feed conversion rates and lower death losses relative to an agreed-upon standard. Poultry producers are generally paid per bird placed, with premiums and discounts applied based on the grower's ranking among similar, usually nearby growers on performance metrics such as feed conversion and death loss. Hog contracts are long-term agreements spanning typically 5 to 10 years. Poultry contracts are flock-by-flock agreements with placements of future flocks at the discretion of the contractor. Hog growers can market their services to a broad group of contractors because pigs and market hogs can be shipped long distances without significant stress or loss. Most poultry growers are captive to one (or maybe two or three) nearby contractors because chickens cannot be shipped long distances without suffering significant losses.

The use of marketing agreements/contracts has grown dramatically since the early 1990s. They now govern the transfer of most pigs from producers to packers. Most marketing agreements/contracts cover deliveries for 3–7 years with prices based on negotiated/spot hog prices, CME Lean Hogs futures contracts, USDA's estimated pork cutout value or feed ingredient prices and pro forma cost of production formulas. These agreements provide certainty regarding packing plant access for producers and sufficient hog supplies for packers to operate plants at peak efficiencies. Some also reduce the variability of prices to be paid, thus mitigating risk. Most pork industry lenders prefer that their customers have marketing agreements in place to guarantee market access for their pigs. One negative impact of the growth of marketing agreements/contracts has been a long-term decline in the number of hogs for which prices are negotiated each day. This reduced level of "price discovery" interactions has cast significant doubt on whether those negotiated prices represent the true value of hogs. The "public good" aspects of price information make increasing the number of hogs for which prices are negotiated particularly difficult. Ideas to require some minimum level of negotiated sales/purchases have significant negative repercussions as well.

Hog and pork prices are determined by the interaction of supply and demand at various market/product levels. Consumer-level pork demand is the primary source of the demand for wholesale pork cuts. Export demand for U.S. pork accounts for roughly 25 percent of wholesale demand as well. Packers derive their demand for hogs from the demand for wholesale cuts. The farm-level supply of hogs is the basis of downstream supplies of wholesale cuts and retail and foodservice pork products. Industry participants use a number of information sources to gauge these interacting supplies and demands. Prices at all levels are discovered simultaneously by the interaction of buyers and sellers across the country and even around the world.

In recent years, domestic consumption has accounted for about 75 percent of U.S. pork output while exports have accounted for 25 percent. Growing exports have claimed 63 percent of the increase in U.S. pork output since 1994. Domestic consumption grows at roughly the rate of U.S. population growth, meaning that domestic per capita consumption has been roughly steady since the early 1980s. The only significant deviation from this steady pattern was in 2011–2015 when higher feed prices driven by (a) government-subsidized and mandated use of corn-based ethanol and (b) the drought of 2012 as well as significant piglet losses cause by porcine epidemic diarrhea virus (PEDv) in 2014 pushed U.S. production sharply lower.

The pork industry in the United States, Canada and Mexico are highly integrated due to the North American Free Trade Agreement of 1994 and its successor, the U.S.-Mexico-Canada Agreement. These agreements eliminated tariffs among the three signatories, fostering growth in trade. Mexico and Canada are the number two

and four U.S. pork export markets. U.S. producers purchased roughly 4.4 million weaner/feeder pigs from Canadian farms for finishing in the United States in 2020. U.S. packers bought an additional 800,000 Canadian pigs for processing in U.S. plants in the same year. The United States is Canada's largest pork export market. Shipments to Mexico have grown 16-fold from 1993 to 2020, but the Mexican pork industry has grown by 60 percent since 1995. Mexico is now a major exporter of pork as it sells high value cuts to Asian markets and purchases lower-value cuts from the United States.

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Introduction

The National Pork Producers Council in 1987 launched a pork promotion campaign with one of the world's most iconic slogans: *Pork. The Other White Meat.* The idea was to go head-to-head with chicken for the American consumers' food dollars. Beef was and is the No. 1 protein purchased in the United States, but the No. 2 spot was up for grabs.

About the same time, the U.S. pork industry saw innovations in feed rations, animal care and housing and genetics; new ways of selling, buying and marketing hogs; and implementation of the first two major U.S. free trade agreements—with Canada, then Canada and Mexico—all of which prompted tremendous growth in pork production even as the number of hog operations declined.

That growth today has made the U.S. pork industry the globe's No. 2 producer (behind China) and the world's No. 1 exporter of pork.

It is in that context that this paper examines the structure of the U.S. pork industry and its importance to agriculture, the U.S. economy and rural America—the places that feed 330 million Americans and millions more around the world.

Economic Importance

The U.S. pork industry is a significant contributor to the economic activity of U.S. agriculture and the broader U.S. economy. More than 60,000 pork producers marketed more that 131 million hogs in 2020 despite significant disruptions caused by the coronavirus pandemic. Those animals provided farm-level cash receipts of over $22 billion.

Iowa State University economists Daniel Otto, Lee Schulz and Mark Imerman estimated that in 2016 the U.S. pork industry was directly responsible for the creation of more than 37,000 full-time-equivalent jobs in pork production and generated roughly126,000 jobs in the rest of agriculture. In addition, the pork sector was responsible for 124,750 jobs in packing and processing and 33,400 jobs in professional services such as financial services, insurance, and real estate. In total, the U.S. pork industry is responsible for nearly 514,000 mostly rural jobs in the United States.

U.S pork producers in 2020 provided 28.3 billion pounds of safe, wholesome, and nutritious meat protein to consumers worldwide. By comparison, in 1960, at least ten times as many pork producers produced about 12 billion pounds of carcass-weight pork.

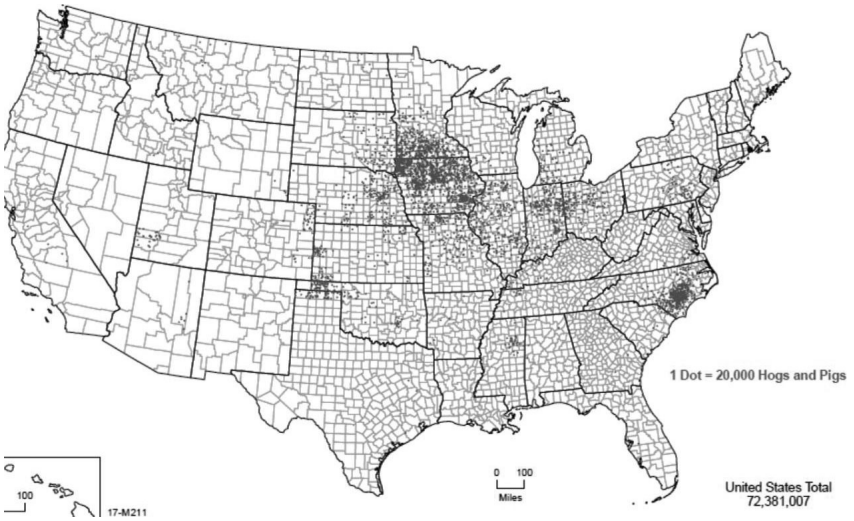
Pork exports add significantly to the bottom line of each U.S. pork producer and have grown dramatically in recent years. They also supported an estimated 110,000 jobs in the U.S. pork sector and its allied industries in 2016, according to the ISU economists. (U.S. pork exports accounted for only about 20 percent of total U.S. production in 2016, so the employment contribution was almost certainly larger in 2020, when exports were a larger percentage of production.)

Additionally, pork producers used roughly 1.1 billion bushels of corn and the soybean meal from 455 million bushels of soybeans in 2020. Pigs also consumed roughly 5 million tons of distillers dried grains with solubles (DDGS), a major byproduct of corn-based ethanol production.

While the U.S. pork industry enhances the well-being of all U.S. citizens by providing safe, nutritious pork products, it contributes more specifically to the econom-

ics of a number of states, primarily in the Midwest. *Figure 1* shows the geographic distribution of hogs in the United States as of December 1, 2017. Major concentrations of hogs, hog farmers and the industries they support can be found in 13 states across a wide geographic region ranging from the Midwest to mid-Atlantic and as far north as the Canadian border. One significant reason for this geographical distribution is that many of those states also are among the top producers of corn and soybeans—the main ingredients of hog feed. Colorado, North Carolina, Oklahoma, Texas and Utah also have large numbers of hogs and related enterprises. Smaller concentrations are found in Arizona, California, Mississippi, Montana and Tennessee. The pork packing sector mirrors these hog locations quite closely.

Figure 1



Hogs and Pigs in the U.S., December 1, 2017 (*Source:* USDA, 2017 Census of Agriculture).

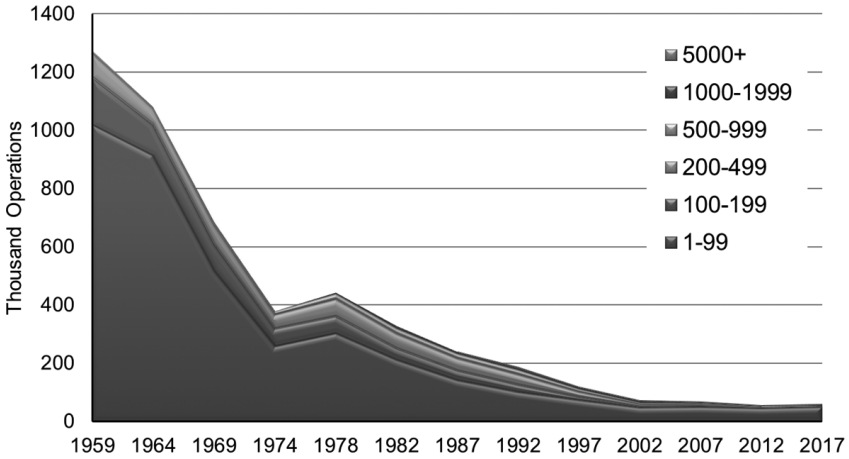
Industry Structure

The structure (producer size, ownership, market share, *etc.*) of the U.S. pork industry has changed dramatically over time but has been relatively stable since the early 2000s. *Figures 2* and *3* show the number of U.S. hog operations by size category from USDA's Census of Agriculture.

The sharp decline in the number of hog operations from the late 1950s through the 1970s was mirrored by reductions in the number of operations producing nearly all agricultural products. Major technological changes were a primary driver as were cultural and social changes that resulted in much smaller farm families and large migrations from farms to cities.

Figure 2

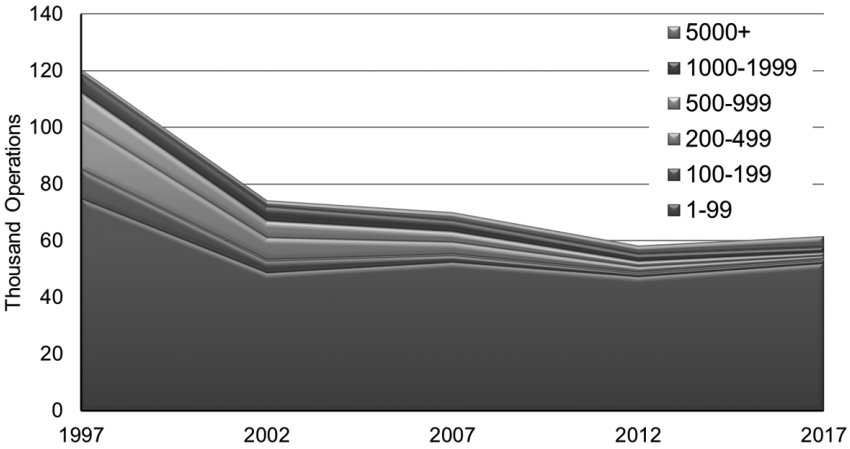
Number of Hog Operations by Marketings, 1959–2017



Source: Census of Agriculture, U.S. Bureau of the Census and USDA, various editions.

Figure 3

Number of Hog Operations by Marketings, 1997–2017



Source: Census of Agriculture, U.S. Bureau of the Census and USDA, various editions.

Hog operations have somewhat stabilized near 60,000 in the last two Census of Agriculture years.

Technological changes continued in the pork industry from the 1970s through the 1990s as confinement production—housing animals indoors to protect them from weather, disease and predators—and advances in animal disease control and nutrition gave rise to substantial economies of scale in hog production. While farms that produced both feed (mainly corn) and hogs had a historical advantage over those that produced only hogs, Federal price support programs resulted in relatively low cash corn prices during this period, which allowed specialized pork enterprises to be competitive with their upstream-integrated competitors.

These forces culminated in a major restructuring of the pork production sector in the mid-1990s. Economies of scale and the looming threat of environmental regulation drove a large expansion of the production sector that resulted in very low

prices. The low prices of 1994 and, even more so, the price debacle of 1998 (when live hog prices were less than $15 a carcass hundred weight (cwt.); today they're around $105) drove producers large and small from the industry but had a disproportionate impact on small producers because of the generally—but not always—lower productivity of enterprises that were part of diversified farms relative to specialized hog enterprises.

USDA in 1964 began breaking out "large" farms that had 1,000 head and more hogs. At that time, these large farms had 3.2 percent of the total U.S. inventory. That share grew to 22.7 percent in 1978, so USDA began providing more detail in the 1982 Census, and the new "large" category of farms with inventories of 5,000 head and more held 4.9 percent of the national hog population. As can be seen in *Figure 7,* the share of farms with 1,000 head and more hogs has continued to grow over time, with the most dramatic growth being in those farms with 5,000 and more hogs. Farms with over 1,000 head now account for 97.2 percent of the national inventory. Those with 5,000 or more hold a 72.8 percent inventory share.

A major advantage U.S. pork has in world markets and its competitive position relative to other U.S. proteins exists in the efficiency of U.S. pork packing companies and plants. U.S. plants are, on average, larger than others in the world and, according to industry sources, capable of converting hogs to value-added pork products at lower costs than plants located elsewhere in the world.

The growth of U.S. pork plants is the result of adding many large, efficient plants since the early 1990s. That growth was accompanied by the closure of many older, generally smaller plants, some of which were in areas that no longer produce many hogs. (See *Figure 4.*)

Figure 4

Pork Packing Capacity by Company

Company	Headquarters	2019	2020	Change
1 Smithfield	Smithfield, VA	130,300	130,300	
2 JBS	Greeley, CO	93,000	93,000	
3 Tyson Foods (IBP)	Dakota Dunes, SD	81,300	81,800	500
4 Clemens Food Group	Hatfield, PA	23,700	23,700	
5 Seaboard Farms	Shawnee Mission, KS	20,500	22,500	2,000
6 Triumph Foods	St. Joseph, MO	21,500	21,300	(200)
7 Triumph-Seaboard	Sioux City, IA	20,400	20,400	
8 Hormel	Austin, MN	19,000	19,000	
9 Indiana Packing Co.	Delphi, IN	17,300	16,700	(600)
10 Wholestone Foods	Fremont, NE	10,675	11,500	825
11 Prestage Foods	Webster City, IA	10,000	10,000	
12 Agar Foods	Rantoul, IL	7,400	7,400	
13 Premium Iowa Pork	Hospers, IA	3,150	5,250	2,100
14 Prime Pork	Windom, MN	5,100	5,100	
15 Sioux-Preme Packing	Sioux Center, IA	4,600	4,600	
16 Johnsonville Sausage	Watertown, WI	3,500	*3,425*	*(75)*
17 Yosemite Meats	Stockton, CA	3,200	3,200	
18 J.H Routh	Sandusky, OH	4,200	2,900	(1,300)
19 Pork King Packing	Marengo, IL	2,200	2,250	50
20 Redwood Farms (Dakota Pork)	Estherville, IA	2,400	2,000	(400)
21 Abbyland Foods	Curtiss, WI	*2,000*	2,000	
22 Fisher Ham and Meat	Spring, TX	1,700	1,700	
23 The Pork Company	Warsaw, NC	1,500	1,500	
USA Pork Products	Hazellton, PA	1,500	1,500	
25 Leidy's	Souderton, PA	1,350	1,350	
26 Verschoor Meats	Sioux City, IA	1,200	1,200	
27 Spectrum Meats	Mount Morris, IL	1,150	1,150	
28 Tri-Eagle Provision (Vin-Lee-Ron)	Mentone, IN	1,100	1,100	
Swaggerty Sausage Co	Kodak, TN	850	*1,100*	*250*
30 Bob Evans Farms	Xenia, OH	1,000	1,000	
31 Jim's Farm Meats	Atwater, CA	850	850	
32 Olson Meat Company	Orland, CA	800	800	
33 Peoria Packing	Chicago, IL	800	800	
34 Calihan Packing Company	Peoria, IL	750	*750*	
35 Independent Meats	Twin Falls, ID	730	730	
36 Martin's Pork Products	Falcon, NC	1,300	650	(650)
37 F.B. Purnell Sausage	Simsonville, KY	500	*500*	
Masami Meat Company	Klammath Falls, OR	500	500	
Dekalb County Packing Company	De Kalb, IL	500	500	
40 Pioneer Packing Company	Bowling Green, OH	450	*450*	
41 Williams Sausage Co.	Union City, KY	400	*400*	
42 Carleton Packing Company	Carleton, OR	375	375	
43 Parks Family Meats	Warsaw, NC	350	350	

Figure 4—Continued
Pork Packing Capacity by Company

Company	Headquarters	2019	2020	Change
44 Morris Meat Packing	Morris, IL	300	300	
Wampler's Sausage	Lenoir City, TN	300	*300*	
Dean Sausage	Atalla, AL	300	*300*	
47 Dealaman Eterprises, Inc.	Warren, NJ	200	200	
48 Gunnoe Sausage	Goode, VA	90	*90*	
Dayton Meat Co.	Dayton, OR	200	—	(200)
Other plant not [listed]		3,600	3,600	
Total Daily Capacity		510,070	512,370	2,300
Weekly Capacity @ 5.4 days per week		2,754,378	2,766,798	12,420

[*Italic*] numbers denote sow/boar plants or primarily sow/boar plants.
[Shading] indicate no response to 2020 survey.
Daily slaughter capacity of U.S. pork packing plants (Source: *National Hog Farmer*).

This shift increased the concentration of ownership in U.S. pork packing. The four-firm concentration ratio (CR–4) of the U.S. industry grew from roughly 44 percent in 1995 to just over 70 percent in 2016. There is no critical value for CR–4, but 70 percent is normally considered high concentration.

The Department of Justice (DOJ) uses the Herfindahl-Hirschman Index as its critical measure of concentration, especially in evaluating proposed mergers. The HHI is simply the sum of the squared value of all companies' market shares. A sector with four firms whose market shares are 30, 30, 20 and 20 would have a HHI of $(30 \times 30) + (30 \times 30) + (20 \times 20) + (20 \times 20) = 2{,}600$.

DOJ considers sectors with an HHI of 1,500 or below to be competitive. Any merger that leaves an industry's HHI below 1,500 will not likely be challenged. An HHI of 1,500 to 2,500 is considered moderately concentrated, and mergers in this range that change HHI by 100 or more points will receive added scrutiny from DOJ. An industry with HHI greater than 2,500 is considered highly concentrated, and any merger that increases the HHI by 200 points or more will be presumed to enhance market power. DOJ does not specify actions it will take, but higher scrutiny is understood to mean the chance of challenging the merger increases.

The pork packing sector generally has remained under the competitive market threshold of HHI 1,500. It did rise above that level in 2016 following the purchase of Cargill's pork operations by JBS. Based on daily slaughter capacity, the sector's HHI in 2016 was about 1,538. DOJ uses actual market shares of hog slaughter, not capacity, to compute its official HHI figures.

The opening of new packing plants in Sioux City, Iowa, and Coldwater, Mich., in 2017 and in Wright County, Iowa, and Luverne, Minn., in 2019 and 2020, respectively, reduced the sector's CR–4 and HHI significantly. These plants were built with hog producers' involvement and investments and represent vertical integration downstream through packing and processing by producers. Using packing capacity data, the 2020 CR–4 is 64, while the HHI is 1,345, indicating a structure more conducive to competition in the U.S. pork packing sector.

Raising, Selling, and Buying Hogs

The markets for pork and hogs are national in that prices for hogs, whether sold by producers to packers live or in carcass form and pork cuts are determined primarily in the Corn Belt where the vast majority of hogs are raised, slaughtered and processed into pork. Prices in other production regions are based on these Midwestern prices, generally differing by the amount of transportation costs, just as economic theory predicts. Prices in regions with smaller hog numbers also may be affected by factors other than transportation costs since they are far more dependent on local demand conditions.

Pigs are produced in a variety of ways in the United States. Some are still produced on diversified farms that involve multiple enterprises, while others are produced by specialized companies in specialized facilities. Some are produced outdoors in either pasture or woodlands, while others spend their entire lives indoors in climate-controlled buildings. Some pigs are from genetic lines known for superior meat qualities that provide superior flavor, marbling or other characteristics determined in white tablecloth restaurants, while others are from lines designed to produce lean pork that meets the preferences of today's health-conscious consumer.

Virtually all U.S. pigs are fed diets based on corn and soybean meal though some regions use other ingredients such as milo, barley and peas as well as byproducts from ethanol plants, bakeries, cereal makers and others. There is no right or wrong

way to raise a hog—just better or worse ways depending on the local climate, available feedstuffs and specific end uses.

The entities that produce hogs vary as much as the hogs themselves. These range from 4–H and Future Farmers of America (FFA) projects that involve only a few purchased feeder pigs each year to regionally diverse divisions of large production companies. There are sole proprietorships, partnerships, corporations of every type and limited liability companies. Most hog operations—even large ones—are owned and operated by individual families and usually involve several members of those families. Such family operations are typically full-time, commercial-scale hog producers.

During the past 30 years, the industry has moved from hundreds of thousands of small operations that sold pigs by the pickup or trailer load through auction barns and buying stations to far fewer operations that sell pigs by the semi-trailer load directly to packers. That move led to new business practices in the pork industry. Contract production, open market operations and vertically owned enterprises are business choices that depend on factors such as transaction costs, risks and uncertainty in markets. No single solution is optimal for all circumstances. Today's demands for higher quality and verified production practices require improved information throughout the supply chain. Contracts provide the ability to create, control and communicate that information.

Production Contracts

The 1980s saw the advent of contract production where the owner of pigs would contract with others to provide buildings, labor, utilities and waste management for a fee. Contract grower-finish facilities were the most common, but contract nurseries and breeding-gestation-farrowing units also were used.

The use of production contracts accomplishes several important goals for hog producers. First, they allow a hog producer to expand rapidly because the owner does not have to raise the capital to construct all the needed buildings. Contracts allows those facilities to be built with the contract grower's capital and credit and to be placed on the contract grower's balance sheet. The trade-off, of course, is that the contract grower can build equity in barns, feeders, hog sorters and other production facilities, with a useful life that in many cases goes well beyond the terms of the initial contract and indebtedness.

Second, contracts allow swine production operations to be geographically dispersed, reducing the risk of loss that would exist if all animals were on one site and placing valuable waste nutrients (manure) near growing crops. Dispersion of facilities helps swine producers address potential risks such as disease and casualties from weather or fire. Having nutrients as fertilizer near their point of use reduces transportation costs and risks as well.

Third, the growth of swine production contracts coincided with the development of separate-site swine production systems that segregated pigs of differing ages to control disease, increase pig health and enhance production efficiencies. Production contracts facilitated the widespread adoption of these systems by giving pig owners access to land in different areas. The benefits have been tremendous and have resulted in healthier animals, lower-cost production, higher output, more affordable pork products for U.S. and foreign consumers and ready access to organic fertilizers that many crop farmers use.

Finally, production contracts allow thousands of rural residents to remain on family farms, making a full-time living in agriculture. Production contracts provide repayment assurance for bankers and, in turn, allow growers to finance, upgrade and modernize buildings. They provide steady sources of income without the grower having to face output or market risk. Once paid off (usually in 8 to 12 years), contract buildings provide substantial cash flow that can be used to replace or expand facilities. Many growers eventually become independent hog producers thanks to the opportunity provided by a production contract.

Contract hog production payments were initially made on a per-head basis, with premiums paid for superior performance such as low death loss, low feed conversion rate and more pigs per sow per year. However, these types of payments do not perform well if weather conditions are bad or a disease challenge is encountered. In addition, early marketing or delayed pig deliveries meant growers were without pigs—and thus without payments—for periods of time, a situation that obviously reduced their incomes and ability to repay loans.

Other payment systems were tried, but the industry finally adopted, in general, a system that pays growers a fixed amount per animal space per year with, in many but not all cases, premiums for performance that exceeds pre-specified levels. Hypothetically, the owner of a 1,000 head finishing barn may receive $36 per pig space per year (*i.e.,* $36,000 annually). In addition, the swine production contract grower

may receive a premium if the feed conversion rate is less than, say, 2.9 lbs. of feed per pound of gain or if death losses are, perhaps, less than 2.4 percent of delivered pigs. This payment system guarantees a minimum income level to growers, provides incentives to improve performance and, thus, profitability for pig owners and allows owners flexibility in the timing of placing and marketing pigs without imposing a consequence on the grower. The system has worked very well for swine contractors and swine production contract growers.

Marketing Agreements

The other business practice that developed over the past 30 years is the use of marketing agreements to transfer ownership of pigs from producers to packers. Marketing agreements, like production contracts, have evolved over time to meet the needs of packers and producers.

Early marketing agreements were offered by packers as a way of securing leaner hogs that would yield higher proportions of saleable cuts. In the 1980s and 1990s, the U.S. hog populations contained a large number of animals with too much fat and not enough lean muscle. As consumers began demanding lean pork products, packers identified producers who had lean, good cutting hogs and offered them a premium if they would make a long-term (as much as 5 to 7 years in some cases) commitment to sell to that packer. An additional benefit is assurance of throughput levels that maximize packing plant efficiencies. This allows producer-to-consumer price spreads to be as small as possible, keeping producer prices high and/or consumer prices low.

Another incentive for using marketing contracts—guaranteed and timely access by producers to packing capacity—was driven primarily by the hog price crash of 1998. In that year, hog supplies increased sharply even while packing capacity declined primarily because of the bankruptcy of Thorn Apple Valley Packing in Detroit. Timely marketings were impossible during November and December of 1998, and prices fell to record lows. The inability to sell hogs on a timely basis drove many producers and their lenders to enter into marketing agreements to guarantee access to packing capacity, or "shackle space" at a packer. Few producers or lenders wanted to take the risk of lacking a market for their pigs, even over a very short period of time. Most shackle space contracts have prices tied by formulas directly to the spot or negotiated market and thus have no risk-mitigating characteristics—the price may be $1 or $2 higher than the spot price in return for a long-term supply commitment, but the variance (*i.e.,* the risk) of the formula price will be the same as the variance of the spot price. Producers who use these kinds of contracts to guarantee shackle space can (and many do) use futures, options and cash contracts with packers—the same tools used by producers selling on the spot/negotiated market—to manage risk.

Some marketing agreements, though, have price-stabilizing or risk-mitigating components. Most of these do not attempt to raise or lower long-run prices as much as they try to reduce price variation, preventing steep downturns in revenues and helping manage cash flows. These contracts stabilize producers' financial performance and thus generally enhance their access to capital. In addition, they result in a more stable supply of hogs for packers.

There have been attempts over the years to limit how producers sell and packers buy hogs, but such proposals would lead to more volatility in the market, less stability for producers and packers and, inevitably, to more vertical integration of the pork industry, with packers simply owning hogs from birth to slaughter.

Market Drivers and Dynamics for Pork and Hogs

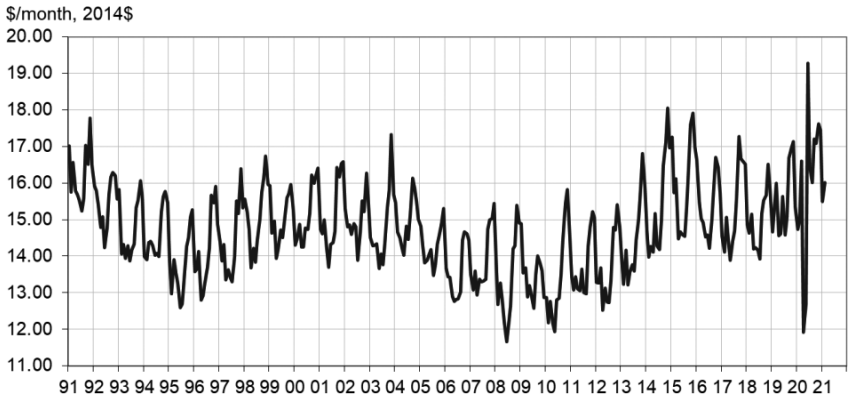
Prices of pork products and hogs depend, quite logically, on the supply of hogs and the demand for pork. Note that this statement involves two different but related products: pigs and pork.

Pork demand is not simply per capita consumption. It is the quantities of pork that consumers are willing and able to buy at alternative prices. It is not a quantity but a set of price-quantity pairs. Prices and quantities are, logically, negatively related: Consumers will buy less pork at higher prices and more pork at lower prices.

Since price and quantity are negatively related, one way to characterize the condition of pork demand is to observe the product of the two—total expenditures. Real per capita expenditures (RCPE) for pork is simply the product of the real (*i.e.,* deflated) price of pork and per capita consumption in retail weight. The relative magnitude of price and quantity changes determine the change in RPCE. Monthly RPCE since 1991 appears in *Figure 5.* Note the large disruptions in consumer-level pork demand in 2020 because of supply chain disruptions caused by COVID–19.

Figure 5

Real Per Capita Expenditures—Pork



Source: Kerns & Associates using data from USDA ERS, NASS and FAS.

The demand for pork is determined by consumer tastes and preferences, consumer incomes and prices of substitute goods (primarily beef, chicken and turkey). Changes in any of these variables will change the price-quantity pairs thus "shifting" demand.

The demand for pork at the wholesale level and demand for hogs at the farm gate are "derived" from consumer demand by deducting costs and profits of intermediary firms from the prices consumers are willing to pay. This process results in sets of price-quantity pairs at the wholesale and hog levels that correspond to consumer-level price-quantity pairs.

Just as consumer-level pork demand is the "source" of demand for wholesale pork and hogs, the farm-level supply of hogs is the source for the wholesale and consumer-level supplies of pork. And just as demand is not a quantity but a set of price-quantity pairs, so is hog supply a set of price-quantity pairs that represent the number of hogs producers are willing and able to supply to the market at alternative prices.

The supply of hogs is determined by the cost of inputs, production technology and expectations for profits. All of these are, importantly, somewhat a function of time, and they influence hog supply over relatively long periods.

Producers cannot quickly change the number of hogs they produce. Decisions to change output levels can be made relatively quickly, but the actual reduction of hog numbers will take 10 to 12 months with the gestation period of a sow being roughly 4 months and pigs taking 5.5 to 7 months to reach market weight. Expansion decisions take longer to execute than do reduction decisions as, in most cases, production facilities must be built. Expansion decisions have a 20 to 30-year impact on hog supplies since facilities placed into production will likely remain in production even if the original owner fails.

To hog supply, the costs of harvesting, processing, transporting, and packaging pork and required profit margins are added to determine sets of price-quantity pairs that represent the amounts packers are willing and able to offer to wholesale pork buyers (further processors, retail stores, restaurants, *etc.*) at various wholesale prices. Costs of retailing and foodservice preparation and required profits of those establishments are then added to wholesale values to determine a set of price-quantity pairs that retailers/restaurants are willing and able to offer at alternative prices to consumers.

The only remaining market factor is export demand. Over the last decade, the United States is the largest single pork exporting country in the world. The EU is the largest exporting entity. U.S. pork exports accounted for just over 27 percent of total carcass weight production in 2020. The value of U.S. pork and pork variety meat exports in 2020 accounted for $56 per hog.

Export customers in essence compete with domestic retail and foodservice businesses to buy wholesale pork. So, export demand impacts the hog-pork economy at the wholesale level. Portions of observed wholesale pork and farm-level hog demand are derived from export wholesale demand.

This entire process provides supply and demand relationships at the farm, wholesale and consumer levels that simultaneously determine the quantities of hogs and pork produced and the prices at which those products trade at the farm, wholesale and consumer levels.

Price Discovery

No single entity or group of entities "sets" the price for pork and hogs in the United States. Prices are determined by the supply and demand relationships described above on a daily basis and are "discovered" by the interaction of buyers and sellers at all levels of the hog-pork economy. No entity knows the precise status of supplies or demands at the various market levels. Interaction and negotiation determine quantities traded and the prices of those trades from the various levels of uncertainty, therefore there can be different prices paid for hog or any wholesale cut on any given day.

The quantity of hogs supplied to the market is the result of breeding decisions made almost a year before the pigs reach market weight. Therefore, the short-run supply of hogs tends to be inelastic, meaning that the quantity can change very little regardless of the price of hogs. In addition, consumer-level pork demand—and thus wholesale pork demand and hog demand—are by nature inelastic, meaning that any change in the quantity offered for sale will cause a larger price change in percentage terms in the opposite direction. So, when the supply curve increases (shifts to the right), prices fall by a greater percentage than quantity increases and producers' total revenues decline. When the supply curve decreases (shifts left) the opposite occurs.

Clearly, the inelastic nature of hog demand allows producer revenue to increase when the quantity supplied is restricted. This is not unique to pig production, and the revenue-inelasticity relationship is a primary reason for antitrust laws. Without legal prohibitions, sellers can collude to restrict supplies and the resulting price increase will lead to higher revenues.

Prices in the hog-pork complex are most clearly discovered at the wholesale level. It is here that the demands of domestic retailers and foodservice companies as well as export customers interact with the supply functions for wholesale pork cuts. This interaction produces individual cut prices that determine the cutout value of a pork carcass. Cutout value is the sum of the prices of the various wholesale cuts multiplied by the percentage of the carcass they represent.

Hog prices are directly derived from the cutout value. As the cutout value rises, packers can (and usually do) pay more for hogs. As cutout falls, hog bids usually fall commensurately.

The relative changes of cutout value and hog price depend largely on the bargaining position of producers and packers at any given point in time. When hog supplies are ample, packers can push hog values down relative to the cutout value. When hog supplies are tight, producers can command a higher proportion of the cutout value for their animals.

The prices paid for hogs are derived in several fashions. Some are negotiated each day by hog sellers and packer buyers. Some are established by formulas that make various adjustments to negotiated prices, futures market prices or some other market price. Others are arrived at based on producers' cost of production.

Pork plants that process 100,000 market hogs or more during a year are required by the Livestock Mandatory Reporting Act of 1999 to report a variety of information to USDA's Agriculture Marketing Service each day. Among these variables are the price, number, weight and carcass characteristics of pigs purchased and slaughtered. Companies that slaughter 100,000 sows/boars per year are required to report similar information on their purchases of cull sows and boars each day.

Prices paid for barrows and gilts are the result of several pricing mechanisms. The ones included in mandatory price reporting reports are:

1. Negotiated Prices—The result of buyer-seller interaction that results in agreement on a base price and a day of delivery. This is the "spot" market for pigs, and the number of pigs sold in this market has declined steadily. The number and percentage of pigs traded on negotiated prices reached all-time lows in 2020.
2. Swine or Pork Market Formula—Prices are based on a price from a hog or pork market. Negotiated prices are frequently the base market for formula-priced hogs, with actual prices normally including an "add-on" from that base.

Western Corn Belt plus $2/cwt., for example. A growing portion of this price category is based on a pork market, primarily USDA's estimated pork cutout value. Cutout formulas usually include a percentage (*e.g.,* 90 percent of the cutout) or a fixed adjustment (cutout value less $10). Some hogs are priced using a combination of hog and pork markets.

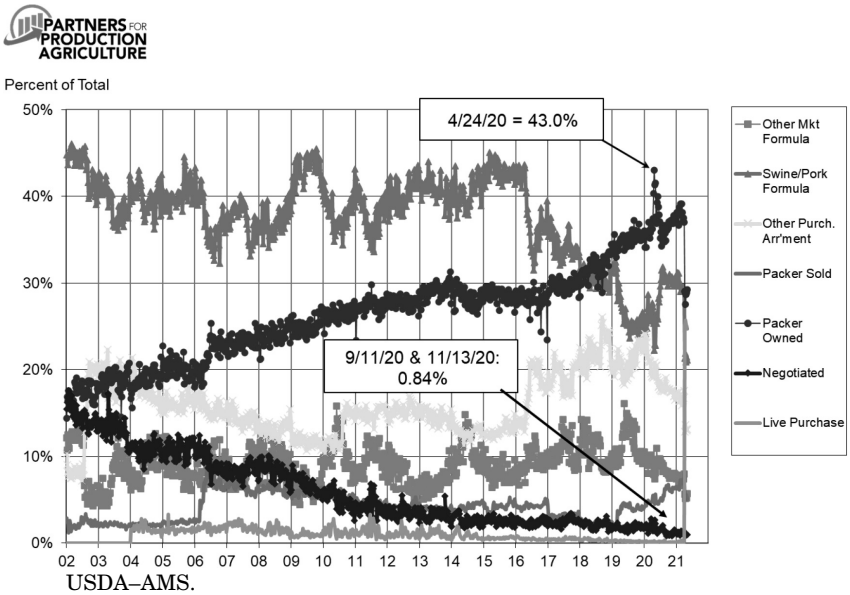
3. Other Market Formula—Prices are based on Lean Hogs futures and options.
4. Other Purchase Arrangement—Prices that do not fit neatly into the other categories. This classification generally includes hog prices that have some limitations (window contracts, price floors, *etc.*), are based on a market other than futures or hogs/pork (*e.g.,* cost of production, corn/soybean meal prices, *etc.*) or involve non-carcass merit premiums (*e.g.,* pen gestation, the absence of antibiotics, specific breed(s), free-range, *etc.*).

The proportion of hogs priced by these alternative methods has changed over time. (See *Figure 6*). Some important points to note are:

1. The share of hogs for which prices are negotiated has been falling for many years but has reached crucially low levels recently. There is no "right percentage" for negotiated animals, but the chances of a mismatch between the number of "open market" (*i.e.,* non-committed) hogs supplied by producers and demanded by packers increases as the number of these hogs falls. Two extra loads are less critical when ten percent of hogs are negotiated than they would be when one percent is negotiated.
2. Packer ownership of hogs continues to grow, but the primary driver of growth since 2016 has been the opening of three large, modern plants either entirely or partially owned by producers. Because of this ownership, those producers' animals moved from another pricing mechanism to "packer-owned." These changes are also the driver in the changes in Packer-Sold pig shares in 2017 and 2019. Packer-sold pigs are pigs raised by packers that are, generally, not in good geographic locations to be processed in the packers' own plants. The 2020 spike was due to COVID–19 disruptions.
3. Changes in USDA Agricultural Marketing Service definitions caused some major shifts among pricing categories in 2016. AMS does not do this often, but it does have an impact on the data when it does.

Figure 6

PCT of Hogs Purchased by Pricing Method, Weekly



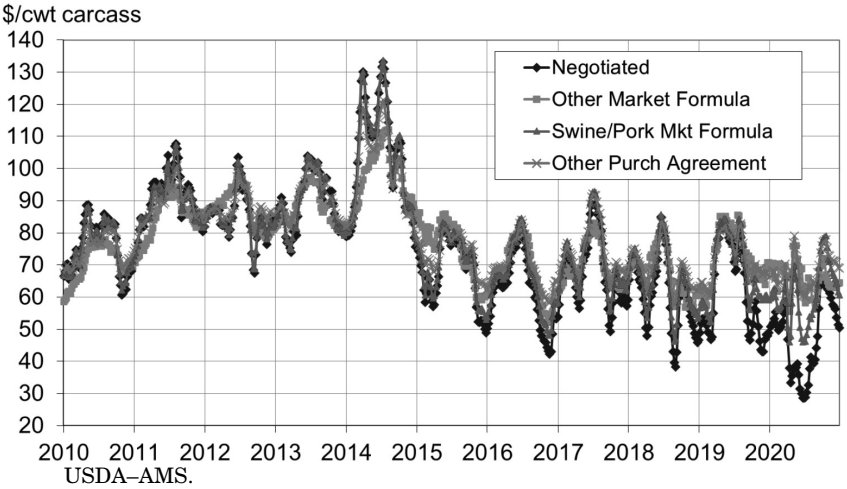
USDA–AMS.

Of primary concern to producers are the changes in price levels that have resulted from these long-term shifts in how hog prices are set. *Figure 7* shows the weekly average prices of the four reporting categories for producer-sold hogs—*i.e.,* hogs sold by independent producers to packers. Noteworthy features of *Figure 7* are:

1. While Other Market Formula (Futures-tied) prices and Other Purchase Arrangement (the catch-all category) prices move generally with the market, they almost always will deviate to some degree. The reason is that OMF prices are based on futures prices at the time an agreement is made between the producer and the packer but are reported only when those animals are harvested. Therefore, the reported price might differ substantially from the market price on the day of sale or slaughter. OPA prices differ because some of the price mechanisms are based on other markets (corn and soybean meal, for instance), and some non-carcass premiums (pen gestation, Berkshire genetics, for instance) can be large.
2. Swine or Pork Market Formula and Negotiated Prices were very close to each other until 2016 because: a) almost all Swine or Pork Market Formula prices were based on negotiated prices; and b) hog supplies were generally below packing capacity.
3. Swine or Pork Market Formula and Negotiated Prices began to diverge in 2016 and have been vastly different from mid-2019 until March 2021. There are two reasons for this divergence.
    a. Over roughly the past 5 years, more and more swine or pork market formulas have been based on pork prices, primarily USDA's estimated cutout value. That value is almost always more stable than hog prices as wholesale demand is more elastic than is hog demand. This is one of the attractive features to producers of tying hog prices to the cutout value. Pricing hogs off that cutout value and including those prices in the Swine or Pork Market Formula keeps the formula price higher when market prices fall. Such had been the case almost exclusively before 2018.
    b. Hog production has increased to the point where it once again challenged packing capacity in 2019, meaning the price of negotiated pigs could be pushed lower by packers since there were few alternative outlets for these "extra" pigs relative to supplies committed to packers through contracts. This factor became especially large in 2020, when packing plants reduced throughput or even closed because of COVID–19 cases among their workers. Plants that stayed open simply could not process all the hogs available, allowing the negotiated price to fall dramatically. Producers had to move hogs regardless of the price that was offered. The price of cutout-based hogs did not fall nearly as far, thus causing the large differential in 2020. It should be noted that the negotiated prices in mid-2020—in the $20s and $30s per cwt.—were actually higher than they could have been based on market conditions. Packers could have dropped prices to practically zero and producers would have had to accept them to prevent being forced to destroy market-ready animals. There was, to anyone's knowledge, no "collusion" to keep prices at or above about $30/cwt carcass weight. Packers simply did not lower their bids beyond that point.

Figure 7

Net Market Hog Prices by Pricing Method, Weekly



USDA–AMS.

The decline in the number of hogs for which prices are negotiated is the result of several diverse but powerful forces. It is not the result of any conspiracy among either producers or packers. Lenders prefer their clients to have long-term agreements for selling their pigs to guarantee "shackle space" or market access. Such contracts are frequently required to obtain financing. Producers who sell multiple truckloads of hogs per week or even per day prefer not to negotiate the price of every load since doing so takes time and, thus, money and is stressful. The process is easier and more fruitful when pigs are in relatively tight supply but becomes very difficult and potentially disastrous when supplies are ample.

Neither producers nor packers are compensated for negotiating (*i.e.,* discovering) prices in the spot market. In fact, producers are frequently penalized for negotiating since the price in the spot market is, more and more often, lower than prices paid for hogs priced by in other manners. Further, neither producers nor packers must pay to use these data as the base for other pricing mechanisms. And the use of the data by one party in no way diminishes its value in use by another party. These are all characteristics of a "public good" and give rise to a "tragedy of the commons," where the public good is under-produced and over-used in the presence of strictly market forces.

Public goods (roads, July 4 fireworks displays, *etc.*) are usually provided by the government since leaving their production up to the private sector is bound to fail. But this particular public good can only be reported by the government. It cannot be produced by the government. Prices must be produced by the parties to the trade, and not every producer or every packer is necessarily good at negotiating prices. Thus, there is a serious question as to whether forcing negotiated transactions through public policy will result in efficient and accurate price discovery.

And there will be other negative impacts. One of the reasons producers have longer-term pricing arrangements is that lenders desire more certainty about where market hogs will be sold and how they will be priced. Many loans for operations and facilities are contingent on a producer having a long-term marketing contract that guarantees access to packing capacity and specifies how prices will be determined. The risk reduction of such agreements is far from trivial so, without them, capital availability will become a problem for many pork producers.

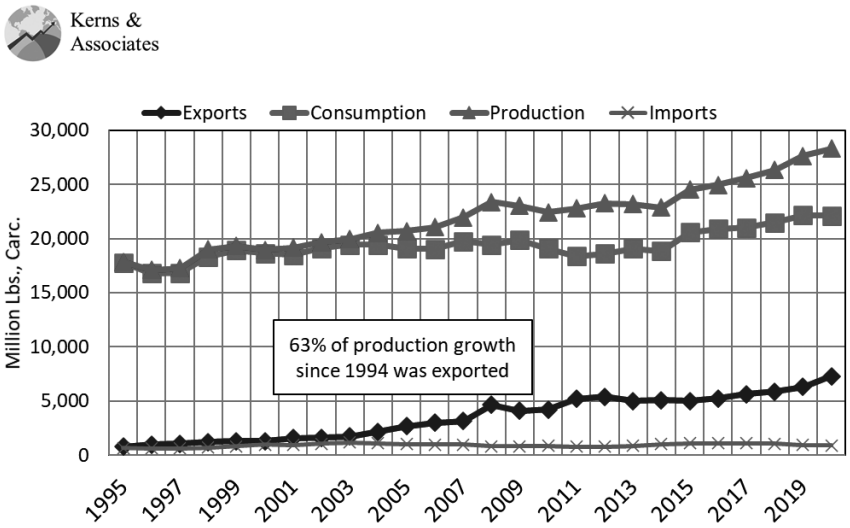
Important Markets for U.S. Pork

While, as noted earlier, pork export markets have grown in importance, the U.S. pork industry's "bread and butter" remains the domestic market, which takes rough-

ly 75 percent of total annual production. *Figure 8* shows the history of U.S. pork output, total consumption, exports and imports. Export growth has used 63 percent of the growth in output since 1994. Domestic consumption has used the remainder of that growth. Imports have been quite steady since the mid-90s.

Figure 8

U.S. Pork Production, Consumption, Exports and Imports

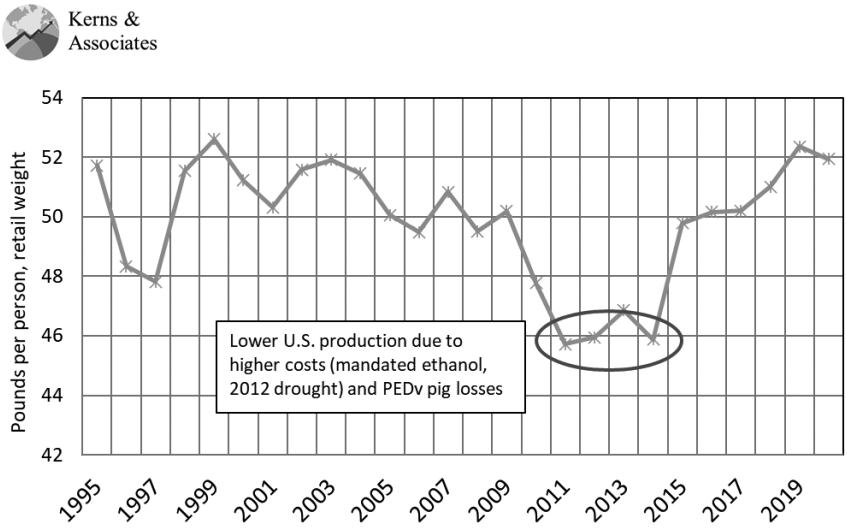


Source: Livestock Marketing Information Center; Data from USDA NASS and ERS.

Domestic consumption has grown at roughly the rate of population growth, resulting in relatively steady U.S. per capita pork consumption (see *Figure 9.*) In fact, except for the 4 years from 2011 through 2014, U.S. per capita pork consumption has been between 47.8 and 52.7 pounds in every year since 1982. The low levels of 2011 through 2014 were caused, first, by higher production costs driven by the diversion of corn to ethanol production to fulfill Federal mandates, then by high corn and soybean prices because of the 2012 drought and finally, by the loss of six to eight million pigs in 2013 and 2014 due to the Porcine Epidemic Diarrhea virus (PEDv).

Figure 9

U.S. Pork Consumption, Per Capita



Source: Livestock Marketing Information Center; Data from USDA NASS.

Steady pork consumption, however, does not mean steady pork demand. The price consumers are willing and able to pay is an additional aspect of demand, and the combination of steady consumption and higher real (deflated) pork prices mean that pork demand has increased nicely since 2009. Real per capita expenditures for pork, a proxy for the condition of pork demand, has increased by nearly 19 percent since its 2009 nadir. The increase is the result of positive changes in consumers' preferences for pork (driven at least in part by pork's stellar record of food safety and improvements in the pork products offered to consumers), the relative prices of pork, beef and chicken and growth in consumer incomes.

Pork Exports

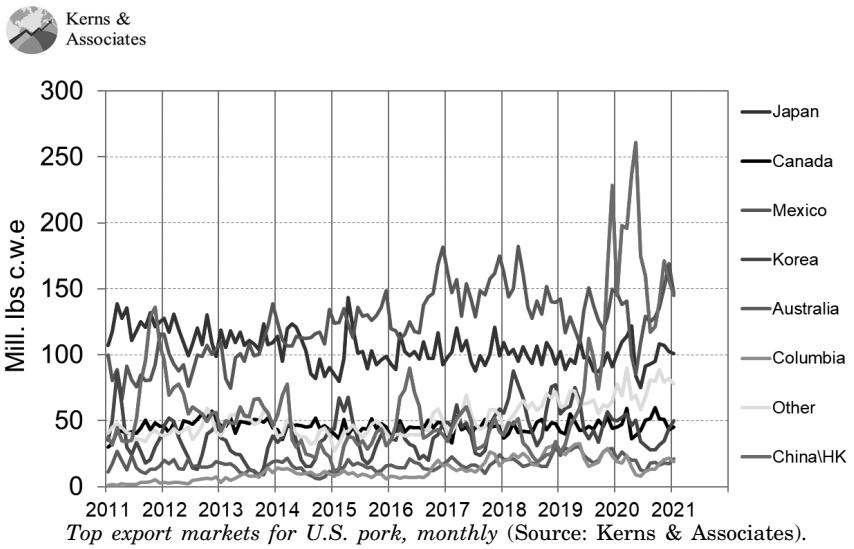
The U.S. pork industry exported a record 7.225 billion pounds (carcass weight equivalent) of pork products in 2020. That quantity represented 25.5 percent of total U.S. output. In value terms, the U.S. exported $7.7 billion of pork and pork products, representing 38.5 percent of the $20 billion of hogs sold last year.

Over the past 10 years, the United States, on average, has been the top exporter of pork in the world; it is the globe's lowest-cost producer of pork. In any given year, the U.S. pork industry ships product to more than 100 countries.

Since the U.S. pork industry first became a net exporter in 1995, pork has been a consistent contributor to the balance of trade of the United States. Top U.S. markets historically have been, in order, Japan, Mexico and Canada. South Korea joined that top echelon in 2011, and China, which had been an intermittent market for U.S. pork, was the top destination for U.S. pork in 2020. Forecasters expect Mexico to return to the top spot in 2021. (See *Figure 10.*)

Figure 10

U.S. Pork Exports by Destination, USDA–ERS Monthly



Top export markets for U.S. pork, monthly (Source: Kerns & Associates).

North American Pork Market

Policies that foster the free flow of goods and expand export markets—mostly through trade agreements—are critical to the continued success of America's pork producers, U.S. agriculture and the overall American economy.

Proof of that can be seen in the robust trade among the United States, Canada and Mexico under the 1994 North American Free Trade Agreement and now, the U.S.-Mexico-Canada Agreement (USMCA), which updated the 25 year old NAFTA. In fact, Canada and Mexico are the top two destinations for U.S. goods and services, accounting for more than ⅓ of total U.S. exports and supporting 14 million American jobs. Those jobs produce the nearly $1.4 billion of goods that are shipped to Canada and Mexico daily.

While trade between the United States and Canada has been strong since before the countries signed their free trade agreement in early 1988, trade between the United States and Mexico before NAFTA was somewhat anemic, totaling only $50 billion each way in 1993. Today, U.S. exports to Mexico are valued at $213 billion and support five million U.S. jobs. U.S. agricultural exports to Mexico have grown nearly 400 percent since NAFTA was implemented.

Mexico and Canada were the No. 2 and No. 4 export markets, respectively, for the U.S. pork industry in 2020. From 1993, the year before NAFTA was implemented, to 2020, U.S. pork exports to Mexico increased 16-fold, from just 98 million pounds to almost 2.1 billion pounds, and exports to Canada went from 36.4 million pounds to nearly 500 million pounds. Both NAFTA partners export some pork products to the United States.

Indeed, the pork industries in all three countries have become integrated to a large degree. Canadian hog farmers in 2020, for example, sold about 4.4 million feeder pigs—ones 3–8 weeks old, weighing from 12 to 60 pounds—to U.S. pork producers mostly in the upper Midwest who raised them to slaughter weight. Canada also ships about 800,000 hogs a year directly for slaughter in U.S. packing plants.

The United States is Canada's most important market for livestock and meat exports, and the two countries have developed a symbiotic relationship with regard to pork production: Canada has cooler summer temperatures that reduce seasonal infertility in its breeding animals, modern breeding, gestation and farrowing facilities and the sows to populate them and—because of the weak dollar—less expensive labor; and the United States provides large, efficient packing plants, cheap feed, finishing space and the millions of acres of row crop fields—where corn and soybeans are grown (the feed)—on which to apply the highly-valued manure produced by hogs.

The interdependence of the North American pork market is further illustrated by the growth of the Mexican pork industry since NAFTA went into effect and U.S. pork exports to Mexico began increasing. Estimates are that from 1995 to 2020 pork production in Mexico increased by 60 percent. That rise was the result of the eradication of some diseases, improvements in disease prevention, growth in slaughter and processing plants as well as by a significant increase in consumer demand. It also prompted Mexico to start exporting pork. The resulting increase in demand for Mexican pork have led to even more imports of U.S. pork (it's more economical for Mexico to export high-value cuts to Japan, for example, and import lower-value cuts from the United States.)

Further, Mexico's pork exports needed to come from packing facilities that met international standards, so starting in the early 2000s, the country's government encouraged development of more federally inspected plants. A significant portion of those facilities, however, were underutilized. Mexico first filled the excess shackle space by importing live hogs from the United States. More recently it has been relying on increased production (more hogs) from its own producers, which has required importation of breeding stock—about 30,000 gilts annually—from the United States.

Nearly all of the pork market integration among the United States, Canada and Mexico took place under NAFTA, which set a zero-tariff rate for pork traded in North America.

Pork *vs.* Beef *vs.* Chicken: A Comparison

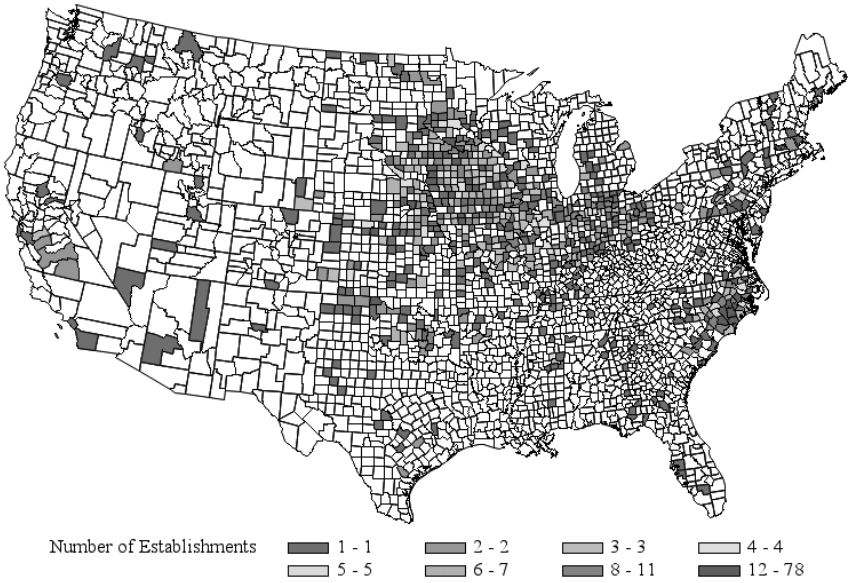
In most developed economies, individuals consume meat as their primary source of dietary protein. In the United States and in most countries, three fundamental meat commodities form the cornerstone of individual diets: pork, beef, and chicken. Lesser roles in the typical American diet are claimed by fish, lamb, turkey, and other specialty meats. Although these different meats are sometimes assumed to be near-perfect dietary substitutes, the individual meat commodities are highly differentiated. This is true across the different meat commodities but also within a single type of meat, where qualities and cuts are highly heterogeneous. In addition to the fact that individual meats have numerous quality attributes that affect consumption, the animal industries that are the sources of the meats are very different.

Production and marketing practices for pork, beef and chicken differ substantially, as do the geographic patterns of production. *Figures 11* through *13* illustrate the geographic distribution of pork, poultry and beef cattle producers as of the third quarter of 2020 and the distribution of hogs, broilers and beef cattle as determined by the *2017 Agricultural Census.*

Beef cattle are produced in nearly every state, with counties in the Great Plains and Western United States having large numbers of beef cattle operations. In contrast, while hogs are distributed in the wide regions mentioned earlier, major concentrations exist in Eastern North Carolina and the Corn Belt. Poultry production also is geographically concentrated, with operations mostly in the Southern United States and the Delta region.

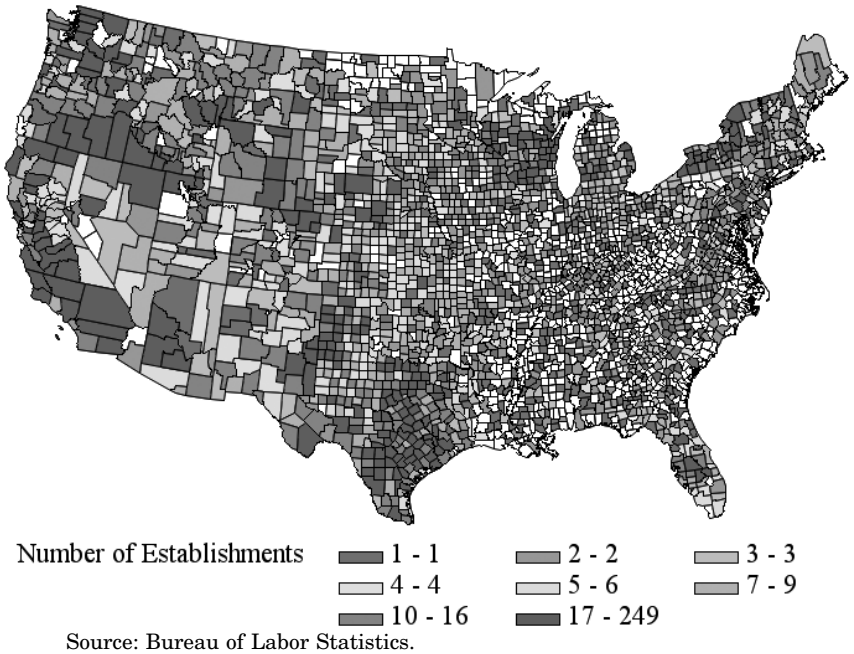
Figure 11

Number of Hog and Pig Production Establishments: 3rd Quarter of 2020 NAICS 1122



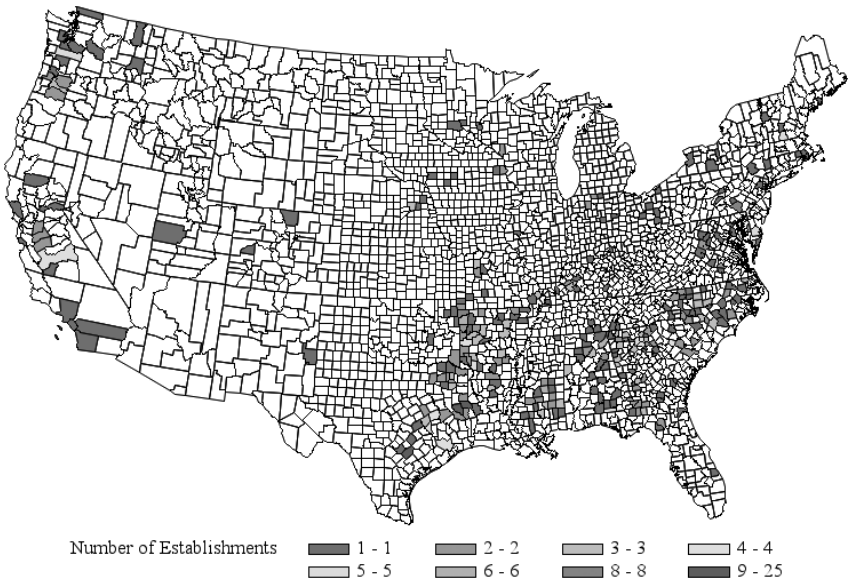
Source: Bureau of Labor Statistics.

Number of Beef Cattle Ranching, Farming, and Feedlot Establishments: 3rd Quarter of 2020 NAICS 1121



Source: Bureau of Labor Statistics.

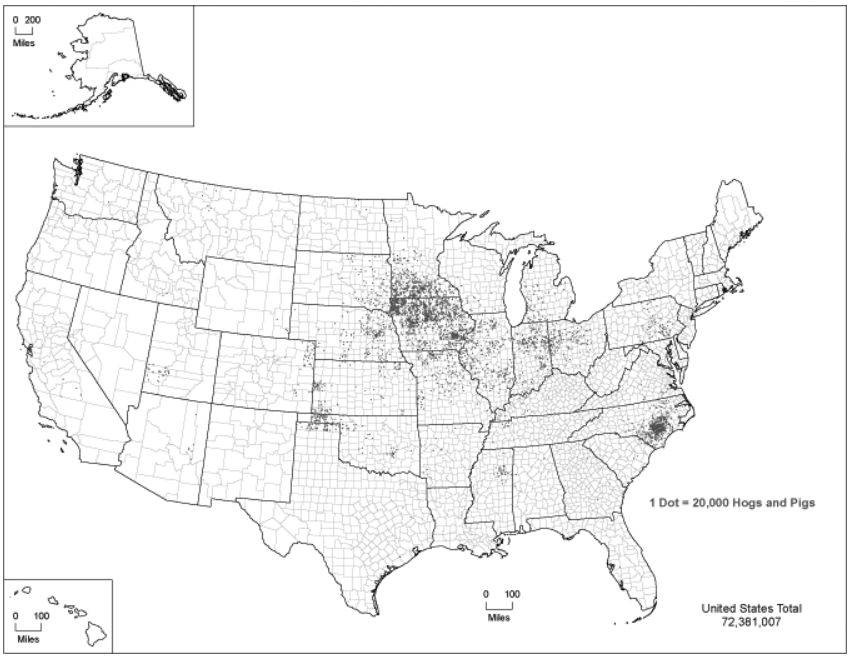
Number of Broilers and Chicken Meat Production Establishments: 3rd Quarter of 2020 NAICS 11232



Source: Bureau of Labor Statistics.

Figure 12

Hogs and Pigs—Inventory: 2017



2017 Census of Agriculture.

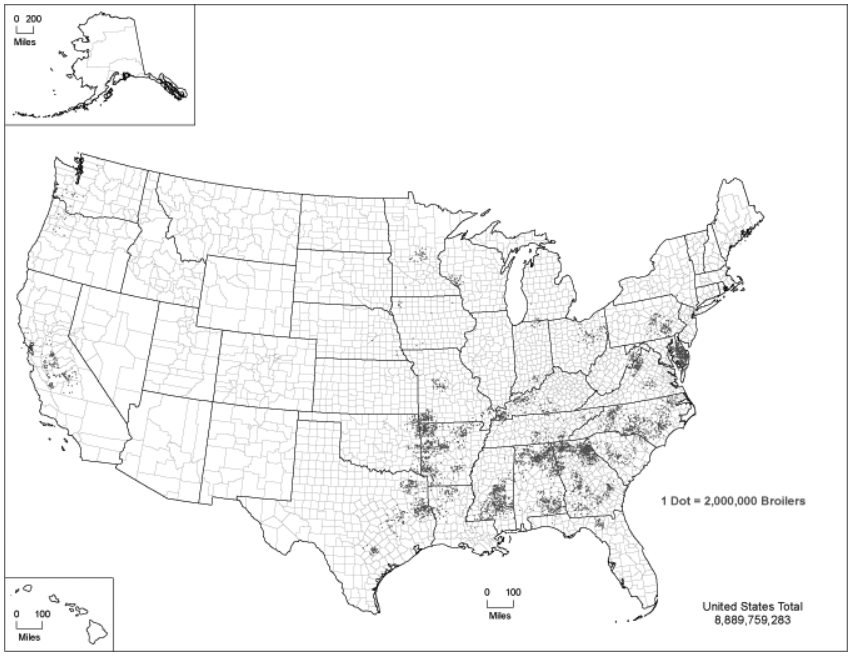
17–M211. U.S. Department of Agriculture, National Agricultural Statistics Service.

Cattle and Calves—Inventory: 2017

2017 Census of Agriculture.

17–M208. U.S. Department of Agriculture, National Agricultural Statistics Service.

Number of Broilers and Other Meat-Type Chickens Sold: 2017



2017 Census of Agriculture.

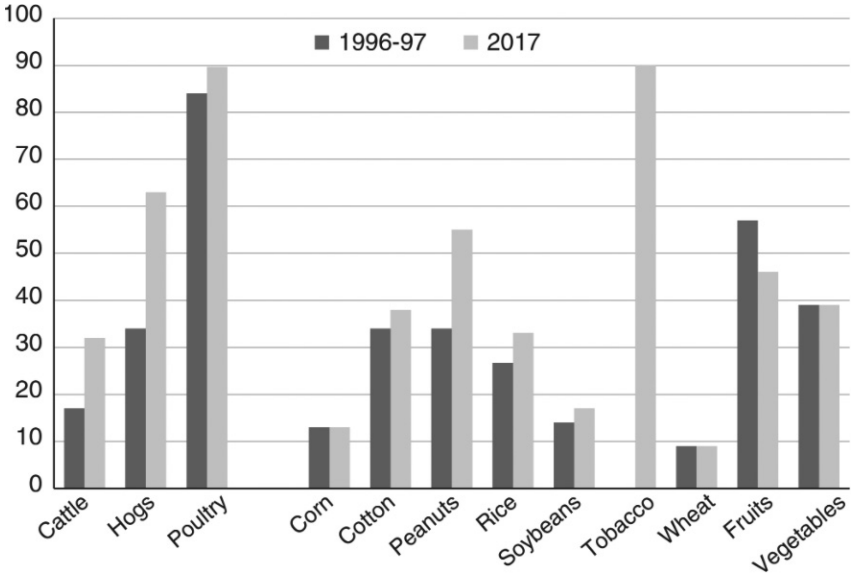
17–M213. U.S. Department of Agriculture, National Agricultural Statistics Service.

Substantial differences also exist in the production and marketing of each of these three meat commodities. Contracts are an increasingly important aspect of agricultural production and marketing. In general terms, they are agreements reached before harvest or before the end of a production cycle for livestock and specify quality attributes and a compensation mechanism. Contracts generally are separated into marketing and production contracts.

As described in the previous section on hog sales, marketing contracts specify the terms of exchange for a commodity between a buyer and seller. Marketing contracts differ significantly from production contracts in that they usually do not dictate the method or means of production. In contrast, production contracts often include specific grower responsibilities for inputs, the means and methods of production, and the desired product qualities. The use of production contracts has expanded considerably in recent years (see *Figure 13.*) Over 90 percent of poultry production now involves a production contract, and more than 60 percent of hogs are now grown and marketed under production contracts. The use of production contracts also is growing significantly for beef cattle, with over 30 percent of production now under contracts.

Figure 13

Value of Production under Contract (percent)



Source: USDA Economic Research Service.

Significant differences exist in the way growers are compensated by contractors (or, in some areas, integrators). The poultry industry uses a tournament system, whereby compensation is determined by a grower's relative performance compared to a group of similarly situated growers. A grower who uses less feed per pound of meat produced, for example, will receive a bonus, while growers on the other end of the efficiency ranking are penalized. The integration of input and output markets by processors is also frequently an attribute of production contracts. The agents involved in the supply of inputs and the coordination of production and marketing are often termed "integrators," reflecting the vertically integrated nature of their operations. Integrators usually pay contract fees to the growers and supply feed, veterinary services, technical assistance, and transportation services.

In contrast to the tournament system, pork producers usually contract with integrators to supply the production facilities, labor, utilities, insurance, and manure management, while the integrators supply the breeding stock, feed, veterinary services, transportation and a prescribed system of production and management. Ownership of the hogs typically stays with the integrator, and growers usually receive compensation on a per-pig or per-pig-space basis. Performance bonuses may also be paid for low mortality, morbidity, and feed efficiency.

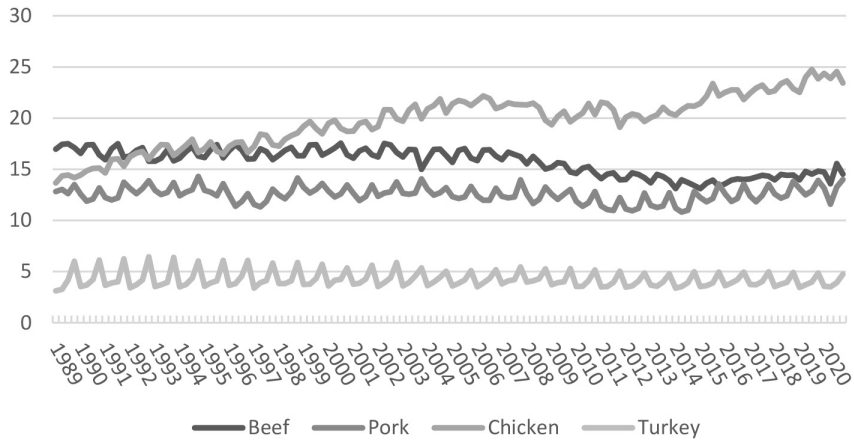
Production contracts provide an important mechanism for the sharing of risk between producers and processors/integrators. The processor may assume most or all the price risk, both for inputs and outputs. The costs of production facilities, which are substantial, generally are amortized over the lifetime of the assets. Long-term loans are often an important feature of hog production. Tournament contracts, such as those commonly used for broilers, may introduce an element of risk in that growers may be rewarded or penalized for stochastic production factors (foreseeable but random production issues such as diseases). A major source of risk for those who have invested in production facilities involves the potential of losing the processor or integrator.

Limited competition among processors is also often noted as a factor that may impact compensation for growers.

Significant differences also exist on the consumer side of the market. The last several years have seen some significant changes in meat consumption patterns in the United States, with chicken consumption steadily rising and beef consumption falling. Pork consumption has remained relatively steady. (See *Figure 14.*) The influence of seasonality is apparent in the data, though seasonal fluctuations have become muted, especially for turkey.

Figure 14

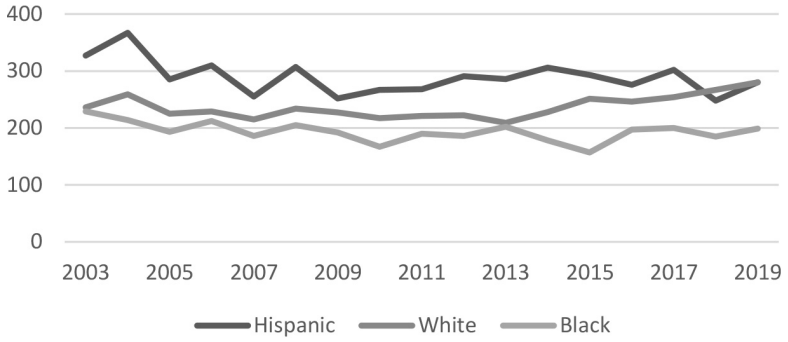
Quarterly Meat Consumption (lbs/capita)



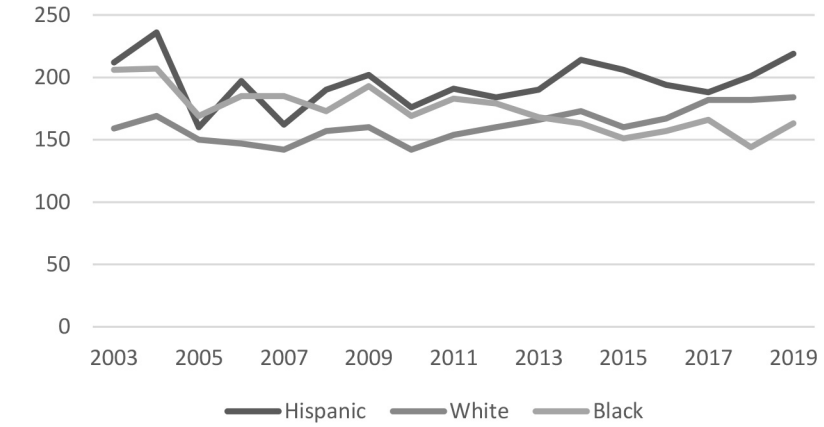
Consumption patterns for meat often reflect ethnic influences, and as the ethnic makeup of the United States has changed over time, so has consumption of different meat commodities (*figure 15* illustrates differences in consumption patterns for beef, pork, and chicken across Hispanic, non-Hispanic whites, and Blacks in the United States.) Strong ethnic patterns emerge, with beef and pork consumption being highest among Hispanic consumers, while black consumers have the highest chicken expenditures.

Figure 15

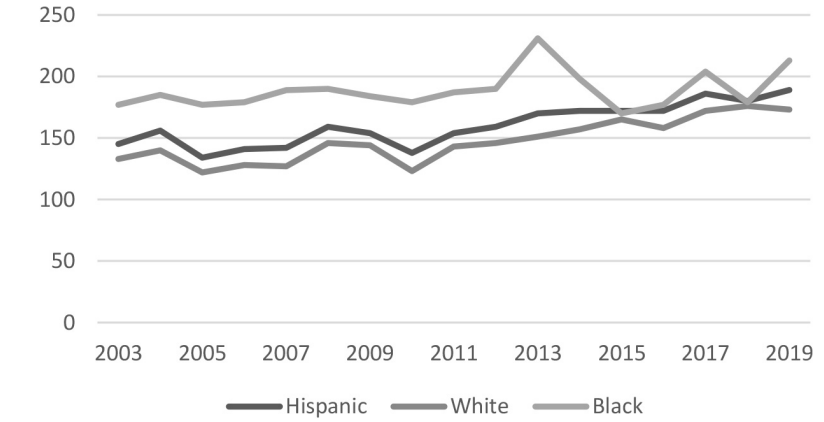
Beef Expenditures



Pork Expenditures



Chicken Expenditures



Source: U.S. Bureau of Labor Statistics Consumer Expenditure Survey.

We used the Almost Ideal Demand System (AIDS) model of consumer demand to consider meat demand elasticities.[1] The model was estimated using quarterly price and consumption data drawn from USDA sources.[2] The results show that demand conditions vary significantly across different meats. (See the uncompensated price and expenditure elasticities in *Table 1.*) Elasticities are the primary metric used by economists to quantify consumer demand relationships. The elasticity coefficient indicates the percentage change in consumption triggered by a given percentage change in price or expenditures. Beef is price inelastic, while pork and chicken are price elastic, with chicken having a very elastic response to price changes. Expenditure elasticities also differ across the different commodities. The implication is that consumers respond to changes in meat prices and expenditures quite differently for the different meat products. Pork demand is considerably more elastic than beef demand, suggesting that pork consumers are more sensitive to price changes. Chicken price changes have a significant effect on chicken consumption.

[1] Parameter estimates are presented in an appendix.
[2] Data, programming code, and estimation results are available from the authors on request.

Table 1. AIDS Meat Demand Elasticities

Quantity	Price				
	Beef	Pork	Chicken	Turkey	Expenditures
Beef	−0.8722	−0.3773	0.3011	0.0189	0.9294
Pork	−0.5830	−1.2479	0.9728	0.1071	0.7511
Chicken	0.3959	0.9046	−2.3613	−0.2778	1.3385
Turkey	−0.0147	0.4872	−1.6752	−0.2104	1.4132

ATTACHMENT 3

CARD Policy Briefs

Center for Agricultural and Rural Development
IOWA STATE UNIVERSITY

The Role of State-inspected Slaughter in the U.S. Pork Supply Chain: Survey and Analysis

June 2021

21–PB 34

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Executive Summary

The COVID–19 pandemic and other capacity-restricting events have motivated state and Federal Governments to invest over $100 million in grants for state-inspected meat processing plants. This paper evaluates the role of state-inspected plants in U.S. pork production and analyzes survey data from state-inspected plants and officials. The results of the survey indicate that most state-inspected plants are "small" or "very small," which is reflected in their production levels. All non-federally inspected slaughter, which includes both state-inspected and custom-exempt processing, accounted for just 0.6 percent of all U.S. hog slaughter in 2020 and less than 0.5 percent in top-hog-producing states. For the ten states that reported totals, state-inspected hog slaughter accounted for about 45 percent of all non-federally inspected slaughter and just 0.2 percent of total hog slaughter in 2020. Although these plants are small, they were able to increase production and provide additional local slaughter capacity during COVID–19 shutdowns. From 2019 to 2020, non-federally inspected slaughter totals increased by 11.2 percent after years of decline. Over this same period, 47 state-inspected survey respondents indicated that their annual slaughter totals increased by 25.4 percent on average. Funding from the CARES Act and other pandemic relief sources likely supported this effort.

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*Corresponding author.

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Appendix B

Background

In response to disruptions caused by the COVID–19 pandemic, state and Federal Governments have placed a renewed focus on improving the resiliency of the food supply chain. Pandemic-related events led to intense supply- and demand-side shocks that resulted in severe disruption to all levels of food production in 2020. Due to the unique structure of various food supply chains, these shocks impacted each industry in different ways. For the U.S. pork industry, the trouble began in March 2020 and continued throughout the spring and summer months. Stay-at-home orders dramatically impacted the demand for specific pork products,[1] COVID–19 outbreaks caused packing plant closures, and a reduction in packing capacity caused bottlenecks at the farm level. In worst-case scenarios, pork producers had no choice but to euthanize market-ready hogs when no slaughter or processing space was available. This sequence of events led many industry experts to begin questioning how the resiliency of the U.S. pork supply chain may be improved to prevent future disruption (Hayes, *et al.* 2020).

One proposed solution to this problem has been to invest in state-inspected slaughter and processing facilities to increase total packing plant capacity and improve accessibility to local processing options. State slaughter and processing facilities are typically smaller than federally inspected plants, and they are inspected by their respective state departments rather than by the USDA. The size, capacity, and location of these plants will be further discussed in subsequent sections.

In addition to the pandemic-motivated desire for increased supply-chain resiliency, support for smaller meat processors has been on the rise as concern about concentration in the meatpacking industry grows. The Economic Research Service (ERS) reported in 2010 that of the 611 USDA-certified hog slaughter facilities in the country, 12 plants accounted for more than 50 percent of federally inspected hog slaughter. The COVID–19 related shutdowns served as a reminder that the pork supply chain is dependent on a relatively small number of very large-scale slaughter facilities. A U.S. District Court ruling in May 2021 reinforced this issue by striking down a provision of the USDA's New Swine Inspection System (NSIS) that allowed for increased line speeds and a more modern pork inspection process. If upheld, this ruling will ultimately result in slowed production at six affected plants leading to a projected 2.5 percent reduction in overall hog slaughter capacity (Hayes 2021). Small hog producers surrounding the affected plants will likely face higher transportation costs and lower prices received from packers, resulting in a less competitive market and increased consolidation within the industry (Hayes 2021). The negative industry impacts associated with the NSIS ruling provide additional motivation for research into state-inspected slaughter facilities and their potential to help make up some of the lost capacity.

The culmination of interest in improving supply chain resiliency and increasing pork slaughter capacity has led to numerous legislative efforts at the state and Federal level and has helped motivate recent USDA funding initiatives. This paper will contribute to the discussion by assessing state-inspected slaughter plants and their ability to supplement the U.S. pork supply chain. This includes a demographic analysis of state-inspected slaughter plants, an evaluation of the USDA's Cooperative Interstate Shipment program, and a summary of survey data collected from state inspection officials and state-inspected plants.

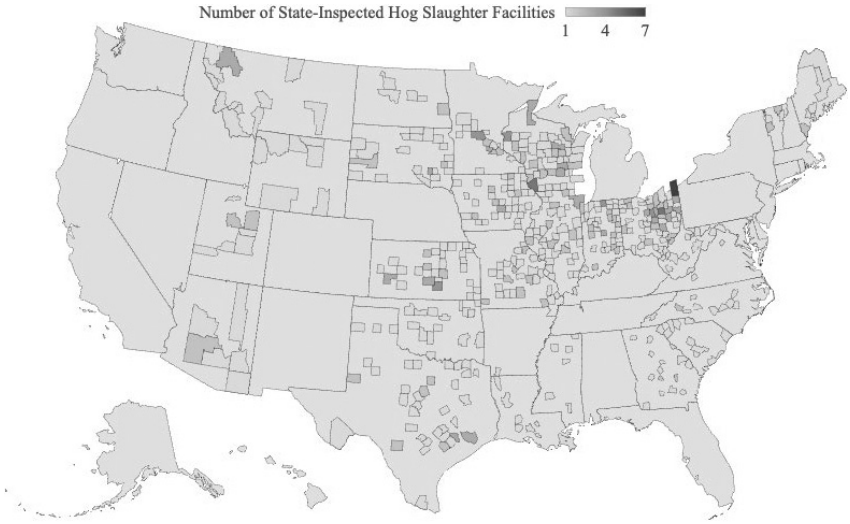
Demographic Analysis of State Inspected Slaughter Plants

State slaughter and processing facilities are governed and inspected by their respective state inspection departments. Each state department works in conjunction with the U.S. Department of Agriculture (USDA) to ensure that their food safety protocols are "at least equal to" those of federally inspected plants (NASDA 2021). The phrase "at least equal to" means that state-inspection protocols need not be identical to Federal procedures in terms of equipment, recordkeeping, information systems, *etc.,* but that the state system must be "at least equal" in terms of upholding food safety and inspection integrity. In 2006 the National Association of State

[1] Restaurant closings and a reduction in food service business caused the demand and price for pork bellies to fall, but at home consumption increased demand for other cuts, *i.e.,* pork loins and boneless hams (Hayes, *et al.* 2020).

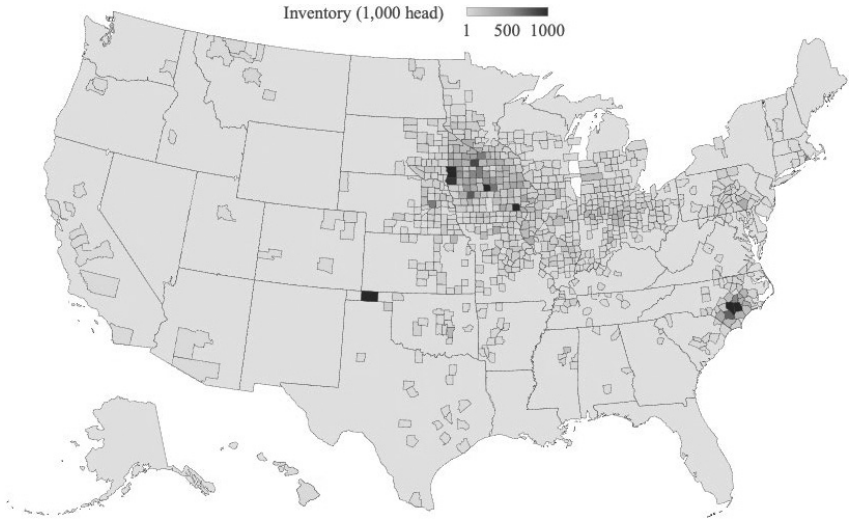
Departments of Agriculture (NASDA) estimated there to be 1,900 state-inspected meat and poultry slaughter and processing facilities in the U.S. Currently, 27 states operate a state-inspection program, and an estimated 604 establishments engage in hog slaughter specifically. Nearly all state-inspected plants process multiple species. *Figure 1* shows the number and location of state-inspected pork slaughter facilities by county. *Figure 2* illustrates the distribution of hog inventories for all counties with over 1,000 head in inventories during the 2017 Census of Agriculture.

Figure 1. State-inspected pork slaughter facilities by county.



Source: Establishment directories published by state departments.

Figure 2. Hog inventories by county.



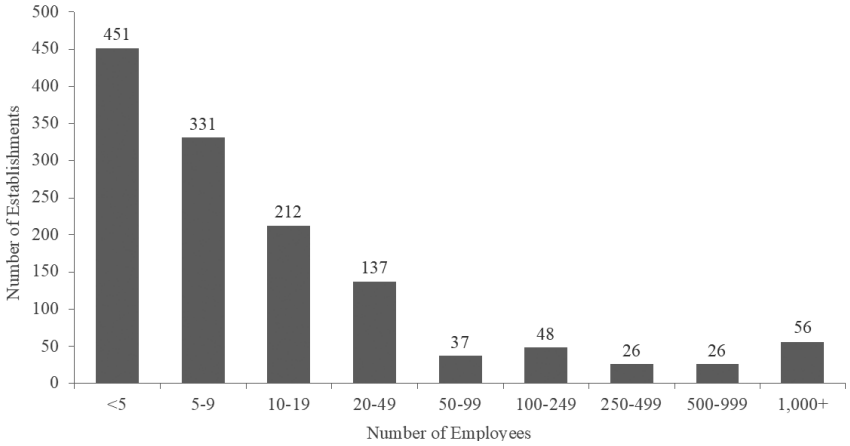
Source: 2017 Census of Agriculture, NASS.

Note: Map includes only counties with inventories greater than 1,000 head.

Looking at *Figures 1* and *2,* it is evident that many top-hog-producing states have a state inspection program. Nearly 90 percent[2] of total U.S. hog slaughter occurs in the 27 states that operate their own inspection programs. However, state-inspected slaughter is not necessarily giving these states a significant boost in terms of pork production. Non-federally inspected (NFI) slaughter is a measure that includes state-inspected, custom-exempt,[3] and on-farm slaughter. In the 27 states with a state inspection program, NFI slaughter accounts for an average of 22 percent of a state's total slaughter. However, among top pork-producing states like Iowa, Minnesota, Illinois, Oklahoma, Indiana, and Missouri, NFI slaughter accounts for less than 0.5 percent of total slaughter on average.

Most state-inspected slaughter facilities would be classified as "small" or "very small" by the USDA's Food Safety Inspection Service (FSIS). A "small" facility employs between 10 and 499 people, and "very small" facilities have less than ten employees. *Figure 3* shows the distribution of all meat slaughter facilities in the country in 2019. This information comes from the U.S. Census Bureau's County Business Patterns (CBP) and includes establishments whose primary business activity is animal slaughter, classified as NAICS 311611. This NAICS coded industry excludes poultry and may also exclude some businesses that provide slaughtering services but bring in more revenue from their value-added processing activities.

Figure 3. Size distribution of U.S. meat slaughter facilities.



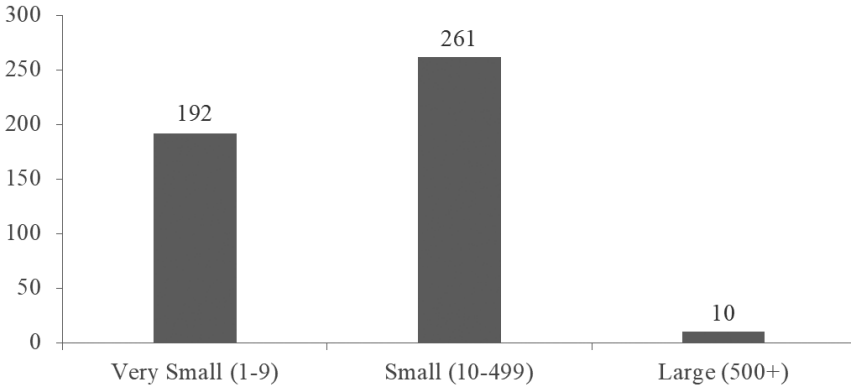
Source: 2019 County Business Pattern Tables, U.S. Census Bureau.

The CBP data does not allow state-inspected plants to be disaggregated, but FSIS publishes a directory of federally inspected establishments and their size classification. Subtracting the Federal distribution from the total produces an approximate distribution of non-federally inspected slaughter facilities in the U.S. whose primary business is animal slaughter rather than processing. Note that the CBP data is from 2019 and the FSIS information was generated in May 2021, so the total distribution will not equal Federal plus non-Federal establishment counts. This is because several new state-inspected plants have opened between 2019 and 2021, and information on FSIS plants from 2019 was not available. *Figure 4* shows that most non-federally inspected facilities are small or very small.

[2] Hog slaughter totals for North Carolina, South Dakota, Kansas, and Virginia were not reported in 2020. Total slaughter values for these states were approximated using available data and the last reported values.

[3] Custom exempt slaughter plants are not required to prove compliance with state or Federal inspection standards. Meat processed at custom-exempt facilities is for private use and cannot be sold commercially (Johnson, *et al.* 2012).

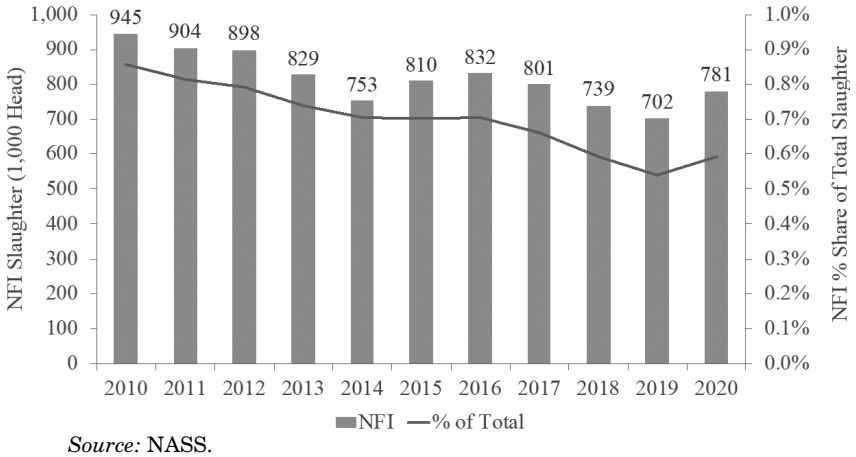
Figure 4. Size distribution of non-federally inspected U.S. meat slaughter facilities.



Source: 2019 County Business Pattern Tables, U.S. Census Bureau.

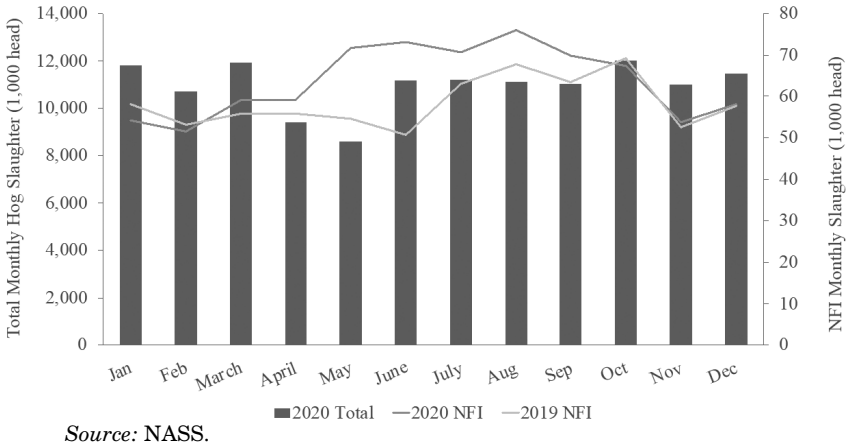
In terms of production, all of these plants also comprise a small percentage of total hog slaughter. *Figure 5* shows that since 2010, non-federally inspected slaughter has accounted for less than one percent of total U.S. hog slaughter. Although hog production and commercial slaughter totals have been growing, NFI slaughter has seen an overall decline in the last decade. From 2010 to 2020, NFI slaughter decreased 17.4 percent while total U.S. commercial slaughter increased 19.3 percent. Thus, the percent share of total slaughter comprised by NFI plants decreased from 0.86 percent in 2010 to 0.59 percent in 2020.

Figure 5. Non-federally inspected slaughter totals and percent share of total slaughter.



Source: NASS.

Figure 6. Total *vs.* Non-Federally Inspected Monthly Slaughter Totals



Source: NASS.

Though the 10 year trend in NFI slaughter is negative, there was an increase in NFI slaughter in 2020 that can likely be attributed to large packing plant shutdowns brought on by COVID–19. The shutdown and slowdown of packing plant operations led to as much as a 45% decline in daily U.S. slaughter capacity in the spring of 2020 (Cowley 2020). This issue is illustrated in *Figure 6,* where 2020 NFI slaughter rises well above 2019 levels in April and May and remains above 2019 levels until the fourth quarter. At its highest point in August 2020, NFI monthly slaughter totaled 74,900 hogs which was just 0.67 percent of total slaughter.

As previously mentioned, the measure of non-federally inspected slaughter includes state-inspected, custom exempt, and on-farm slaughter. State-inspected slaughter numbers are not published by the USDA, but many states were willing to share their state-level totals for this paper. The available data show that an even smaller proportion of total slaughter comes from state-inspected plants than from all NFI sources. *Table 1* below shows total, NFI, and state-inspected slaughter totals in 2020. State-inspected slaughter accounts for 45.0 percent of all NFI slaughter and just 0.2 percent of total slaughter in states with available data. This indicates that a significant portion of NFI slaughter, especially in states like Iowa, must come from custom-exempt slaughter for private consumption.

Table 1. Total, NFI, and State-Inspected Slaughter Totals in 2020 (measured in head)

State	Total Slaughter	NFI Slaughter	State-Inspected Slaughter	State-Inspected as % of NFI	State-Inspected as % of Total
IA	40,346,700	36,107	5,199	14.4	0.01
MN	12,013,700	34,924	8,538	24.4	0.1
IN	8,641,200	47,648	31,406	65.9	0.4
MO**	8,632,800	37,566	8,654	23.0	0.1
WI	865,300	47,118	43,965	93.3	5.1
SC	93,800	50,018	16,471	32.9	17.6
WY	4,700	*	827	*	17.6
AZ	1,700	*	1,265	*	74.4
NC	*	*	42,249	*	*
VA	*	*	196	*	*
Total	**70,599,900**	**253,381**	**158,470**	**45.0**	**0.2**

* Indicates state total not reported by NASS in 2020.
** Missouri's state-inspected slaughter total includes all red meat species and likely overstates the state-inspected share of total hog slaughter.

In a survey[4] conducted with state-inspected slaughter facilities in nine top hog-producing states, participants were asked about their estimated weekly slaughter capacity and annual hog slaughter totals. Note that survey respondents account for

[4] Survey design and response distributions are detailed in Section 3 and *Appendix A.*

about 14 percent of a state's total slaughter plants on average. The results of 49 responses are displayed in *Table 2* below as an average for each survey state.

Table 2. Average Weekly Hog Slaughter Capacity and Average Annual Hog Slaughter Totals

State	Average Weekly Capacity	Average Annual Slaughter (2016–2020)
Illinois	16	568
Indiana	42	583
Iowa	17	585
Minnesota	29	862
Missouri	17	675
North Carolina **	200+	4,000+
Ohio	17	397
Oklahoma	*	*
Wisconsin	19	523

* No responses received from state-inspected plants in Oklahoma.
** The sole respondent from North Carolina disclosed weekly but not annual slaughter totals. Total was approximated based on total state slaughter, number of establishments, and weekly capacity reported by the plant.

While many state-inspected plants run at a very small capacity and comprise a minor share of the total pork supply, their potential importance to the U.S. pork supply chain was put on display during the COVID–19 pandemic. During large plant shutdowns and panic-buying behaviors at grocery stores, state-inspected and custom-exempt meat processors played an important role in local food supply chains. Pork producers relied on local processors to provide a small amount of excess slaughter capacity, and pork consumers began sourcing more meat products from their local lockers, resulting in an inundation of business at these plants. In the previously mentioned survey of slaughter establishments in top-hog-producing states, respondents reportedly increased their hog slaughter totals by 25.4 percent on average from 2019 to 2020. For the ten states that are represented in *Table 1,* the total number of hogs slaughtered at state inspected plants increased 31.0 percent from 2019 to 2020.

The surge of non-federally inspected slaughter in 2020 was made possible in part by the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The CARES Act allocated millions of dollars to states which were distributed as grants to small meat processors. In most cases, these grants were intended to help small meat processors expand their operations and support the increased demand for meat products and slaughter capacity (IDALS 2021). As the meatpacking industry continues to face capacity issues such as the NSIS ruling and cyber-attacks, industry experts and policymakers seem to be increasingly interested in supporting state-inspected and custom-exempt meat processors.

The Cooperative Interstate Shipment (CIS) Program

There are currently many barriers preventing state-inspected plants from increasing production to supplement the U.S. pork supply. In addition to labor shortages and cost-related inefficiencies, state-inspected plants are limited to doing business via intrastate commerce, meaning they are only permitted to sell and distribute their products within the state where the meat originates (NASDA 2021). Because of this, state-inspected plants were limited in their ability to supply meat products and add inspected slaughter capacity during times of crisis in the spring of 2020.

One way for state-inspected facilities to increase their market access is to participate in a USDA Food Safety and Inspection Service (FSIS) initiative called the Cooperative Interstate Shipment (CIS) program. This program was created by a provision in the 2008 Farm Bill and was launched in 2012. The CIS program allows state-inspected plants to participate in interstate and international commerce, enjoying virtually all the same marketing freedoms as federally inspected plants. States can become eligible for this program by working with the USDA to ensure that they are able to conduct inspections in accordance with FSIS standards. This includes using the same information system and lab equipment as FSIS. State-inspected facilities that are located in a CIS state and have fewer than 25 employees are eligible for the program (FSIS 2021). To become certified, a business submits an application to the state, receives a visit from state inspectors to flag any potential issues, and hosts a visit from Federal inspectors to check that all requirements

are met. Once approved, CIS participants continue working with their state inspection department, but state inspectors receive Federal training to ensure that CIS facilities continue meeting all FSIS requirements.

While this program has the potential to help state-inspected plants reach new markets, it may not be a universal solution. Depending on how closely a state's inspection protocols align with FSIS, the program's requirements may make CIS eligibility quite expensive for some state departments and unattainable for many state-inspected plants. Small and very-small plants with less than 25 employees may not be able to justify the capital expenditure required to convert their systems and equipment, and slightly larger plants with more business activity likely would not qualify for the program. Furthermore, many small plants also offer custom-exempt slaughter and may be best suited to serve their local communities rather than distribute inspected product. The CIS program has been active for nearly 10 years but has just 93 participants within nine states, including the addition of South Dakota in June 2021. Of these 93 participants, an estimated 23 CIS-certified establishments are slaughter facilities (FSIS 2021).

Survey Results and Analysis

To better understand the scale of state-inspected slaughter facilities and their interest in interstate shipment, a survey was sent via email to 242 hog slaughter establishments. The selected establishments are located in the top pork-producing states of Iowa, Illinois, Indiana, Minnesota, Missouri, North Carolina, Ohio, and Oklahoma. Because the Cooperative Interstate Shipment program is a point of interest for the study, the survey was also sent to pork slaughter plants in Wisconsin, the state with the second greatest number of CIS-certified facilities. There are approximately 380 facilities believed to slaughter hogs within the nine selected survey states. Of this number, 242 businesses could be reached by email and thus received the survey. There were 60 responses to the survey resulting in a 25% response rate. *Table 3* shows the distribution of responses, and more information can be found in *Appendix A.*

Table 3. Distribution of Survey Responses by State

	IA	IN	MO	OH	WI	MN	IL	OK	NC
Total Hog Slaughter Plants	41	47	35	96	69	23	45	14	11
Surveys Sent	27	25	23	55	64	15	25	6	3
CIS Responses	1	1	0	1	3	Not CIS Eligible			
Non-CIS Responses	5	8	6	12	10	5	7	0	1
Total Responses	**6**	**9**	**6**	**13**	**13**	**5**	**7**	**0**	**1**
Response Rate	22%	36%	26%	24%	20%	33%	28%	0%	33%
% Of Total Represented	**15%**	**19%**	**17%**	**14%**	**19%**	**22%**	**16%**	**0%**	**9%**

Survey participants were first asked to classify their business to ensure that the response came from a slaughter facility. Some respondents indicated that their business performed processing activities only, but these responses were still included in the analysis related to interstate shipment and expansion. The survey asked plants to identify the percentage of their total hog slaughter that was state-inspected rather than custom-exempt, the number of employees, their CIS eligibility or interest, and the impact that interstate shipment eligibility might have on their intentions to expand the business. The responses to these questions are summarized in *Table 4* as a percentage of all respondents for each question.

Table 4. Results of Selected Survey Questions, Reported as a Percentage of Responses

Classification			
State-Inspected Slaughter and Further Processing	State-Inspected ***and*** Custom Slaughter and Further Processing	State-Inspected Slaughter Only	State-Inspected Processing Only
23.3%	70.0%	1.7%	5.0%

Table 4. Results of Selected Survey Questions, Reported as a Percentage of Responses—Continued

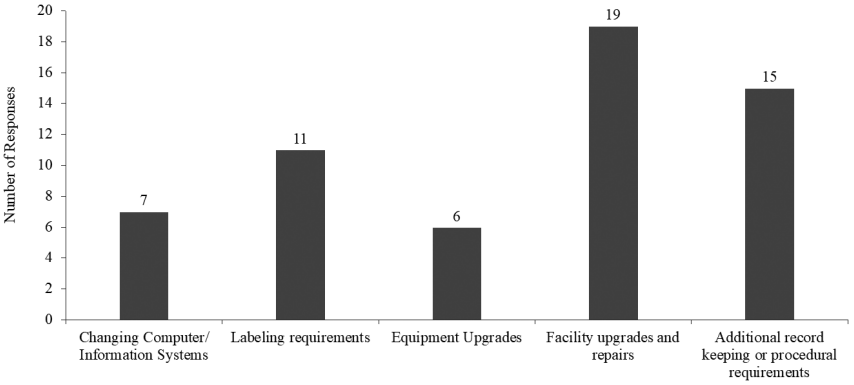
State-Inspected Slaughter and Further Processing	State-Inspected ***and*** Custom Slaughter and Further Processing		State-Inspected Slaughter Only	State-Inspected Processing Only
Percentage of total hog slaughter that is state inspected				
0–20%	*20–40%*	*40–60%*	*60–80%*	*80–100%*
24.5%	7.5%	5.7%	3.8%	58.5%
Number of Employees				
1–10	*10–20*	*20–30*	*30–40*	*40+*
49.2%	42.4%	3.4%	0.0%	5.1%
For CIS States: Are you CIS eligible?				
Yes, and CIS certified	*Yes, but not participating*		*No, not eligible*	*Unsure/Unfamiliar*
13.3%	60.0%		6.7%	20.0%
For Non-CIS States: What is your level of interest in the CIS program?				
Very interested, we would apply for CIS	*Somewhat interested, we would want to learn more*		*Not interested*	*Unsure*
41.7%	33.3%		8.3%	16.7%
Likelihood of expanding business if granted interstate shipment eligibility				
Very likely	*Somewhat likely*	*Somewhat unlikely*	*Very unlikely*	*Unsure*
24.5%	41.5%	9.4%	17.0%	7.5%

Note: Not all questions were answered by all respondents.
See *Appendix A* for the full list of survey questions.

The results in *Table 4* indicate that 70 percent of respondents were state-inspected slaughter and processing facilities that also offer custom processing. For over 58 percent of respondents, state-inspected work makes up 80–100 percent of their business, but for 25 percent of plants, inspected work accounts for less than 20 percent. Furthermore, over 90 percent of plants represented in the survey have between 1 and 20 employees. When asked about CIS eligibility, 60 percent of respondents from CIS states were aware of the program but not participating, 13 percent of plants were CIS certified, and 20 percent were unfamiliar with the program. In non-CIS states, more than 75 percent of respondents were at least somewhat interested in the CIS program, with 42 percent saying that they would apply for the program if it was available. Although many noted concerns about labor, nearly 70 percent of respondents said they would be at least somewhat likely to increase slaughter capacity if granted interstate shipment eligibility.

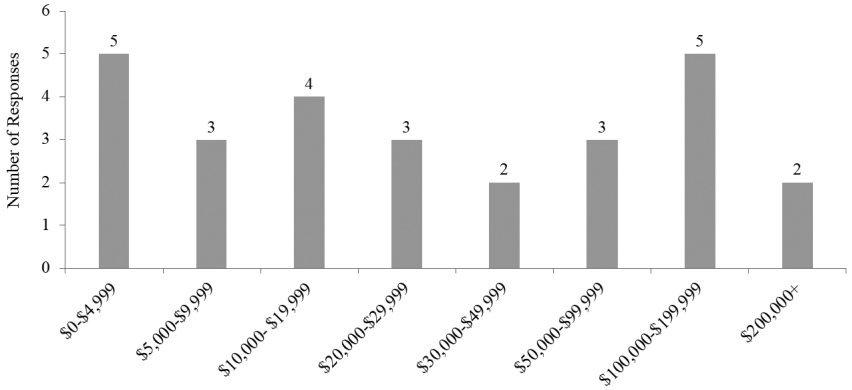
Survey participants were asked which aspects of their current facility would be the most expensive or difficult to transition from state to Federal inspection standards. The most common response category was facility upgrades and repairs (33%), followed by additional recordkeeping (26%) and labeling requirements (19%). *Figure 7* shows the distribution of responses.

Figure 7. Responses to the question: "What would be the most difficult or expensive part of transitioning from state to Federal standards?"



When asked about the cost of making these changes, 19 percent of respondents estimated that the required investment would be under $5,000, while an equal percentage estimated costs to be between $100,000 and $199,999. Fifteen percent of respondents estimated that they would spend between $10,000 and $19,999 to transition from state to Federal standards. The average cost estimate across all states was nearly $52,000, and the distribution of responses is summarized in *Figure 8.*

Figure 8. Estimated cost of meeting USDA inspection criteria.



The open-ended question of estimated cost yielded the lowest response rate with just 27 estimates from 60 completed surveys. However, it may be one of the most valuable pieces of information collected from participants. Although a small percentage of businesses are represented in each state, the relative "ease" at which a plant feels they could meet USDA standards appears to match up with current CIS participation within states. *Table 5* shows the average cost estimate for each state as well as the current status of CIS participation in that state.

Table 5. Estimated Cost of CIS Certification and CIS Participation by State

State	Number of Estimates Reported	Average Cost Estimate	CIS Participation Status
OH	4	$4,625	32 Total, 7 Slaughter.
WI	9	$40,625	23 Total, 5 Slaughter.
IN	5	$42,020	18 Total, 4 Slaughter.
IA	2	$50,125	10 Total, 2 Slaughter.
MO	1	$100,000	2 Total, 0 Slaughter.
IL	1	$11,000	Not Participating.
MN	5	$117,000	Not Participating.

Table 5. Estimated Cost of CIS Certification and CIS Participation by State—Continued

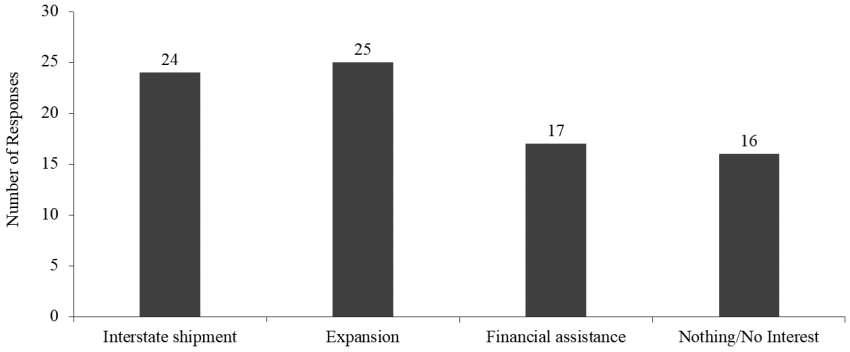
State	Number of Estimates Reported	Average Cost Estimate	CIS Participation Status
Total/Average	**27**	**$52,199**	**85 Total, 18 Slaughter**.

If we ignore the single response from Illinois, it seems that the lowest cost estimates are associated with the highest CIS participation rates. This is not a claim of causality, but it may serve as evidence that some states and state-inspected plants have an easier time obtaining CIS certification depending on how closely their state program aligns with USDA protocols. For example, the state of Iowa was already using the Public Health Information System (PHIS) that is used by FSIS, but a state that uses a different system may incur additional costs when applying for CIS eligibility. The Iowa Meat Inspection Bureau initially estimated the state's cost of meeting CIS requirements to be $200,000. This includes trainings for state inspectors, which were less expensive when conducted virtually, and some lab equipment purchases. The department shared that no CIS applicants in Iowa have had to make substantial changes beyond standard repairs, cleaning, and revising the language of their procedures. They also reported that all plants that have undergone a Federal visit have passed and received CIS certification. State inspection programs can get up to 50 percent of their inspection costs reimbursed by FSIS, and once certified, CIS states are eligible for up to 60 percent cost reimbursement (FSIS 2021). However, this may not be enough to incentivize some states to adopt the program. Officials with the Minnesota Dairy and Meat Inspection Division stated that even with the 60 percent reimbursement rate, the added costs of starting and operating the program were not financially feasible.

At the individual plant level, each business decides which inspection option they are best suited for based on their size, business model, expansion intentions, and the incentives to change. For some plants, interstate shipment is not a priority, but for others, reaching new markets may allow the business to expand. There are several factors that may influence a plant's decision to seek CIS eligibility or switch from state to Federal inspection. One of the most important factors, based on conversations with the Iowa Meat Inspection Bureau, is a plant's proximity to a border. Plants that are located near state lines may have more opportunities and lower costs associated with distributing their products outside of the state. *Appendix B* contains maps of each state in the survey and the number of state-inspected pork slaughter establishments in each county, providing a visual representation of how close each state's inspected plants are to the border. Another important factor is a plant's relationships with potential buyers. A state-inspected slaughter facility in Minnesota shared that they have several out-of-state retailers interested in their products, so they have begun investigating the costs associated with switching to Federal inspection. More generally, each plant must weigh the costs of making upgrades and switching programs with the potential benefits and funding incentives offered to do so.

Aside from CIS participation, the only other way for state-inspected establishments to gain interstate shipment eligibility is to become federally inspected. For facilities outside of CIS eligible states or for those that do not meet the CIS criteria, Federal inspection may be a better option. Survey participants were asked what factors might motivate them to switch from state to Federal inspection and were given a multiple-choice list to choose from. The list included interstate shipment eligibility, expanding their business, potential opportunities for financial assistance, or nothing/no interest. The most selected factors were expanding the business (30%) and interstate shipment (29%). Note that respondents could select more than one factor. However, out of 52 individual respondents, 16 said that nothing would motivate them to become federally inspected. *Figure 9* summarizes the responses.

Figure 9. Potentially motivating factors of becoming federally inspected.



Starting in March 2020, allocations from the Coronavirus Aid, Relief, and Economic Security (CARES) Act have funded grants for small to medium sized meat processors in Iowa ($4 million), Indiana ($4 million), South Dakota ($5 million), Washington ($4.6 million), Kentucky ($2 million), Arkansas ($5 million), Missouri ($17 million), Oklahoma ($10 million), and other states in the U.S. The Consolidated Appropriations Act, passed in December 2020, added an additional $60 million in grants for small meat processors to upgrade their facilities, and $200,000 in grants could be used to help small facilities meet USDA inspection standards and achieve interstate shipment eligibility (American Farm Bureau 2021, Bodine 2021, Eddington 2020, IDALS 2021, Investopedia 2021, WSDA 2021).

In Iowa specifically, funding was allocated through three different types of grants. The grant type most related to this study was the Business Improvement Grant, which awarded funding to 109 meat and poultry facilities to purchase or upgrade equipment. This grant stipulated that facility improvements must allow the business to "increase its processing capacity to accommodate the increased demands brought on by the COVID–19 pandemic." Custom-exempt plants could also put this funding towards becoming inspected, and state-inspected plants could use funding to offset the costs of CIS certification (IDALS 2021). In Missouri, over $17 million in grants were awarded and the number of state-inspected meat and poultry processing plants have doubled (Harker 2021). Grants in South Dakota, awarded to promote the expansion of slaughter and processing operations, are expected to fund at least 16 new facilities and 83 existing facilities (Shaffer 2021). Since the start of the COVID–19 pandemic, many other states have awarded grants to state-inspected and custom-exempt meat processors incentivizing them to expand their operations, seek interstate shipment eligibility, and support the U.S. meat supply chain. In June 2021, the USDA announced an additional $4 billion in pandemic aid that would be directed to a few targeted groups including meat processors (Abbott 2021).

Survey participants were asked how potential state or USDA funding initiatives could help them increase capacity and expand. This was an open-ended question, but similar responses were categorized and are displayed in *Table 6.* Thirty-two percent of responses were related to labor and training programs. Many respondents left comments about their struggles with finding quality applicants and the cost and time expenditures associated with training. Several respondents commented that labor shortages are the most limiting factor in terms of business growth. Nineteen percent of respondents listed both facility and equipment upgrades as potential uses of funding. Although, a few plants indicated that equipment and facility upgrades would be targeted towards increasing efficiency so that less labor would be required to accomplish the same level of production. Other responses were related to making CIS status more financially attainable and streamlining the entire inspection process, including having more state inspectors available.

Table 6. How could USDA or state funding be directed to motivate an increase in slaughter capacity?

Response	Number of Responses
Labor and training	12
Equipment upgrades	7

Table 6. How could USDA or state funding be directed to motivate an increase in slaughter capacity?—Continued

Response	Number of Responses
Facility/infrastructure upgrades	7
Assisting with the costs of applying for CIS	4
Expanding the business	2
Adding cooler/freezer space	2
Hiring more inspectors	1
Assisting with debt load from startup	1
Streamlining the inspection process	1

Conclusion

The demographic analysis and survey results indicate that state-inspected plants are small, and they operate on a very small scale. Non-federally inspected slaughter accounts for less than 0.6 percent of total U.S. slaughter, and state-inspected slaughter makes up an even smaller proportion. The survey results, though limited in scope, indicate that state-inspected plants in most top-hog-producing states have an average weekly slaughter capacity of between 16 and 42 hogs, and they average between 400 and 900 hogs annually. To understand how small-scale each of these plants truly is, recall that Iowa has an estimated 41 state-inspected hog slaughter facilities, and the 2020 state-wide state-inspected slaughter total was 5,199 hogs. To put this in perspective, there is a large, USDA inspected packing plant within the state of Iowa that processes 19,500 hogs each day and accounts for nearly four percent of U.S. pork processing capacity (Eller 2020). This means that one large plant can do in 1 day roughly four times what all state-inspected plants in Iowa could do in 1 year. No amount of funding or surges in production would allow state-inspected plants to make up for even a slight disruption at this large plant.

However, state-inspected plants have shown throughout the COVID–19 pandemic and large plant shutdowns that, with funding support, they are able to increase capacity. Recall that from 2019 to 2020, state-inspected survey respondents increased their annual slaughter totals by over 25 percent on average. Total non-federally inspected slaughter also increased by over 11 percent during this time, and of the ten states with available data, state-inspected slaughter numbers increased nearly 31 percent from 2019 to 2020. This points to the possibility that non-federally inspected slaughter establishments may be capable of capturing and sustaining a larger share of total slaughter. Because most state-inspected slaughter plants are located in the states and counties with the greatest hog inventories, investing in local processing options may help increase local slaughter capacity, decrease transportation costs, and improve market competition for small or specialized hog producers.

To meet the goals of future funding initiatives most effectively, many state-inspected plants will likely need to seek interstate shipment eligibility. In its first 10 years, the Cooperative Interstate Shipment (CIS) program has seen relatively low levels of participation, especially among slaughter facilities. However, two of the program's nine participating states only just became CIS eligible since the beginning of 2020, and they will likely see higher rates of CIS certification in the next few years. The Iowa Meat Inspection Bureau indicated that they have several slaughter facilities currently in the application process. The survey responses identify areas that plant operators view as the most difficult or expensive to transition to Federal standards, and they estimate the cost of making these changes. This information could be used to allocate grants or low-interest loans specifically for CIS certification or the transition to Federal inspection.

Due to limited resources and data availability, this study was somewhat limited in scope. For future work on this issue, I recommend conducting a formal evaluation of the CIS program once its recent state participants have been active for several years. For more comprehensive survey data, I would recommend incorporating phone calls and follow-up emails to reach a greater percentage of state-inspected establishments. The events that occurred in 2020 related to the COVID–19 pandemic were unprecedented, and 2021 may be too soon to be analyzing the outcome that it had on the meatpacking industry. As more data becomes available, I would recommend conducting an updated analysis and perhaps investigating the impact that Federal and state grants have had on small meat processors, including custom-exempt facilities.

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Appendix A

Table 7. Survey Questions for CIS States (IN, IA, OH, MO, WI)

Question	Answer Choices
1. Please select the choice that best describes your business.	a. State-Inspected Slaughter and Further Processing b. State-Inspected **and** Custom Slaughter and Further Processing c. State-Inspected Slaughter Only d. State-Inspected Processing Only
. Does your facility process hogs?	a. Yes b. No
3. How many people does your business employ?	a. 1–10 b. 10–20 c. 20–30 d. 30–40 e. 40+
Only displayed for respondents who selected choice (b) for Question #1 4. What proportion of hog slaughter is state-inspected (rather than custom-exempt)?	a. 0–20% b. 20–40% c. 40–60% d. 60–80% e. 80–100%
5. What is your weekly hog slaughter capacity?	Answers reported using a sliding scale
6. Is your business eligible to participate in the Cooperative Interstate Shipment (CIS) program?	a. Yes, and we are CIS certified b. Yes, but we are not participating c. No, we are not eligible d. Unsure/Unfamiliar with CIS program
Only displayed for respondents who chose any option other than (d) for Question #6 7. CIS program certification requires state-inspected plants to meet Federal inspection criteria. Which of the following aspects of your business would be (or were) the most difficult or expensive to transition from state to Federal standards? (select all that apply)	a. Changing computer/information systems b. Labeling requirements c. Equipment upgrades d. Facility upgrades/ repairs e. Additional recordkeeping/ procedural requirements f. Other (please list):
Only displayed for respondents who chose any option other than (d) for Question #6 8. What would you estimate to be the total expenses associated with gaining CIS certification or becoming federally inspected?	Answer entered in text box

Table 7. Survey Questions for CIS States (IN, IA, OH, MO, WI)—Continued

Question	Answer Choices
Only displayed for respondents who chose option (d) for Question #6	
9. CIS program certification requires state inspected plants to meet Federal inspection criteria. What would you estimate to be the total expenses associated with gaining CIS certification or becoming federally inspected?	Answer entered in text box
10. Which of the following would motivate you to become federally inspected? (select all that apply)	a. Interstate shipment b. Expanding the business c. Financial Assistance d. Nothing/ No Interest e. Other (please list):
11. How likely would you be to expand your business (*i.e.,* increase slaughter capacity) if state-inspected plants could engage in interstate commerce?	a. Very likely b. Somewhat likely c. Somewhat unlikely d. Very unlikely e. Unsure
12. How could funding from state or USDA initiatives best be directed to motivate state-inspected plants to seek interstate shipment and increase capacity?	Answer entered in text box
13. If willing to share, what were your annual hog slaughter totals for the past 5 years? (slide bar for each year)	2016: reported using sliding scale 2017: reported using sliding scale 2018: reported using sliding scale 2019: reported using sliding scale 2020: reported using sliding scale
14. Additional Comments	Answer entered in text box

Table 8. Survey Questions for Non-CIS States (IL, MN, NC, OK)

Question	Answer Choices
1. Please select the choice that best describes your business.	a. State-Inspected Slaughter and Further Processing b. State-Inspected AND Custom Slaughter and Further Processing c. State-Inspected Slaughter Only d. State-Inspected Processing Only
2. Does your facility process hogs?	a. Yes b. No
3. How many people does your business employ?	a. 1–10 b. 10–20 c. 20–30 d. 30–40 c. 40+
Only displayed for respondents who selected choice (b) for Question #1	
4. What proportion of hog slaughter is state-inspected (rather than custom-exempt)?	a. 0–20% b. 20–40% c. 40–60% d. 60–80% e. 80–100%

Table 8. Survey Questions for Non-CIS States (IL, MN, NC, OK)—Continued

Question	Answer Choices
5. What is your weekly hog slaughter capacity?	Answers reported using a sliding scale
6. Which of the following would motivate you to become federally inspected? (select all that apply)	a. Interstate shipment b. Expanding the business c. Financial Assistance d. Nothing/ No Interest e. Other (please list):
7. Which of the following aspects of your business would be (or were) the most difficult or expensive to transition from state to Federal standards? (select all that apply)	a. Changing computer/information systems b. Labeling requirements c. Equipment upgrades d. Facility upgrades/ repairs e. Additional recordkeeping/ procedural requirements f. Other (please list):
8. What would you estimate to be the total expenses associated with becoming federally inspected?	Answer entered in text box
9. The Cooperative Interstate Shipment (CIS) program allows state-inspected facilities with less than 25 employees and meeting Federal criteria to engage in interstate commerce. Eight states currently offer this program. If your state became CIS eligible, how interested would you be in participating?	a. Very interested—we would apply for CIS certification b. Somewhat interested—we would want to learn more about it c. Not interested d. Unsure
10. How likely would you be to expand your business (*i.e.,* increase slaughter capacity) if state-inspected plants could engage in interstate commerce?	a. Very likely b. Somewhat likely c. Somewhat unlikely d. Very unlikely e. Unsure
11. How could funding from state or USDA initiatives best be directed to motivate state-inspected plants to seek interstate shipment and increase capacity?	Answer entered in text box
12. If willing to share, what were your annual hog slaughter totals for the past 5 years? (slide bar for each year)	2016: reported using sliding scale 2017: reported using sliding scale 2018: reported using sliding scale 2019: reported using sliding scale 2020: reported using sliding scale
13. Additional Comments	Answer entered in text box

Appendix B

Figures 10–18. Maps of state-inspected pork slaughter facilities by county in surveyed states.

Figure 10. Iowa.

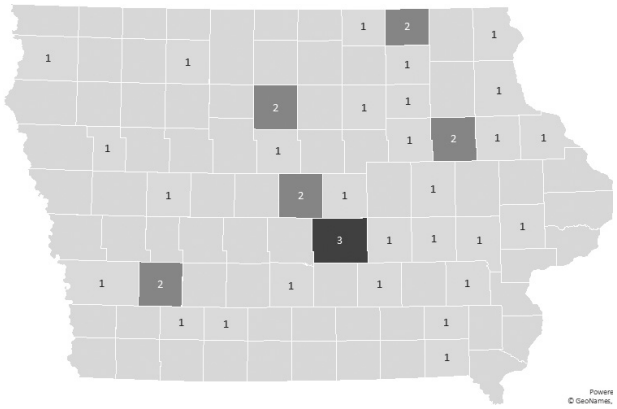


Figure 11. Illinois.

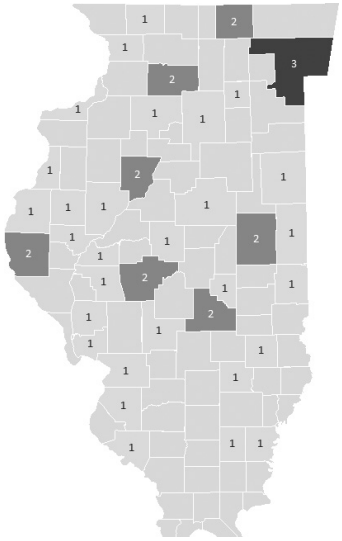


Figure 12. Missouri.

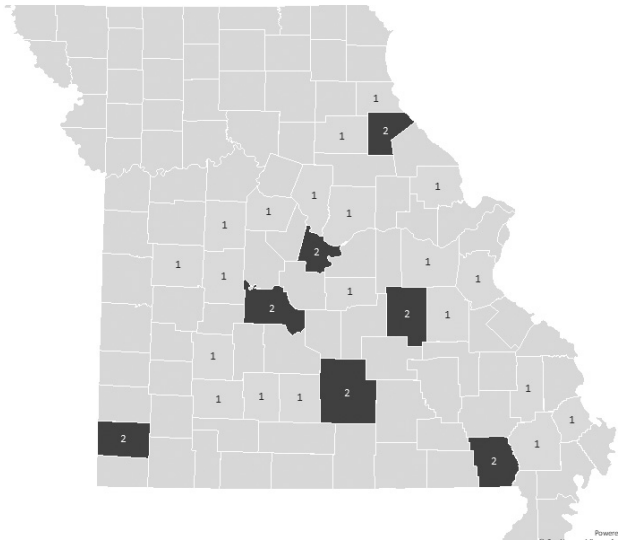


Figure 13. Minnesota.

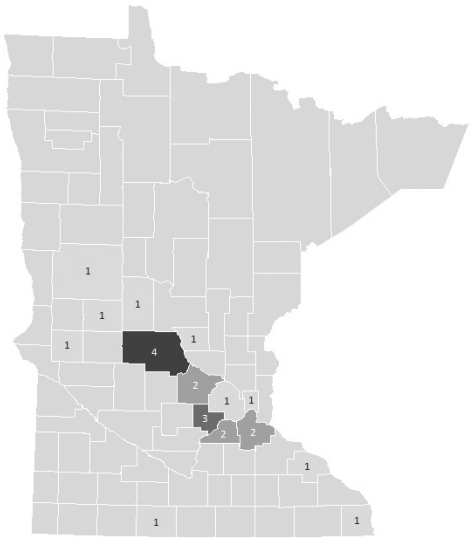


Figure 14. Ohio.

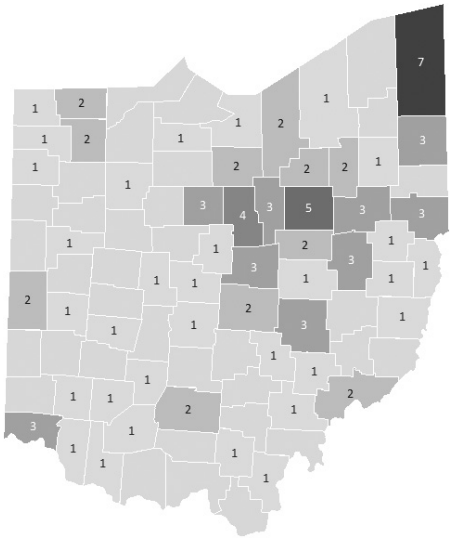


Figure 15. Indiana.

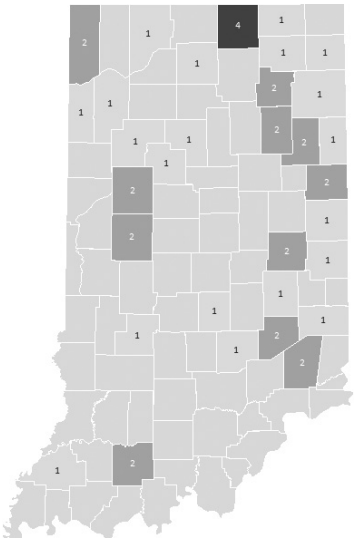


Figure 16. Wisconsin.

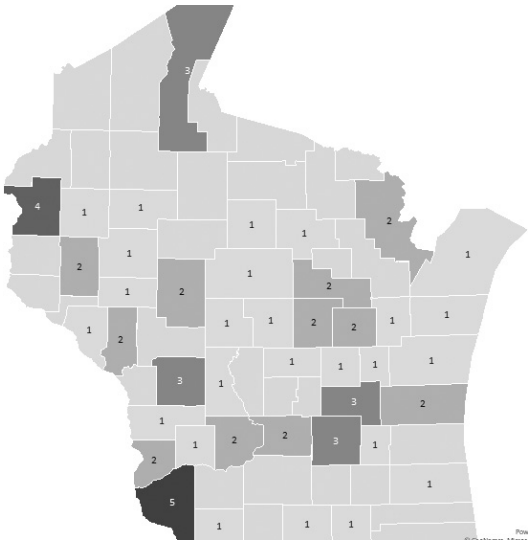


Figure 17. Oklahoma.

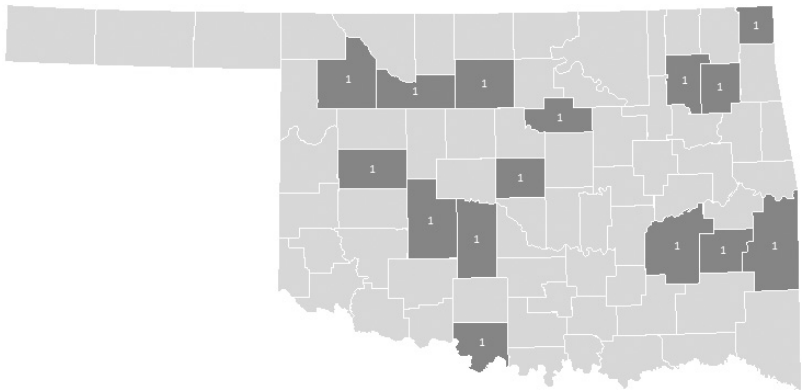
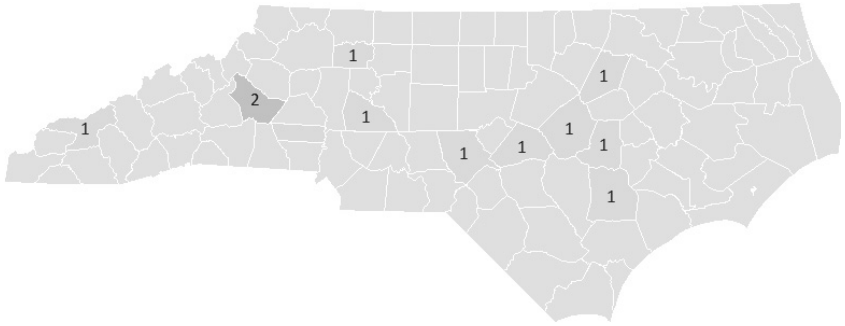


Figure 18. North Carolina.



The CHAIRMAN. Thank you very much. And now, Mr. Boner, please begin when you are ready.

STATEMENT OF BRAD BONER, VICE PRESIDENT, AMERICAN SHEEP INDUSTRY ASSOCIATION, GLENROCK, WY

Mr. BONER. Thank you, Chairman Scott, Ranking Member, Thompson, and Members of the Committee. I appreciate the opportunity to speak with you today. I am Brad Boner, a sheep producer from the east central Wyoming, and current Vice President of the American Sheep Industry Association. My family raises sheep, commercial cattle, and black Angus seed stock. We are also involved in raising crops which support our livestock enterprises. I am the fifth generation to reside in our county, and my son Ryan is hard at work proudly carrying on our legacy of ranching in Wyoming.

I was a founding member of Mountain States Land Cooperative. Over 19 years we successfully marketed our members' lands. In 2016 we purchased the JBS Lamb Processing Plant in Greeley, Colorado. At that time we were concerned with JBS wanting to change it to a beef facility. Loss of that facility would reduce U.S. slaughter capacity by 20 percent, leaving our cooperative members and other producers with no place to harvest their lambs. A subsidiary of the cooperative, Mountain States Rosen, operated the Greeley plant until April of 2020, when supply chain issues due to COVID resulted in a loss of a significant number of our retail and food service customers. Ultimately, bankruptcy proved to be our only viable option. Our worst fears were realized, and currently the Greeley plant serves as a beef facility for JBS.

The loss of 20 percent of harvest capacity was a tough blow to our industry when we had lambs on feed across the country in preparation for our Easter/Passover season, our busiest marketing season of the year. Lamb producers were in a bind, with very limited places to market their lamb. Prices for lambs plummeted, and it looked for a moment like our industry, or many in it, would not be able to withstand the year. On top of this, our industry was also reeling from the decimation of rural markets due to an ongoing trade dispute with China. Sheep producers have two sources of income, wool and meat, and both were gone.

These events highlighted the concentration and resulting supply chain vulnerability of our markets, conditions we had tried to avoid. Fortunately, and thankfully, with the intervention of Congress and the Administration, wool and lamb were ultimately included in the Coronavirus Food Assistance Program, and, working closely with USDA, we were able to give direct payments to producers and feeders, and resolve issues with the wool LDP to bridge this terrible gap.

Tools like mandatory price reporting, the wool LDP, and lamb Livestock Risk Protection are vital to lamb producers like myself. Unfortunately, price reporting has not adjusted to changes in the lamb industry. While we would like the program to adjust to benefit producers, our number one goal is to ensure program does not experience a lapse. Of significant concern is the current confidentiality guideline at USDA, which restricts the information available to sheep producers. In 2011 there were 13 reports available under the mandatory price reporting for lamb. Today there are only five

reports available. Of these five reports, the amount of information provided has been diminished over the years, with data on formerly traded lambs not being reported in over a year. This sporadic price reporting led to the USDA's withdrawal of the lamb Livestock Risk Protection.

Within the last year we have seen the opening of a new packing plant in Brush, Colorado, and the reopening of an additional packing plant in San Angelo, Texas. I am very pleased to say both facilities are either entirely or majority owned by producers, which shows the optimism and resilience built into our industry over generations. The American Sheep Industry Association appreciates the current efforts by Congress and the Administration to build resilient supply chains.

The sheep industry continues to experience gaps in significant processing capacity, particularly in the upper Midwest and eastern regions, where we have experienced growth in both lamb supply and consumer demand. Sheep producers in these regions frequently comment that they are only offered one date, usually a year in advance, to get their lambs processed with few, if any, alternatives available. Relatively modest investments, especially through grants or federally backed loans to increase processing in the areas of the nation where we have both supply and demand could have a huge impact on the future of this industry.

Trade too remains a major concern for sheep producers, with over 60 percent of the lamb available in the U.S. coming in mainly from Australia and New Zealand. We are concerned with the recent talks between the White House and the United Kingdom, which have indicated our market will soon be open to additional imports. Science-based standards are important, but equal importance should be placed on reciprocal access to foreign markets. We continue to ask that export opportunities for American lamb be prioritized before further import markets are opened.

Thank you for this opportunity to visit with you, and I look forward to answering any questions you may have.

[The prepared statement of Mr. Boner follows:]

PREPARED STATEMENT OF BRAD BONER, VICE PRESIDENT, AMERICAN SHEEP INDUSTRY ASSOCIATION, GLENROCK, WY

Introduction

Chairman Scott, Ranking Member Thompson, and Members of the Committee, thank you for the opportunity to speak with you today. I am Brad Boner, a sheep producer from Wyoming and the current Vice President of the American Sheep Industry Association (ASI). ASI is the national trade association for the United States sheep industry, representing the nation's 100,000 lamb and wool producers. America's sheep producers continue a strong tradition of supporting wildlife habitat, natural resources, and open space across the country—all enabled by careful resource management while grazing our flocks on private and Federal lands.

The sheep industry is very broad and diverse, nationally accounting for an economic impact in excess of $2.7 billion to the United States economy. I appreciate the opportunity to present our industry's perspective across a number of priorities:

Mandatory Price Reporting

Ensuring there is not a lapse in Livestock Mandatory Price Reporting (LMR) is critical to the United States sheep industry. Unfortunately for sheep producers, LMR has not adjusted to changes in the lamb industry. Of particular concern is the implementation of the current confidentiality guideline of the United States Department of Agriculture (USDA) which restricts the information available to sheep producers. In 2011, there were 13 reports under mandatory price reporting for lamb.

Today, there are only five reports available, all of which are national reports released on a weekly basis. Of these five reports, the amount of information provided in the slaughter lamb report has been diminished over the years with the data on formula traded lambs not being reported in over a year. These lapses in price reporting led the industry last month to support USDA's withdrawal of Livestock Risk Protection—Lamb (LRP-Lamb) since the sporadic availability of the product unpinned by the lack of reported prices rendered the program of limited use. LRP-Lamb was a Federal lamb price insurance product and the only risk protection product available to lamb producers and feeders to hedge their risk. Robust and transparent, third party, price reporting is paramount to producers' ability to secure necessary loans in order to finance operations, expansions and startups. Without robust and transparent price reporting, lenders will find it difficult, if not impossible, to assess the viability of loan requests presented to them. This may lead to loans being denied that otherwise would have been accepted if trustworthy price reporting were available. Increased consolidation in the packing industry across livestock will only continue to hinder producers' access to accurate price reports and issues of confidentiality will need to be resolved sooner rather than later to preserve the value of LMR for sheep producers and the other commodities that rely on these reports.

The American Sheep Industry Association has proposed a number of potential changes to LMR that we believe would enhance the program's effectiveness for lamb producers while protecting the interests of everyone in the supply chain. The first recommendation is to change or replace the 3/70/20 Confidentiality Guideline. This guideline is not required by statute and current market prices have a relatively short-term relevance. By the time prices are reported, they only reflect past transactions. Prices and market activity can be reported without sacrificing confidentiality and the current confidentiality guideline by USDA is stifling the information lamb producers need to make accurate marketing decisions. Additionally, ASI has recommended that USDA amend LMR, so it reflects the unique nature of the lamb industry, such as including a definition for Vertical Business Relationships that includes Custom-Processors and lowering the packer processing threshold again for reporting to 20,000 head to reflect current slaughter lamb numbers. ASI believes these changes would greatly enhance the program for all users.

Packer Capacity and Concentration

The lamb processing sector is highly concentrated with two to three firms influencing the majority of market sales and imported lamb influencing the other 50% of lamb meat sales in the United States. This concentration was highlighted during the outset of the COVID–19 pandemic, when the sudden loss of restaurant and food services sales forced the bankruptcy proceedings of our second largest lamb packing facility, Mountain States Rosen, owned by the Mountain States Lamb Cooperative. The loss of this lamb packer at the height of what is traditionally the lamb industry's busiest marketing season, the Easter/Passover holiday, exposed serious deficiencies in the industry's supply chain, namely the lack of adequate packing and fabrication capacity in the event of a market disruption.

The American Sheep Industry appreciates the current efforts by Congress and the Administration to look at Investments and Opportunities for Meat and Poultry Processing Infrastructure and building resilient supply chains. The sheep industry continues to experience gaps in sufficient processing capacity across the country, particularly in the upper Midwest and eastern regions of the nation where lamb producers have shown growth in flock size and demand for lamb has expanded for local and non-traditional consumer markets. Sheep producers in these regions frequently comment that they are only offered one date, usually a year in advance, to get their lambs processed. If they miss that date or find themselves short or long of their anticipated head count, they have few if any viable alternatives available. Relatively modest investments, especially through grants or federally backed loans, to increase processing in areas of the nation where we have both supply and consumer demand could have a huge impact on the future of this industry. This is not only an issue of packing capacity in these regions, but also the hurdle of interstate shipment due to the lack of federally inspected facilities. Additionally, as in all of agriculture, access to skilled labor remains a tremendous challenge for our packing infrastructure. ASI supports efforts to look at additional flexibilities that allow small and regional processing facilities to engage in interstate commerce, without negatively impacting our vital food safety system.

Trade

The lamb market in the United States is heavily influenced by imported lamb, particularly from Australia and New Zealand, which make up over 50% of total lamb sales. The American Sheep Industry Association in response has asked succes-

sive Administrations to prioritize lamb export opportunities for United States producers before allowing additional imports. Our industry still cannot access potentially lucrative markets like China, the European Union and the United Kingdom; this despite an announcement last month that the United States would begin allowing imported lamb from the United Kingdom. The domestic industry's ability to withstand additional import pressure at this challenging time, and the United Kingdom's tremendous potential for significant lamb exports in the wake of their departure from the European Union are a looming concern for United States lamb producers. A cautious and deliberative approach is necessary to ensure that while trade may be free, it is fair.

Wool trade too remains a challenge. While we have seen an increase in wool shipments to China, numbers are still significantly lower than they were prior to the tariff retaliation. Additionally, shipping challenges continue to mount. The same holds true for the export of pelts. Prior to the implementation of tariffs, 72 percent of U.S. raw wool exports and 80 percent of U.S. sheep skins were sent to China. Continuing to build strength in the international marketing of lamb and wool requires a commitment to the promotion and export of United States wool to export markets through strong USDA Foreign Agricultural Service (FAS) Program funding. ASI is the cooperator with the FAS for American wool and sheepskins and finds success every year in securing customers through the Market Access Program, the Foreign Market Development Program, and the Quality Samples Program. In 2001, ASI relaunched an export program for wool and significantly improved the competitiveness for American wool.

Barriers to Expansion

There is tremendous reason for optimism in the American Sheep Industry. Lamb demand domestically is on the rise, wool is being recognized as a natural regenerative fiber for performance wear, and the vast environmental benefits of targeted grazing are being recognized by our private and public land managers across the country. With that optimism, there are barriers to our industry reaching its full potential, including:

State Wage Regulations

The sheep industry has relied on sheep herders to care for, protect, and tend to their flocks since time immemorial. For large- and mid-sized western range operators, these sheep herders are an integral and necessary part of their operation, especially those that graze public lands. This work necessarily requires living in a camp with the sheep seasonally and moving the flock nearly daily to achieve range management goals in the most rugged and isolated lands in the United States. However, state wage and overtime regulations, particularly in California and Colorado, threaten to devastate our industry, mandating wages for this work that are untenable. If a solution is not found to bring these wages into line, there will not be a commercial sheep industry in these states, which represent our second and third largest sheep inventories and the sites of our largest lamb processing facilities.

H2–A Temporary Agricultural Workers

The American Sheep Industry has a decades long history of a reliable, consistent, and legal workforce. Sheep ranchers depend on the H–2A sheepherder program to help care for more than ⅓ of the ewes and lambs in the United States. To meet those needs, the industry has participated in temporary visa programs (in various forms) since the 1950s. As a result, sheep producers employ a legal labor force with an estimated eight American jobs created/supported by each foreign worker employed. A workable temporary foreign labor program is essential for the sheep industry including the special procedures for herding in future legislation involving immigration workers.

Access to Animal Drugs

With approximately 5.2 million head of the sheep, animal drug industries often find that securing Federal Drug Administration (FDA) approval for new, innovative, and even older products is not cost effective for this market. The lack of access to these key technologies used by our competitors in other countries, places the United States sheep producers at a disadvantage, not to mention limiting their ability to protect and prevent disease to ensure the welfare of their animals. While imported lamb may be treated with a product that has a USDA/Food Safety Inspection Service accepted residue level, that same product often is not approved for use in the United States by the FDA.

Predation

Coyotes, mountain lions, wolves, and bears kill tens of thousands of lambs each year. Livestock losses attributed to these predators cost producers more than $232 million annually. American sheep producers rely on USDA/Wildlife Services, state and county programs to effectively control and manage predation by state managed and federally protected predatory species. The Livestock protection program is majority funded by industry and local cooperators. Sheep producers have adopted many techniques to reduce predation, including the wide-spread use of livestock protection dogs, but access to lethal and non-lethal predator control methods must be maintained.

Conclusion

The American Sheep Industry has faced challenges these past years, related and unrelated to the COVID pandemic. Like all industries, the pandemic highlighted flaws and created failures in our supply chains, but we have emerged as a stronger industry. We did lose our second largest packing facility, but also saw two new packing facilities come on-line, both either entirely or majority producer-owned, showing the optimism in our industry. I'll reiterate the growth in demand for lamb and fine wool, and the environmental benefits of sheep production for range health, control of invasive weeds and reduction of hazardous fuel loads. With minor policy adjustments, the American Sheep Industry is poised for exponential growth.

Thank you for your support of the livestock industry and for allowing me to visit with you about our priorities.

Sincerely,

BRAD BONER, *Vice President.*
American Sheep Industry Association.

The CHAIRMAN. Well, thank each of you. You have given our Committee and our Members just some very, very, much needed information, and I am sure our Members are just very anxious to get to question you, and get additional information. At this time our Members will be recognized for questions in order of seniority, alternating between Majority and Minority Members. Each will be recognized for 5 minutes in order to allow us to get as many questions in as possible. And, as always, I remind each Member to please keep your microphones muted until you are recognized in order—so that we can minimize any background noise. Now, if I may start, I want to recognize myself for 5 minutes. I hope I can get all my questions in, because you raised so many.

Let me start with you, Mr. Wilkinson. You mentioned in your testimony, and I wrote it down here. You mentioned one size does not fit all. Can you explain what you mean by that, in reference to our Livestock Mandatory Reporting?

Mr. WILKINSON. Certainly, and thank you, Mr. Chairman. The issue before you and your Committee is will mandatory price reporting for purchasing be enough to fix this market? And our concern is that if we shoot one bullet to try and cure a problem that has gone on for far too long, that we are going to decimate part of the producers, and let me explain why. Because, we think we are going to hit the packers, and I am all for hitting the packers, I will tell you that, but I think the bullet's not going to go at the packer. The bullet's going to go at the feeder, and then trickle down to the cow-calf operator. Because if that packer says, I am not going to purchase your cattle today because I have a certain quota that I have to meet of a different criteria, suddenly we are going to make commodity cattle.

And our producers are proud of their cattle, and they want to be able to market their cattle at a higher level, and it is up to us to be able to have alternate marketing plans for them to be able to

do that. And I am just concerned that Congress is going to overshoot, and try and exercise a one-size-fits-all answer.

The CHAIRMAN. And let me ask you, what actions or changes do you feel would've helped to mitigate the disruptions in the meat supply in 2020?

Mr. WILKINSON. Well, first and foremost, we need more capacity. I mean, you can get to the bottom of everything on here, we have let this market get down to so few players that they are largely controlling what is happening. Now, certainly, nobody could predict a pandemic, but if we had more packing capacity, they wouldn't have this funnel that we have to pour everything through. And the efforts that are happening through USDA right now, and through Congress, on increasing more packing capacity is really what we need. But I will tell you this, from NCBA's standpoint, we don't want that money that you are giving out to go to the four large packers. They don't need any more money. We need that to go to the small producers, and the medium-sized regional plants, because they can make a difference for us.

The CHAIRMAN. Thank you. Now, Mr. Blubaugh, I wrote down—and you made a statement relative to manipulation of the marketplace. Now, give us some examples, who's doing that? What companies?

Mr. BLUBAUGH. Sure. I would say that the Livestock Reporting Act of 1999 (Pub. L. 106–78, Title IX) is very, very important for transparency in the marketplace, but here's the problem. With the current law, and it needs to be updated for modern times, you have so much of the live cattle market is now sold on a contract basis, with the AMAs, or the marketing agreements that they have, and very little of it is sold on a cash basis anymore. When this law was first written, most of the cattle were sold on a cash basis. And because of the private information that is in these marketing agreements, these alternative marketing agreements, we don't have true price transparency USDA is not allowed to collect that data, because of the privacy laws, and they are proprietary information. We would urge that that rule be changed, that law be changed, that all of the livestock marketing arrangements must be reported the same as the cash basis.

The CHAIRMAN. I see. And let me just ask you, I have a few seconds here, in your testimony, you made references to other ways to increase capacity, such as training, labor, education. Can you elaborate on those efforts, as well as how they tackle the workforce issues?

Mr. BLUBAUGH. Sure. In Oklahoma, Governor Stitt allocated $10 million of the first round of CARES money to fund small processors to get opened up, and to re-work old existing plants to get them up to USDA standards. And so we did that. One of the problems that we are running into in getting these plants open is both labor, of course, skilled labor I am talking about, and then the second thing is USDA inspectors.

The CHAIRMAN. Yes.

Mr. BLUBAUGH. We are in very short supply of USDA inspectors, and that is slowing down some of these brand new plants that are mom and pop owned in these small communities from getting their doors open.

The CHAIRMAN. Yes. Well, thank you very much. My own time has run over a bit here, and so you can see, this is a very important hearing, in terms of our Livestock Mandatory Reporting. And now the gentleman from Pennsylvania, Ranking Member Thompson, you are now recognized for your 5 minutes.

Mr. THOMPSON. Thank you very much, Mr. Chairman. I apologize for the technical difficulties earlier. I am assuming you can hear me now, though.

The CHAIRMAN. Yes. Yes, we can hear you pretty clear.

Mr. THOMPSON. I saw the nod of the head, so I figured that was a yes. And thank you to all the witnesses on the panel. This is, as the Chairman said, an incredibly important topic, and a very timely topic, and I would say critical. So I want to start out with Mr. Léger. Your testimony cautions against the sort of government interventions you previously experienced in France. Can you elaborate on what you saw, and the lessons learned that should be kept in mind, as new legislation and regulations are considered?

Mr. LÉGER. Yes. Thank you for asking the question: 40 years ago France, trying to support the producers, and trying to find ways to get support to producers, so they pushed toward feeding young bulls. And—so the slaughterhouses—and the way they fed the push was through co-op. And the slaughterhouses had to buy those young bulls, and the price of those young bulls, the price of the meat, was regulated, so the government was fixing the price. The problem was we had put in place protection at the level of the producers. We killed those bulls at a certain price, but there was no market. So all the product end up in freezers, and the government after had to sell the product to other countries at huge discount. And I just don't believe it is good policies. It is not good to take the taxpayer money and—to put it this way. So I am just cautioning against these kind of things.

Mr. THOMPSON. Mr. Wilkinson, how does a shortage of beef processing capacity affect the cattle producers' negotiating leverage in fed cattle transactions?

Mr. WILKINSON.—and we need to be able to better accommodate that by increasing capacity, and nothing is more important right now than increased processing capacity to America's farmers and ranchers.

Mr. THOMPSON. Well, thank you, sir. Mr. Chairman, can I inquire how much time I have left.

The CHAIRMAN. You have time, but I want to make sure that everybody heard Mr. Wilkinson. I believe his microphone was off at one point. So, in all fairness, I think we are all on the same path now. If you could repeat that, and then, Ranking Member, you could proceed. I just want to make sure you heard what our witness said.

Mr. WILKINSON. Mr. Chairman, you want me to answer that again?

The CHAIRMAN. Yes. Would you? Can you hear him clearly, Ranking Member?

Mr. THOMPSON. I can, Mr. Chairman, thank you. Go ahead, Mr. Wilkinson.

The CHAIRMAN. Go right ahead.

Mr. WILKINSON. Absolutely, and thank you, Mr. Chairman. Again, the point is right now we don't have enough hook space in the United States. We don't have enough processing capacity. And by increasing process capacity, we are going to take away that leverage from the packer, and we need to de-leverage the packers'—somewhat of a stranglehold they have on the market. If you think of a funnel, we are trying to take cattle and put them down into a funnel, and those packers control such a significant portion of the market, we are having a very difficult time dealing with that. The only way to cause that to change is to increase the size of the funnel, and increasing that funnel is going to come from greater hook space, greater packing capacity.

Mr. THOMPSON. Thank you, sir. I appreciate your insight. Mr. Boner, how important is USDA's Wildlife Services Program to the sheep industry, and what sorts of tools are the most important and effective in terms of predator control?

Mr. BONER. Well, I thank you for the question. I appreciate it. Wildlife Services is paramount to the sheep industry. In particular, the Aerial Hunting Program, non-lethal and lethal methods, are critical to the survival of not only our animals, but our producers.

Mr. THOMPSON. Very good. And I just want to ask all panelists, what advice do any of you have for USDA as it doles out upwards of $600 million in funding for processing capacity? What should the priorities be? What suggestions would you make?

The CHAIRMAN. Who did you direct that to, Ranking Member?

Mr. THOMPSON. Mr. Chairman, you want me to repeat that?

The CHAIRMAN. Yes. I think our witnesses are—did you direct it to any one of our——

Mr. THOMPSON. No, none of the panelists in particular. Anyone that may have input.

The CHAIRMAN. Any witness like to respond to the Ranking Member's question? Are we clear on that question? He was breaking up a bit.

Mr. WILKINSON. I am not, Mr. Chairman. I couldn't hear it very well.

The CHAIRMAN. Okay.

Mr. BLUBAUGH. I couldn't either.

The CHAIRMAN. Ranking Member you are breaking up a bit. We will take another shot with you. If you could repeat your question, because the witnesses didn't hear it.

Mr. THOMPSON. Fine. Let's try that one more time.

The CHAIRMAN. All right.

Mr. THOMPSON. But, to any of the panelists, what advice might they have for USDA as it doles out upwards of $600 million in funding to enhance the processing sector?

Mr. WILKINSON. Mr. Chairman?

The CHAIRMAN. Yes, Mr. Wilkinson?

Mr. WILKINSON. I will take a swing that.

The CHAIRMAN. Sure.

Mr. WILKINSON. One of the first things that I would suggest is to not give it out to people that are making a lot of money. We don't need to give it to the four major packers. We need to give it to small producers, medium-sized facilities, so that they can make a difference in our markets.

The CHAIRMAN. Anyone else?

Mr. BLUBAUGH. I would absolutely agree with that call. That money needs to be directed to small- and medium-sized processing plants, and not—the Big Four packers should not receive any of that money.

The CHAIRMAN. All right, anyone else. Yes, sir, Mr. Boner?

Mr. BONER. I would just add real quickly that I would also add to that, in addition to handing that out to processors, I think it is important that those new processors have a sound marketing plan on how they are going to move product through their system as they move forward.

The CHAIRMAN. All right. Thank you very much. Good question, Ranking Member. Thank you for that.

Mr. THOMPSON. Thank you.

The CHAIRMAN. Okay. And now I recognize the gentlewoman from North Carolina, Ms. Adams, who is also Vice Chair of our House Agriculture Committee. You are recognized for 5 minutes, Ms. Adams.

Ms. ADAMS. Thank you, Mr. Chairman. Thank you to our witnesses for your testimony today. The meat and poultry sector have become highly consolidated and uncompetitive. By transforming the food system, and transforming rural communities, we can ensure a more resilient food supply for consumers and a competitive marketplace for family farmers and ranchers, and our farmers are a vital part of our country, and we must ensure a fair and competitive marketplace.

So, Mr. Blubaugh, in your statement you mentioned support for USDA's efforts to strengthen the Packers and Stockyards Act regulations to provide more protections for our national livestock and poultry farmers. So can you talk about why it is important for farmers in your area to strengthen these regulations to give farmers a fair shake?

Mr. BLUBAUGH. Sure. That legislation was created well over 100 years ago, and President Roosevelt used that legislation to bust up the packers 100 years ago or so, and we are kind of back to that consolidation again, once again to that level. So I think it is very important both for our contract growers to have protection under the Packers and Stockyards Act, as well as price discovery and transparency.

Transparency is very important. We know that markets go up, and they go down. That is not what we are talking about here. We are talking about the lack of transparency, and the lack of competition in the marketplace for processing fed cattle, in this instance.

Ms. ADAMS. Right. Thank you. Mr. Léger, in your testimony you mentioned that government intervention, such as reforming the Packers and Stockyards Act, and Congress introducing new bills to place purchasing requirements on packers, could jeopardize packers' ability to provide products customers and consumers desire, that the industry's advancement goals cannot be achieved through what you refer to as a restricted market. So are there any ways in which USDA could strengthen the Packers and Stockyards Act enforcement that the meatpacking industry would support? If so, why or why not?

Mr. LÉGER. It is my understanding that there are talks about putting a library for cattle contracts. And, for a company like mine, I am feeding, as I said earlier, I have two types of business. I have a cow-bull business, and this one I buy everything on the open market, so it is negotiated. But, on the other hand, I have a feeding operation, and the reason why I have a feeding operation, it is because when I wanted to start my branded product no hormones, no antibiotics, I had no one who wanted to produce the cattle for me, so I had to start my own things. And today I am involved in genetic, so I have cow-calf. I produce some calves, but I buy or sell a lot of calves. One of the things that I am trying to do is sell bulls to collect the calves, and I have agreement with farmers, producers, who would raise those calves for me.

My understanding is if today we open those contracts to everyone, I have the possibility to end up in a litigation because I—could be argued that I give more money to the producers who produce the calves that I want, compared to the one who I may simply say, I cannot buy from you, because that calf doesn't match the quality that I want.

Ms. ADAMS. Okay. Thank you. Mr. Wilkinson, farmers and ranchers are reporting that one of the most beneficial Federal steps that can be taken is to permit interstate distribution and resale of customer slaughtered meat, so why do you think this has not been prioritized yet? Got just a few seconds.

Mr. WILKINSON. Frankly, Madam Representative, I don't know why that hasn't been implemented yet. I don't think we want to impede that, and I would agree with your statement, and I think that is something that Congress can make major steps forward in pursuing that.

Ms. ADAMS. Right. Thank you. Mr. Chairman, I am going to yield back.

The CHAIRMAN. All right, thank you very much. And now I will recognize the gentleman from Georgia, Mr. Austin Scott, for 5 minutes.

Mr. AUSTIN SCOTT of Georgia. Thank you, Mr. Chairman. And, Mr. Hays, I have a quick question for you. Have the swine producers received their CFAP payments yet? Mine in Georgia are telling me they haven't, and I just wonder if you know the answer on that.

Mr. HAYS. So we received two rounds of CFAP payments, but my understanding was that they were for half of the payment, and there was another half that was supposed to come later, and that is the portion that we have not received, is the top half of that.

Mr. AUSTIN SCOTT of Georgia. Okay. And do you know if that is limited to pork producers, or is that other producers as well?

Mr. HAYS. I do not know. I know contract producers were included in the last round——

Mr. AUSTIN SCOTT of Georgia. Okay. Fair enough.

Thank you. And, Mr. Léger, the National American Meat Institute, you represent 350 companies who produce about 95 percent of the meat products in America. What percentage of production from that 95 percent do you think the top ten percent of companies are responsible for?

Mr. LÉGER. I am not sure I understand the question. Can you clarify more?

Mr. AUSTIN SCOTT of Georgia. Sure. So there are 350 companies that the Meat Institute represents.

Mr. LÉGER. Everywhere, overall.

Mr. AUSTIN SCOTT of Georgia. I'm sorry sir?

Mr. LÉGER. Overall, across all proteins.

Mr. AUSTIN SCOTT of Georgia. That is right. But, if we took the top ten percent, if we took the top 35 largest from the Meat Institute, what would that percentage be, the 95 percent?

Mr. LÉGER. I don't know the answer. The only answer that I know is about the beef, and if you take the biggest—and it was said earlier, the biggest company represent 85 percent.

Mr. AUSTIN SCOTT of Georgia. Okay. The biggest four companies?

Mr. LÉGER. Four or five.

Mr. AUSTIN SCOTT of Georgia. At least four or five. I think it is four or five. Okay. So you have been successful in getting your products into Walmart, and that is one of the things that I don't think we have talked about enough in the food supply, is such that there are so few grocers out there now as well that are actually purchasing the products. They all want just in time delivery, and they all have their requirements. What suggestions do you have on how we get the super-size grocers of the world to carry more product from these smaller processing facilities?

Mr. LÉGER. First, I am a strong proponent of transparency and cost-plus agreement, and that is the way I manage my business. And in regards to the small packing operations, if you start to open a multitude of small plants that deal with 10, 30, 50 heads, you are going to have a big problem. It is going to be the problem of consistency. Product consistency, quality consistency. There is a reason why this industry is as concentrated as it is today. However, many questions have been asked about the concentration about this industry, and increasing the capacity of the industry. And, first of all, it is not simple to go and build a slaughterhouse, because you need, as a packer, I can testify today, if I wanted to build another slaughterhouse, I do not have the money to do it, first of all. Second thing, I am not sure I am going to have the supply, the cattle supply, to supply that new facility. I remember——

Mr. AUSTIN SCOTT of Georgia. Mr. Léger, I want to thank you. I am down to 20 seconds. I am very interested in the Committee pursuing co-op opportunities. I have spoken with the Georgia Cattlemen's Association, and opportunities for cattlemen to come together, and to own their own feedlots, and their own processing facilities, but then somehow we have to find a way to get the grocers to buy that product from us. And so I apologize for interrupting you, Mr. Léger, I am just out of time on the clock, and very interested in how we help our farmers' co-ops so that they can get a larger share of the price that the supermarket's getting. With that, Mr. Chairman, thank you for the indulgence to run 20 seconds over, and I yield back.

The CHAIRMAN. The gentlewoman from Maine, Ms. Pingree, is recognized for 5 minutes.

Ms. PINGREE. Thank you very much, Mr. Chairman, and thank you again for this interesting day we have been having, and thank

you to everyone on the panel. I have really appreciated hearing all your perspectives on the challenges that we are facing today. And, for the most part, really emphasizing the need for more packing capacity and less consolidation in the industry, and I really appreciate, Mr. Wilkinson, that you had a good perspective on that, because really increasingly there is more need for slaughterhouses than ever, particularly in our region, in New England, where we don't have the capacity that we used to, can't depend on just the big companies, so this is really an important hearing.

Mr. Blubaugh, thank you for your testimony as well, and being part of the National Farmers Union. We all appreciate hearing from them. And I also am glad to hear you are from Oklahoma. My partner is from Gore, Oklahoma, and while I have never been in your region of the state, I know agriculture and beef production is really important there.

I want to talk a little bit about Federal and food safety inspectors, getting them into some of the smaller facilities, especially since small plants are so often competing with the bigger facilities for the same inspectors. Do you have any recommendations that would help level the playing field for smaller facilities in this regard?

Mr. BLUBAUGH. Yes. I think the Executive Order that President Biden put in place cutting the overtime requirements for these small plants, that helps, but we do have just an actual shortage of inspectors, and we are seeing that both at the state inspected facilities in Oklahoma, and at our USDA inspected facilities. So we have to address that problem, and get more Federal inspectors. Right now the big plants have priority, and so they are getting the inspectors. The small mom and pop startup plants, they are having very much trouble getting inspectors in there.

Ms. PINGREE. Yes, and I concur with you on that, we just don't have enough people. And while we know it is important for the big plants to keep running, I hear this frequently about the smaller facilities, just can't get them. Again, Mr. Blubaugh, we have heard a lot today about workforce challenges, and I think that is kind of universal across all industries right now, but certainly in this one. I have been working on a bipartisan bill called the Strengthening Local Processing Act of 2021 (H.R. 1258) that would create career training and apprenticeship programs in meat and poultry processing. It is not something that everybody thinks about going into as a career, but I think there is a lot we could do with that. In your testimony you mentioned some programs like this that have been operating in Oklahoma. Could you tell us more about those programs, and any models that they are using that we should know more about, or consider expanding?

Mr. BLUBAUGH. Yes. I am very excited about our education starting up. We have a lack of skilled workers in the meat processing, and in management too of these plants. So we have our junior colleges in Oklahoma—one received part of the CARES money, was actually able to put a processing plant there at school, and so they are not only processing animals, but they are teaching students how to do the work. We see that also in our career techs throughout the state, and we even have some high schools now, in their

FFA Programs, that are doing meat cutting, and learning those skills as well. So all of these things together are very useful.

And we do have one Tribe, the Quapaw Nation in northeast Oklahoma, they have a state of the art processing plant that they have built that they do—they process all the needs of their own Tribal members, but they also process cattle from the neighbors down the road, and—with their excess capacity, but they are training their workers there. So they have this set up as a teaching opportunity to teach both skilled meat cutters and management.

Ms. PINGREE. Great. Thank you for that answer. That is great to hear about how you are handling it in Oklahoma, and we will certainly look into how that Tribe has been doing their work. Again, thank you, everyone, for your testimony, and with that, Mr. Chairman, I yield back.

The CHAIRMAN. Thank you very much. And now we will hear from the gentleman from Georgia, Mr. Allen. You are now recognized for 5 minutes.

Mr. ALLEN. Thank you, Mr. Chairman, and thank you to all of our industry leaders today, and particularly thank you, my good friend François, for pitching in, because I want everybody to hear your story. It is one of the great success stories in my hometown, right there in Augusta, Georgia, and I am so proud of it. I have had the opportunity to tour your facility, and I was so proud. I want you to tell the panel, I called you when we were actually running out of food in grocery stores, and this was back in May of 2020, and I said, how are you producing? And you explained to me how you were doing it. Would you tell these folks how you did that? Because it was amazing. I mean, people around the country were shutting down their facilities, and you were saying, hey, send me more animals, I will process them, I will do my part during this difficult time in this country. Just quickly, can you tell these folks how you did it?

Mr. LÉGER. So I—being from France, I was watching the news in Europe, and I understood quickly that, at that time, the pandemic would come directly to us, and my biggest worry was to lose our employees. So what we did, the way we did it—and thank you very much for the Cattlemen's Association of Georgia, because they have been very helpful. But what we did, we paid babysitters for our employees, we took mask policies immediately, and we never backed off of that mask policy. And we made sure that employees who had a fever, who had something, they were going to stay at home, paid them at home, made sure they would not contaminate someone, or potentially contaminate someone.

And, in matter of fact, during the pandemic, I had the best absenteeism rate we ever had in the, believe it or not in the company. Compare it to today, today it is very poor compared to that time. And so that is how. But one thing, we never closed, not one day. We never closed.

Mr. ALLEN. Right. Well, I want to thank you for that, because it is critical to our food supply in the Southeast. You all did a great job. And I will tell you, for all of our panelists here today, we have a war on small business in this country. I mean, the amount of regulations that are coming out of Washington, D.C. are going to kill the small business community. We also have about 25 million peo-

ple who are stuck in welfare, work capable people, and we have probably got another ten million people sitting on the side. That is 35 million in the workforce out there that are available that we need to get trained up and get to work, because we have the jobs for them.

But somehow, for whatever reason, the government does not want to motivate those folks to do that, and I don't understand that for the life of me. In fact, the government is the biggest reason those folks are not working. And I think some of the things that we implemented during COVID have created this problem that my friend François has talked about, where he has this absenteeism now because of the enhanced unemployment, and other benefits, stimulus checks, you name it, that the government's putting out. So I don't know how you start a business now, and where you get the workers. I mean, we are talking about investing all this money and putting these people into business, and you need to go look and get François's advice, because what he's been able to accomplish, not many folks have been able to do.

The other question I have is: you talked about working with the Cattlemen, and the relationship you have. How important is that?

Mr. LÉGER. It is extremely important. I believe that a vertical integration, and have all the segment of the supply chain to work together, is the answer. You need to have the cow-calf producers, the feeder, everyone sit at the same table. And someone asked me a question earlier about that, and vertical integration—and the question was geared toward the big retailers. A lot of big retailers, and especially one we worked a lot with, is trying to achieve that, to put a vertical integration in place. And this is definitely the way to go, which is going to be very transparent, and open, put the problems on the table, fix them, and everyone gets the return that they deserve. But everyone needs to be open to do that including cattle producers.

Mr. ALLEN. Yes. I am out of time. François, thank you for taking time today to testify. I appreciate your friendship, and if there is anything we could do to help you, you let us know.

The CHAIRMAN. Thank you, Mr. Allen. Now the gentleman from Florida, Mr. Lawson, is now recognized for 5 minutes.

Mr. LAWSON. Thank you, Mr. Chairman, and I would like to thank all of the esteemed panelists for testifying on this critical issue facing the livestock industry, and providing more perspectives on how to address industry and market challenge. During this hearing we have discussed a variety of events that have created a challenging market condition. While a local and regional food system faced some disruption, they was generally better positioned to adapt to the changes. My question would be to Mr. Blubaugh. You spoke a good deal about local and state partnerships in your hometown in Oklahoma that helped strengthen the infrastructure of the local supply chains. How can we duplicate these type of investments in other states who are potentially partnering with HBCUs and the MSIs?

Mr. BLUBAUGH. Well, in Oklahoma we had $10 million allocated out of the CARES money to go to this project. We had 196 applicants in our state apply for that grant money. There was enough money to go around, and there was 40 operations that were funded.

Out of that, 19 new facilities either are online or will be online by the end of the year. And this was all administrated through the Oklahoma Department of Agriculture, Food and Forestry, very successful program. A lot of times things we do in government does not work, but in this case, this program really works. Get the money out to the states, get the capital out there, to get these small plants going. But don't forget to get us some Federal inspectors as well.

Mr. LAWSON. Well, that is great. It is no secret that the agriculture industry has struggled to retain reliable, consistently well-trained workforce, especially during COVID–19. Now, I know for a fact that a lot of the money that people received during the COVID time, that money is long gone, and so people are available. There is no more government assistance for most of this program, except to try to control the vaccine: the question for all witness, in your own opinion, what would be some changes Congress can make to address this shortage, especially in rural areas, which I represent some rural areas, and ensure that current and future workers have the mechanism for reporting abuse and retaliatory behavior within the industry? And that is for all the members of the panel.

Mr. BLUBAUGH. Well, I would just say training and education would be the number one thing. We need to educate our young people in this skill. This is kind of a lost art. I remember, as a young man, going into the local grocery stores, and they all had a meat cutter there, and they would cut your steaks just the way you wanted them. And they processed them that way right there at the grocery store. But, those days are long gone, and there are very few of those left, and this is kind of a lost art.

Mr. WILKINSON. If I could, Mr. Representative, I certainly agree. Training and education is critical, but I would also think we need to give people the incentive to go back to work, and continual payments to people to sit on the sidelines is counterproductive. Farmers and ranchers don't get the luxury of staying home and collecting a check. They have to work for it every day, and that is the America that I know, and that is what we need to get back to.

Mr. LAWSON. Anyone else?

Mr. HAYS. Yes, sir, I am in agreement with what's been said. Our rural communities, and that is where these small processors are at, and we have an aging population, we have a shrinking workforce, and it is a challenge to find folks. But, now these small plants, they are doing more and more business. My youngest son actually works for one, really enjoying it. But there is a need to educate and train folks to do that. But the main thing is we need more workers out here in the rural areas.

Mr. LAWSON. Okay. That is great. Anyone else want to respond?

Mr. LÉGER. Yes. Yes. Labor is certainly a big issue in our industry, and we need to train, but also we need to attract more young people to come to work in our industry. And so one of the measures that I know a lot of packing houses have done, as an industry we have raised a lot the wage in order to try to compete with the money that people who sit on the side, the money that they receive. So that is one of the—that the packing industry has taken.

The CHAIRMAN. The time of the gentleman has expired. Now I recognize the gentleman from South Dakota, Mr. Johnson, for 5 minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. I have appreciated how much today's conversation has been focused on solutions. We are not just complaining about the problem, we are focusing on solutions. I very much appreciate that. To me, a big watershed moment was a few months ago, when the Livestock Marketing Association pulled together in Phoenix U.S. Cattlemen, R–CALF, NCBA, Farmers Union, Farm Bureau, and those groups, which represent a variety of different interests, and don't always agree on a whole lot, they walked away with an agreement that they could work together regarding three things in this arena. First off, additional transparency, including the formation of the beef contract library. Number two, more robust investigations. We have been talking a lot about investigations today, and I don't know of anybody that is particularly happy with those that have taken place so far, and then number three, investment in new capacity. And particularly, as Todd Wilkinson mentioned a bit ago, outside of the four large market participants on the processing side.

So I have really taken those as the marching orders, and I want to work with those groups to do a better job in the livestock space. And I just want to call back to Senator Grassley, the testimony at the beginning of today. I think the Senator suggested that perhaps his 50/14 proposal was what was needed in the marketplace, and perhaps even that there was some consensus around that idea. I would say to my friends on this Committee, there is not consensus on that issue, and, in fact, 50/14 or 30/14 did not come out of the Phoenix meeting.

And when we look at the report that was put together by Texas A&M, a report that was done at the request of former Chairman Peterson and former Chairman Conaway, when you look at the key findings of that report, and on Page 12, Key Finding Number 8 says this, that mandatory minimums on negotiated transactions could, and I quote, "impose huge costs that are passed down to cattle producers in the form of lower prices." And Page 104 of that report, again, prepared at the request of Mr. Peterson and Mr. Conaway, indicates that the reduced value to cattle producers in this country because of that kind of mandatory minimum could be $16 billion, and that that would hit producers.

And so as we segue away from an idea that is not consensus-based, and instead look at an idea that is consensus-based, the beef contract library, I want to first go to Mr. Wilkinson, and then to Mr. Blubaugh. Give us your thoughts, any additional things you haven't had an opportunity to say yet, about the validity and the importance of a beef contract library.

Mr. WILKINSON. Thank you, Representative Johnson. You touched on a number of points, and certainly the contract library is critically important. They have already got it on the pork side, and we just need to be able to duplicate that. Me, as someone that is marketing cattle, I would like to know what else is being offered out there. It makes me more competitive, it gives me more of an advantage. Currently we don't have that, and until we get that,

beef producers are going to be at a disadvantage, and that contract library is critically important, and I appreciate you bringing it up.

Mr. BLUBAUGH. Yes.

Mr. JOHNSON. Mr. Blubaugh?

Mr. BLUBAUGH. Yes, I would absolutely agree. It is very important to have the contract library. Pork industry has had it a while. It is the same processors, for the most part, process the pork that process the beef, so there is really no legitimate reason not to have a contract library with all these contracts that are secret right now. And we need to have transparency in the marketplace, and especially because this alternative livestock marketing agreements are now the way most of the cattle are sold today, and it is not with a cash basis.

Our organization, we support more cash trade, I don't have a magic number, whether that is 30 percent or 50 percent, but we support more cash trade to establish the market.

Mr. JOHNSON. So with just the 20 seconds I have left, is there anything that would cause you to tell us we should not pursue a contract library on the beef side, based on your experience on pork?

Mr. HAYS. I don't see a problem with having a contract library. It has served the pork industry well. We had some of the same fears, but it is worked well. I don't think it is caused the issues that some of the folks may be concerned about.

Mr. JOHNSON. Thank you, and Mr. Chairman, I yield back.

The CHAIRMAN. Thank you. The gentleman from Ohio, Mr. Balderson, is recognized now for 5 minutes.

Mr. BALDERSON. Thank you, Mr. Chairman, and thank you to the panel for being here. And my first question is going to be just kind of an add-on to the question Ranking Member Thompson started. Mr. Wilkinson, as you know, the USDA recently closed its public comment period for the $500 million in grants, loans, and technical assistance to address bottlenecks and supply chain issues. What advice would you have to the USDA to ensure they distribute this money effectively and expand processing capacity?

Mr. WILKINSON. Thank you, Representative. First, I would again echo the need for this to get to the small-, the very-small-, and the medium-sized processors. And in that situation, they don't need just grant money to build the facilities. Oftentimes it is operating capital, and the ability to guarantee a loan that is more critical for them. We don't want to set up a whole bunch of new processors just to fail to watch the big boys come in and buy them up, because that doesn't gain us anything. We need a framework around these loans and these grants so that they can have success going forward in the future.

Mr. BALDERSON. Thank you. A follow up, can you explain how a shortage of beef processing capacity affects cattle producers' negotiating leverage in fed cattle transactions?

Mr. WILKINSON. I am sorry, Representative, was that directed to me? I couldn't hear.

Mr. BALDERSON. Yes. I apologize, I stumbled there a little bit. Yes, Mr. Wilkinson, that was directed to you. I apologize.

Mr. WILKINSON. Well, again, the shortage is the root of the problem here. We just have enough cattle, and, unfortunately, we are going through a herd reduction right now because of drought,

which is what we don't want to do. We are faced with a situation where we are trying to take a big quantity and funnel it through a very small funnel, and we need that funnel, that increased capacity, in order to be able to put us on a level playing field. I want to be able to negotiate with somebody where I can say, you give me a bid, you give me a bid, and you give me a bid. I don't want them saying, this is the only bid you are going to get.

I live in a part of the country that is fortunate that we do get multiple bids, but that is what we need to have go across the country. We need to have the capacity to be able to put these packers back on their heels.

Mr. BALDERSON. Thank you. My next question is for the entire panel, and I am down to 2 minutes and 25 seconds. It is a lengthy question, but anybody could jump in here. I have heard from a number of constituents, and those that work in the agricultural industry, about the devastating effects of port congestion and supply chain issues in the shipping industry, had a meeting on it yesterday, in fact. This is obviously a complex issue, and both the White House and Congress need to work together to fix it. First, can any of you provide details on how this disruption has hurt your members or businesses, and second, are you aware of any outreach efforts from the Department of Agriculture to provide information, direction, or advice to farmers or ranchers relating to port congestion and these shipping issues? And that is directed to the whole panel, anybody may jump in, and we are down to a minute and 30 seconds, so thank you for as much response as possible.

Mr. BONER. Real quickly, Congressman, I can jump in here. It has definitely impacted our producers' ability to export their wool overseas, and we have seen a very negative impact to our wool industry because of that. I have not personally seen anything from USDA to try, any literature or anything to help try to educate us on how to alleviate the problem, but it is a big impact right now.

Mr. WILKINSON. Congressman, and if I may, certainly the lack of shipping capacity has impacted the beef industry, but it is also impacted the producer from the other side. The producers aren't able to get their components to be able to run their tractors, to do everything else that is necessary in the industry, and we are faced with a situation, I can't even buy fence posts right now because they are not available, and this port congestion seems like a problem that the government should be able to handle.

Mr. BALDERSON. Agree.

Mr. BLUBAUGH. I would just add I agree. We are having difficulties buying anything that is imported in here right now: spare parts, whether it is clothes you see in department stores, shelves are empty. This port problem is huge, and it is becoming a very big problem for us to operate out here in agriculture.

Mr. BALDERSON. Thank you all very much for your answers, and, Mr. Chairman, thank you. I yield back.

The CHAIRMAN. Thank you. And now I recognize the gentleman from Kansas, Mr. Mann, for 5 minutes.

Mr. MANN. Thank you, Chairman Scott, and thank you to everyone for participating on this panel. It is essential, in my mind, that this Committee consistently hears directly from the producers who feed, fuel, and clothe our country and world. Agricultural produc-

tivity results in a freer America that does not have to depend on any other country for food. My district, Kansas 1, is the largest beef producing district in the country. We have cow-calf operations of all sizes, feedyards of all sizers, and packing plants. We can't lose sight, in my mind, of the economic impact of the livestock industry to rural America, and the fact that it is the largest demand driver of our crops as well. At least, that is the case in my district.

I grew up on a family feedyard, and spent thousands of hours riding pens and doctoring cattle, and I am passionate about the cattle industry. I believe that we all should be proud of the progress the industry has made over the years to provide a high quality product that tastes great, and is in strong demand by consumers, both in the U.S. and around the world.

I have a couple questions for Mr. Wilkinson. Toward the end of your testimony, you stated a few things that you think Congress should do. You indicated Congress should be focusing effort on bringing more transparency to the cattle marketplace, support small- and medium-sized packers, promote expansion of processing capacity, ensure timely authorization of LMR, review confidentiality agreements required of the USDA, and continued oversight of the DOJ to ensure the ongoing investigation reaches a swift conclusion. I have talked with hundreds of producers of all sizes throughout Kansas, and I agree with all of those recommendations. Would you mind expanding upon any further thoughts on a couple of them, focusing efforts on bringing more transparency to the cattle marketplace, and also reviewing confidentiality obligations that are required by the USDA?

Mr. WILKINSON. Absolutely, Representative, and I am glad you brought that up. The confidentiality provisions that exist in LMR are problematic to the producers. We see situations where packers are not able to—we are not able to see what they are paying because we only have one packer in an area. Colorado's a classic example. It routinely doesn't get reported because of confidentiality issues. There has to be some changes made to LMR to allow for greater transparency in that information, and that is just critically important.

And, part of the other issues are, I am going to speak from NCBA, because we have tackled this issue. We went head-on, and we went out and formed a working group that actually producers have caused greater negotiated trade to occur because of themselves, on a voluntary basis. And it is that producer-led solution that is going to get us out of this situation. No offense, but sometimes the government brings bigger problems than you can bring solutions.

Mr. MANN. No offense taken, I completely agree. And that was really my second question for you, Mr. Wilkinson. I have talked to hundreds of cattle producers in Kansas' Big 1st, from the smallest cow-calf operations, to some of the country's largest feedyards, and everything in between. I will tell you, overwhelmingly I have heard that we need to: A, increase the price discovery in the cash market; B, we need to make sure the producers benefit when they provide a superior product; C, we need to not let the government interfere in the free market; and D, we need to acknowledge we have regional differences. Can you provide a little more explanation of the

producer-driven effort to increase cash trade you alluded to just now. How's that going, and what progress have you seen so far?

Mr. WILKINSON. Yes, I would be happy to, Mr. Representative. A working group was formed, and these are the grassroots. This is all across America where we had participation. These folks came together and tried to come up with some solutions, so they set trigger points, and if we didn't get sufficient trade happening voluntarily, then it was going to cause a trigger. We had a trigger in the first quarter. We didn't in the second quarter because we see negotiated trade go up.

Most importantly, what has just happened in October, or the end of September, we now have all four of the major packers that were able to form a packer silo, and get their information, and find out how they are truly participating in negotiated trade. And, with that information, we are going to be able to develop a framework, where if these packers aren't going to participate, we are going to know it, and then we are going to have to take the next step. Right now the producers are leading the charge, and I have to give them hats off. They are doing a great job.

Mr. MANN. Thank you, Mr. Wilkinson. I believe I am out of time. I appreciate everyone on the panel for being here today. Mr. Wilkinson, thanks for the further explanations. I yield back.

The CHAIRMAN. Thank you. Now I recognize the gentleman from Iowa, Mr. Feenstra, for 5 minutes.

Mr. FEENSTRA. Thank you, Chairman Scott, and thank you, Ranking Member Thompson. We have a problem. We have a problem. I probably represent the most independent producers of anywhere in the country, and my producers sometimes can't even get a bid. Can't even get a bid, unless you are vertically integrated, of course. So I talked to Secretary Vilsack this morning about the importance of price discovery measures within the cattle market. Mr. Blubaugh, can you share how increased price transparency and true price discovery measures included in long-term reauthorization of Livestock Mandatory Reporting may benefit the market participants?

Mr. BLUBAUGH. Sure. It is just simply transparency. If we can get that contract library, we can get that data in there on all of the sales, and not just part of the sales, reported, that is going to help us a lot, be able to decide what really is the true value of our cattle, because it is so difficult right now.

You see the price of box beef at record high prices, the price in the grocery stores are very high, but at the very same time, our ranchers—prices are going down, and continuing to go down. And every time we see a black swan event, which we have seen a cyberattack on some of the large processors that have shut them down, we have seen a fire up at Holcomb, Kansas that shut one of the large plants down, and then during the pandemic, with sick workers, that shut many plants down. And, one of these large plants that goes down, offline, for any reason whatsoever is nearly five percent of our beef capacity in processing, and so we are just way too consolidated, has led us into this problem.

Mr. FEENSTRA. Yes, I would agree. I mean, it is hook space, shackle space, it is pricing, it is cash price. I am just trying to find my way of what we can do, as Congress. I do not agree that it is

just simply hands off and let it play out. It is just not. I mean, the four packers, they have their way right now. They are making an incredible amount of profits, right? My in-laws, people I know, they are losing $120 a head. So my question to you also would be what do you think of 50/14 proposal that Grassley and Fischer sort of are looking at?

Mr. BLUBAUGH. Senator Grassley spoke a little bit this morning that he was in negotiations with Senator Fischer on coming up with a compromise bill to kind of mesh those two together. I think that is a great idea, I think it is the right direction that we need to go in, so I don't have the magic number of the best way. I know different regions of the country there is more cash trade in some areas and less in others. I will tell you in the Southern Plains, it is very low cash trade, below 20 percent in most weeks, so it is almost non-existent in the Southern Plains.

Mr. FEENSTRA. Yes. Right. I would agree with you, and that is the trouble. I think the producers in Iowa are just trying to make a living, and just trying to get some fairness in the market, and that just doesn't seem to happen.

I want to pivot just a little bit to Mr. Hays on the swine industry. I have about a minute left. Can you just talk about African Swine Fever, and that we have a possible vaccine, the ASF vaccine, and what your thoughts are on how we can prevent this as we move forward, and is this an opportunity for us? Mr. Hays, if you could just extrapolate on that?

Mr. HAYS. Sure. Where we need to focus, Congressman, is keeping it out of the country, obviously, and that is why so much focus has been put on Dominican Republic and Haiti, because it is so close to us, and we would worry about it getting into the wild pig population.

We are very supportive of the vaccine, we are excited about the vaccine, but that is more of a tool to clean up if we get African Swine Fever here. If we run out and vaccinate the U.S. herd without having a wild strain here, then all the problems that we are going to have with trade come as soon as we stick the first pig—considered positive at that point. So—grateful to have, but it is not the way to prevent it from coming——

Mr. FEENSTRA. I agree 100 percent. It is just one of those things that we have—already had—and I represent the largest hog production in all of our nation in the 4th District, so thank you for those comments, and I yield back.

The CHAIRMAN. Thank you, Mr. Feenstra. And now I recognize the gentlelady from Minnesota, Mrs. Fischbach, for 5 minutes.

Mrs. FISCHBACH. Well, thank you, Mr. Chairman, I appreciate it. And I would like to thank all the witnesses, and thank them for hanging in there with us. I know it has been a long day, and so I appreciate you hanging around to testify and to answer questions. And I would also like to associate myself with the opening comments of Mr. Mann, when he talked about how critical it is that we hear from producers, because, as we are going through legislation and policies, it is absolutely critical that we hear from the folks that are actually doing the work, that are actually having to implement the kinds of regulations and legislation we put into ef-

fect, so I particularly want to say thank you, because it is critical that we hear from producers.

And just a couple of quick questions. Mr. Hays, your testimony included a variety of technical suggestions to the Livestock Mandatory Reporting requirements for the swine industry, and, big picture, can you explain what kind of benefits such changes would provide?

Mr. HAYS. So, yes, basically, Congresswoman, what we are asking is just to modernize it, would be the best way to say it. The pig market, the way we market pigs, continues to evolve and change, and we basically get to make changes in LMR once every 5 years, and we are just trying to get the market to catch up with where the industry's at, I guess would be a quick way of summarizing that.

Mrs. FISCHBACH. Okay. Well, thank you very much, and do keep in touch on those, because it is critical, as we do go through the process of creating those new requirements, so thank you very much.

And, Mr. Wilkinson, in your written testimony, you talk about long-term declines in negotiated trade of fed cattle. In your opinion, what has been the main driver of that decline, and is the NCBA concerned about the lower levels of negotiated trade?

Mr. WILKINSON. Representative, I would tell you that NCBA is critically concerned about the reduction in negotiated trade. The good news was—or is that we have seen some increased trade this year in part because we have producers trying to come to a voluntary solution. But negotiated trade has to pick up. Why is it going down? I think that is largely because we have people using different marketing programs as to how to market their cattle.

You know, 20 years ago there wasn't a lot of formula trade. Now we have grid-based trade. All of those are relatively new. That doesn't mean that they are wrong. As a producer, if I think my cattle are worth more, I want to get a better spiff, and I want to be able to negotiate that with the person that I am selling my cattle to. And, unfortunately, that doesn't mean I am going to take a bid from JBS, or take a bid from Tyson, or all of those. I want to be able to negotiate my cattle as a premium. So if I am selling certified Angus beef, I want to capture that premium. So, when I do that, I take it out of the direct cash negotiated trade, and that is part of the issue.

I am not going to say it is a problem. It is the nature of where we are right now, but we still have to have price discovery, and we can't have everything based off of AMAs.

Mrs. FISCHBACH. Thank you very much, I appreciate that. And then finally, Mr. Léger, how might government mandates on those required thresholds for cash purchases of cattle affect your business model?

Mr. LÉGER. So I am in a different part of the United States, because I am in the Southeast. As you may know, we are not feeding very much cattle over there, but we are more a cow-calf producer. In regard to my business, I am buying all my cows on the cash market—it is negotiated. So basically we are in auction barns, and we have three, four, five packers that bid for the same cow, and that is how I buy. And I have another type of buy that—where I

put my grid every day out to certain buyers, and they deliver the cattle based on the price that I have put out. It is their choice. They have no obligation to come and deliver the cattle. If the price satisfies them, they come to me, and they are supplied.

Mrs. FISCHBACH. Well, I thank you, and again, thank you to all of the witnesses. I really do appreciate you being here. And, with that, Mr. Chairman, I yield back my 13 seconds.

The CHAIRMAN. Well, thank you for that. The gentleman from California, Mr. LaMalfa, is recognized for 5 minutes.

Mr. LAMALFA. Thank you again, Mr. Chairman. I appreciate it. For our panelists there, Mr. Wilkinson and Mr. Boner, we asked Secretary Vilsack a little while ago about the vacant grazing allotments in the West that are an issue for our livestock folks, and so he was talking about how there might be certain issues with maybe endangered species, or others. It didn't sound like it was a bureaucratic issue. What is your experience with your memberships on what's going on with that? Whether it is a habitat issue, whether it is an endangered species, or some other issue with environment, or is it just coming down to bureaucracy and not getting the things out? Is there a concerted effort to just not get these allotments done for growers? What do you think about that? Tell me.

Mr. WILKINSON. Mr. Representative, I am going to start by where you left off in your question, and, unfortunately, I think a lot of that is based on bureaucracy. Grazing is the best way for us to provide some forest protection, and unfortunately we are taking allotments away. And, cattle grazing is good for the habitat, and yet we seem to see a bureaucratic tendency to want to take that way, and leave that to grow up into wild grasses and game production areas, when, in fact, the opposite result ends up. And, unfortunately, your state has been victimized as part of that process. So grazing allotments need to be given out, and we need to get the cattle back on the ground, because that is the best forest protection we can do.

Mr. LAMALFA. Yes.

Mr. BONER. Thank you for the question, Congressman. I would echo what Mr. Wilkinson has just said. The experiences we see are most of the hurdles that are put out there are bureaucratic hurdles made by people with an agenda, for lack of a better term, and it is not good for forests, or forest management. We see that throughout the summers, as we watch our forests burn throughout the West. And so I would echo what Mr. Wilkinson said, that it is a bureaucratic problem.

Mr. LAMALFA. Well, what do you gentlemen think, in part of my district and neighboring districts you also have a wild horse issue, you have sage grouse. I guess part of the things we need to dispel is that cattle grazing does not compete with wild horse territory. Do you guys find that the livestock industry is still being victimized by a perception on the wild horse issue? And then touch onto the sage grouse, and that habitat and such.

Mr. WILKINSON. Yes, absolutely, Representative. And, I will start with sage grouse first, because it appears that we have made such progress by the producers voluntarily working on programs to enhance sage grouse, only to suddenly have the Federal Government decide that they want to declare more habitat critical, and kick the

cattle back off the areas. It is just counterintuitive. I don't understand it, and neither do our producers.

And the wild horse situation, we are not competing for the same area, and yet we are seeing bigger allotments of cattle moved off because supposedly we are supposed to be protecting a greater habitat area for wild horses, which is going unmanaged and unchecked.

Mr. BONER. Yes, I would just add, in my home State of Wyoming, the wild horse issue is a tremendous issue, and we are seeing—it is so funny, on one hand the Federal agencies have these requirements for the amount of stubble height, and things that we leave in our allotments, yet on the wild horse areas, there is incredible amounts of overgrazing for long periods of time that are damaging the resource, yet nothing is done to control those populations. And so, again, the bureaucracy is not always the best manager of Federal lands.

Mr. LAMALFA. No, it definitely isn't, as we suffer with hundreds of thousands of acres of forest fire on our Federal forest lands. It is just so frustrating, as I just went through the district yesterday. Our hills are going to turn into—instead of tree-covered hills, they are going to be rolling hills in the mountains area. We all understand what you are up to, and how it could be helpful, so we just need to have you as partners here instead of the enemy, because there are folks that just flat don't like you in this industry, that you exist. And that is what a lot of it comes down to with the bureaucracy, anyway, thanks very much.

The CHAIRMAN. Thank you, Mr. LaMalfa. And now I recognize the gentlelady from Illinois, Mrs. Miller, for 5 minutes.

Mrs. MILLER. Yes, thank you, Mr. Chairman, and this has been helpful and insightful. I do have to make the comment that 40 percent of our ranchers are gone since 1980, and the rest of us are hanging on. And I say that coming from a family farm, and we run a cow-calf operation. I have visited neighbors, and it is very dire. I agree with my fellow Members on this. In addition, all of this impacts the rural economy. So, anyway, I do have a question, for Mr. Wilkinson. As a cow-calf producers and cattle feeder, do you believe that a cash market mandate would make you more money on your cattle? And if so, do you have an idea of what that threshold should be?

Mr. WILKINSON. Actually, I believe, as a cow-calf operator, a cash market mandate is going to interfere with my business. It is going to be telling the feedlot owner whether or not they can sell their cattle because the packer suddenly has this new mandate that they have to comply with, and it gives another bullet in the packer's quiver, and they don't need any more bullets. We need to take away some of that, and our producers are very concerned that they are going to get taken—their free choice is going to get taken away. They want to be able to market their cattle the way they want to market their cattle. Don't tell us how we have to market our cattle. And you can say I am going to tell the packer, but the packer's going to tell us, because that is the nature of the market right now.

Mrs. MILLER. Thank you. And then I have another question relating to constituents that have reached out to me in light of expanding opportunities for small operation packers opening. Do you

think it is viable to allow veterinarians to be licensed to do meat inspection in processing facilities? Do you think there is a place for this in the livestock industry?

Mr. WILKINSON. Madam Representative, if the veterinarian is trained, and has the ability to do that, absolutely. We need more inspectors to be able to increase the smaller operations. We are looking for any solutions that we can put out there to increase the small producer production, because that is the producer that is going to get the food to that local community, that is going to drive the economy. It is not the big packers. We need to hit it on the ground level. I appreciate the question.

Mrs. MILLER. Yes. And I understand. My son's been having to schedule a year ahead of time for processing, so, like the other Members have said, this is a serious issue that we have. Thank you so much, and I yield back.

The CHAIRMAN. Thank you very much. And now we will hear from the gentleman from Texas, Mr. Cloud. You are recognized for 5 minutes.

Mr. CLOUD. Thank you, Mr. Chairman. Texas is a state, of course, where alternative market agreements are heavily relied on, and generally constituents argue for less regulation. As you can imagine, Texans generally do not support mandating a minimum amount of cash trade. In the last year, the Texas-Oklahoma-New Mexico region has made strides in increasing the amount of negotiated cash transactions. Today 17 percent of the transactions in this area are negotiated by cash trade, not too far from the company average of 26 percent. At one time packers in this region only bought one percent of the cattle through cash contracts. Mr. Wilkinson, can you discuss some of the challenges associated with the government requiring certain levels of negotiated trade?

Mr. WILKINSON. Yes, and, Representative, you hit the nail right on the head there. You know that increased cash trade came from producers voluntarily doing that. They went out and wanted to make the change. And, again, the issue is if you force something on the packer, we are afraid, as the feedlot owners, that that is then going to come down to us, and we are going to be limited on how we can market our cattle. So let us have a chance to solve this problem, because this year has demonstrated one thing loud and clear, we are making progress. And to all of a sudden force something down our throats, and mandate something that the government knows best, is clearly going to be problematic for America's cattle producers.

Mr. CLOUD. Can you discuss the benefits of alternative marketing agreements to producers?

Mr. WILKINSON. I am sorry, Representative, I missed the question.

Mr. CLOUD. Can you discuss some of the benefits of alternative marketing agreements to producers?

Mr. WILKINSON. Well, yes, absolutely. I will use myself as an example. I am producing an Angus animal, I have the ability to market that animal at a premium, and I am getting paid for that premium. And on a feedlot situation, if you put a certain type of cattle in there, and you have a marketing window to capture some additional dollars, that helps make a profit, and in this industry profit

is so small, we need every avenue we can possibly take to increase our bottom line. And those alternative marketing arrangements are in part how some of us are surviving.

Mr. CLOUD. Thank you, I appreciate that. And I had wanted to be on earlier to talk with Secretary Vilsack. I am traveling the district, and wasn't able to get on, but one of the things I keep hearing over and over again from people across our district, they are really concerned with some of the tax proposals. You are a second-generation rancher. The Administration keeps saying [inaudible] proposed tax changes won't really affect you.

Mr. WILKINSON. Representative, I am going to assume I know what that question was, because all I heard was taxes, and that gave me—my ears went right up. Secretary Vilsack's statement that the Administration's proposals on taxes is not going to have an impact on—other than two percent is pure bunk. You cannot take away stepped-up basis and increase the Federal estate tax—sure, give a million dollar exemption, because farmers and ranchers have their assets in land, cattle, and machinery. They don't have it in cash. We don't have cash like that in the bank.

So when we have to pass it on to the next generation, and if my son is forced to pay tax to continue our operation, for me to get it from one point to the next point, that is ridiculous. And when he buys out his sisters in that operation, if he has to pay a capital gains tax on it, we are simply not going to be able to stay in operation.

The other issue we talked about there is an exception to this, an exception to that. I have a client right now who's—he doesn't have a son, he has a step-son, and those exceptions don't work with the step-son, so his operation—and he's just passed away—is going to be directly impacted if we let these tax proposals come to fruition.

Mr. CLOUD. Thank you, Mr. Wilkinson. I really appreciate your testimony. It is so vital that we do everything we can to protect the family farms. They really have been the life blood of our agriculture industry here in the United States. Thank you very much.

The CHAIRMAN. Thank you very much. Unfortunately, we are not hearing everything, but we certainly thank you for that, and I certainly agree with you on the step-up——

Mr. CLOUD. Rural broadband. Rural broadband.

The CHAIRMAN. Yes. Thank you very much. I appreciate that, and you made some—ladies and gentlemen, and just—you all who have given us your time, your energy, your influential testimonies, we are deeply appreciative, because we on this House Agriculture Committee are determined to bring and make sure that we are addressing these critical issues in our livestock animal agriculture area. And this has been a very informative hearing, and we thank you for it.

And we thank all our witnesses. We had Senator Grassley here, Secretary Vilsack here, Mr. Wilkinson here, Mr. Léger, Mr. Blubaugh, Mr. Hays, and Mr. Boner. Thank you both—thank you all, all five of you, for coming today, and sharing your views, and answering our questions. And I want you to know that I am committed, as Chairman of the House Agriculture Committee, to ensuring that Livestock Mandatory Reporting is extended. I referenced my bill, H.R. 5290, which would extend Livestock Manda-

tory Reporting for 1 year, a policy that has broad industry support. My bill has broad bipartisan support. As you heard, both Republican and Democratic Members here are on board, and committed as strongly as I am to making sure, because, number one, it maintains the transparency that you all have talked about, price discovery that you all have talked about.

And this, as I said before, and I used the terminology, and I mean it, this is our precious industry. It is our food industry. It is about making sure it is secure. Where would we be without the livestock industry? And so we feel very concerned about that, and, as my colleagues and I lead this legislative effort to secure the future of Livestock Mandatory Reporting, and address the critical livestock policy issues that you all have raised and discussed with us today, I want to assure you that the valuable insights and recommendations that you all have made as our witnesses is considered in our report, and our legislative work. And we will keep you involved as we work our bill through the House of Representatives, into the Senate, and over to the White House for the President to sign this bill.

And so I know the American people who shared your excellent testimony, thanks to C–SPAN, is greatly appreciative as well. Thank you so very much for sharing your views, answering questions, and really shining a light of direction as to where and what we need to do. Thank you.

And so, with that, under the Rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any questions posed by a Member. And so with that, ladies and gentlemen, this very important hearing of the Committee on Agriculture in the House of Representatives is adjourned.

[Whereupon, at 5:05 p.m., the Committee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUBMITTED REPORT BY HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

The U.S. Beef Supply Chain: Issues and Challenges—Proceedings of a Workshop on Cattle Markets

Kansas City, Missouri, June 3–4, 2021

Edited by BART L. FISCHER, JOE L. OUTLAW, DAVID P. ANDERSON, Agricultural and Food Policy Center, Texas A&M University

Supported by: Office of the Chief Economist, U.S. Department of Agriculture; The Agricultural and Food Policy Center, Texas A&M University

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Introduction

Bart L. Fischer and Joe L. Outlaw [1]

On the evening of August 9, 2019, a fire swept through the nation's second-largest beef packing plant in Holcomb, Kansas, taking it offline for 4 months. A few months later, the COVID–19 pandemic struck, halting production at many of the nation's packing plants and significantly disrupting beef supply chains. While these were significantly different events, the economic impacts were much the same: processing disruptions (coupled with a rapid change in retail demand in the case of COVID–19 as consumers shifted to eating at home and away from restaurants) sent wholesale and retail prices sharply higher. In contrast, disruptions in the processing sector resulted in less demand for fed cattle, which put downward pressure on fed and feeder cattle prices.

While economists offer explanations rooted in fundamental supply and demand relationships, many others view these events as evidence that the system is broken, particularly as it relates to fed cattle pricing. These events have led to renewed concerns about packer concentration, lack of transparency in fed cattle pricing, and insufficient packing capacity. These same events have also resulted in a litany of legislative proposals as policymakers have sought to respond to the concerns of their constituents.

While some of these issues are relatively new, many have been around for a very long time. For example, as long as ranchers have been raising cattle in the United States, there have been concerns about competition in the packing sector. In fact, as we write this, the *Packers and Stockyards Act,* which was designed "to assure fair competition and fair trade practices, to safeguard farmers and ranchers . . . to protect consumers . . . and to protect members of the livestock, meat, and poultry industries from unfair, deceptive, unjustly discriminatory and monopolistic practices . . ." turned 100 years old. While competition is a near-constant concern of many in the industry, it is an issue that has been thoroughly studied. As such, it is addressed in this volume for context, but the primary work on concentration is being done by others who focus more on enforcement—for example, the U.S. Department of Justice.

Following passage of the *Agricultural Marketing Act of 1946,* USDA's Agricultural Marketing Service (USDA–AMS) began collecting livestock pricing information from meat packers on a voluntary basis. Following concentration in the packing sector and an expansion of the use of alternative marketing arrangements (AMAs) beyond the traditional negotiated (or cash) sales, Congress passed the *Livestock Mandatory Reporting Act of 1999* (LMR) which went into effect in April 2001. With respect to cattle, the Act required price reporting for live cattle and boxed beef.

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[1] Bart L. Fischer is a Research Assistant Professor with Texas A&M AgriLife Research. Joe L. Outlaw is a Regents Fellow, Professor & Extension Economist with Texas A&M AgriLife Extension Service. Both are Co-Directors of the Agricultural and Food Policy Center at Texas A&M University.

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August 7, 2020

The Honorable Sonny Perdue
Secretary of Agriculture
U.S. Department of Agriculture
1400 Independence Ave. SW
Washington, DC 20250

Dear Secretary Perdue:

As you are aware, the U.S. beef sector has experienced unprecedented stress due to the COVID-19 pandemic. Labor disruptions in the meatpacking industry have resulted in fluctuating cattle and beef prices. At the same time that some industry segments have experienced meat shortages, others have experienced high prices at the consumer level and demand disruptions at the restaurant level. Meanwhile, prices received by ranchers have declined. This situation has led to questions arising regarding the vulnerability of the beef supply chain and the level of concentration in the industry.

Under the authority granted in 7 U.S.C. 3155, the Secretary can utilize policy research centers to conduct research and education activities. In light of these recent and ongoing events, we are writing to request that the Office of the Chief Economist engage the policy research centers to address the following:

- Current issues and trends in cattle markets, including structure of the industry, price discovery and methods to address deficiencies, price reporting, purchasing mandates, and barriers to entry in the packing sector. As appropriate, the policy research centers could commission work from national experts and initiate regional/national workshops.

- Beyond addressing the general topics above, we also request that the policy research centers provide an in-depth description of today's beef packing sector. This research would address a series of questions:

    - How did the sector get to its current structure and what are its advantages and disadvantages for producers as well as consumers?
    - Is the current capacity sufficient for the industry to thrive and grow?
    - What are the impediments to expansion for both new and existing firms of varied sizes?
    - Are there policy options to expand capacity or increase price discovery regionally or nationally, and would those options address current concentration and supply chain vulnerability concerns?
    - What common success factors for small to medium packing plants, including producer-owned processing can be documented, and is there a set of generalizable strategies for success?

We would request that the policy research centers engage other experts from across the country, including critical private industry members and industry associations, to ensure this research has appropriate regional representation.

We also request that the policy centers provide quarterly briefings for the Committee staff to provide timely updates on findings and progress.

From a legislative perspective, we see this as an opportunity to fully examine and bolster the beef sector, ameliorating current concerns and ensuring food security for America's future.

Sincerely,

Collin C. Peterson
Chairman

K. Michael Conaway
Ranking Member

Growth in the use of AMAs has led to less use of negotiated cash pricing. Fewer cattle traded in a negotiated cash framework has led to worries about price discovery. As many (or most) AMAs are based on negotiated trades happening in the market, some argue that the lack of negotiated trades would result in a lack of adequate price discovery, affecting all cattle prices. The assumption of many is that more discovery (*i.e.,* negotiated trades) would lead to higher producer prices. That assumption is not necessarily true.

With LMR set to expire on September 30, 2020, many saw an opportunity to address a number of lingering concerns with fed cattle pricing. Instead, Congress chose to extend LMR authority through September 30, 2021, and the bipartisan leadership of the Committee on Agriculture in the U.S. House of Representatives asked USDA to commission a study to look into the issues surrounding fed cattle pricing (*see pages vi–vii*). Ultimately, USDA partnered with the Agricultural and Food Policy Center (AFPC) at Texas A&M University, and this book is a culmination of that request.[2]

While this book focused primarily on fed cattle pricing, Congress also asked us to weigh in on packing capacity issues as well. In many ways, packing capacity and fed cattle pricing are inextricably linked. As a result, capacity is addressed in a number of places throughout the book. With that said, on July 9, 2021, the Biden Administration announced that it was investing $500 million "to expand meat and poultry processing capacity" along with "$150 million for existing small- and very-small-processing facilities to help them weather COVID, compete in the marketplace and get the support they need to reach more customers."[3] As a result, some of the concern about packing capacity may dissipate as loans and grants are made available to bring additional capacity online.

In carrying out our work, we commissioned papers from noted experts around the country on a variety of topics, ranging from a history of how the industry arrived at this point to an initial evaluation of voluntary proposals introduced by industry to address some of these pressing challenges. AFPC hosted a workshop in Kansas City, MO, on June 3–4, 2021, where the authors of the respective papers presented their findings. Four discussants—representing a diverse cross-section of the industry—were invited to offer a formal response. The workshop was open to the public, and participants offered a number of helpful comments.

In Chapter 1, Derrell Peel provides a historical overview of how the cattle and beef markets have evolved over time. In Chapter 2, John Anderson, Andrew McKenzie, and James Mitchell distinguish between price discovery and price determination while addressing concerns about market thinness and undertaking an empirical evaluation of market efficiency. In Chapter 3, Christopher Bastian, Chian Jones Ritten, and Amy Nagler provide an overview of risks and agent incentives, and they tie those to fed cattle market implications. In Chapter 4, Ted Schroeder,

[2] The findings and conclusions in this book are those of the authors and should not be construed to represent any official USDA or U.S. Government determination or policy. This research was supported in part by the U.S. Department of Agriculture, Office of the Chief Economist.

[3] *https://www.usda.gov/media/press-releases/2021/07/09/usda-announces-500-million-expanded-meat-poultry-processing*.

Brian Coffey, and Glynn Tonsor closely examine the incentives and tradeoffs of marketing agreements and cash negotiated trade. In Chapter 5, Stephen Koontz revisits the RTI Livestock and Meat Marketing Study (LMMS) and uses those findings to provide an initial evaluation of various proposals to mandate minimum levels of negotiated (or cash) trade. In Chapter 6, Joshua Maples and Kenneth Burdine examine market reporting and transparency, with a particular focus on the role that contract libraries play in providing transparency. In Chapter 7, Scott Brown highlights lessons learned from other agricultural markets. In Chapter 8, David Anderson, Charley Martinez, and Justin Benavidez examine the implications of fed cattle pricing changes on the cow-calf sector. In Chapter 9, Justin Benavidez and David Anderson examine negotiated cash trade targets—specifically, the 75% Plan developed by the National Cattlemen's Beef Association (NCBA). Finally, in Chapter 10, David Anderson provides a summary of the comments made by the discussants and participants at the workshop in Kansas City, MO. The box on pages *x–xi* provides a summary of the key findings from our work.

While we offer these findings—which can largely be characterized as urging caution before changing a system that has resulted in cattle producers capturing significant value over the last 3 decades—we acknowledge the palpable frustration of many producers throughout the country. In many cases, their frustration seemingly stems from feeling like they aren't receiving the prices they think they should and the fact that economists often simply urge caution instead of offering finite answers. For example, as noted in the findings, economists are generally quite comfortable saying that price discovery is still quite robust, but we can't pinpoint the point at which that would cease to be the case. Unfortunately, we are limited to what we know, and that is what we've endeavored to outline in this book. Further, finite answers may not exist (and may never exist) because they are situation specific, and circumstances in the market are constantly changing.

With that said, if Congress and/or USDA wish to make even more informed decisions, then additional research is in order. While Congress could certainly revisit confidentiality requirements in the context of reauthorizing LMR—for example, making more data publicly available for analysis—there are legitimate reasons for making sure confidential business data is protected. On the other hand, USDA has collected enormous volumes of data via LMR over the last 2 decades, much of which has never been independently analyzed. As such, *in lieu of* relaxing confidentiality requirements, Congress may wish to consider requiring USDA to contract for additional analysis but in a manner that protects business-sensitive information. There are a number of analytical tools that could be brought to bear, but so far, independent analysis is limited to a small subset of data that is made publicly available. As John Anderson, one of our chapter authors, recently quipped:

> *Why do we keep studying the moon through binoculars when we have the Hubble Space Telescope sitting right there?*

In the meantime, we would urge extreme caution in making changes to a system that has grown organically over time to reward high-quality beef production in a way that acknowledges regional differences throughout the country.

Finally, a housekeeping note: this book is admittedly very technical and assumes a working knowledge of the industry. Where possible, we've tried to define terms, but we undoubtedly missed some. Further, many of these chapters are looking at varying angles on a common issue—principally, fed cattle pricing. Consequently, there is overlap between various chapters. Rather than forcing the reader to constantly refer to earlier chapters (for similar charts and definitions in particular), they are left in place throughout the book.

Key Findings from AFPC's Evaluation of Cattle Markets

General

1. The beef cattle industry is one of the most—if not the most—complicated markets in agriculture, and stakeholders throughout the supply chain have a number of varied viewpoints.
2. Our capacity to answer questions is limited to the data that is collected, the timeframe over which it is collected, and the extent to which it is made publicly available.

Concentration

3. While not the central focus of the study, one can't discuss fed cattle pricing and capacity without acknowledging concerns over packer concentration. However, with respect to fed cattle pricing, research shows that alternative marketing arrangements (AMAs) do not create market power, because they do not change underlying supply and demand fundamentals.
4. While not necessarily a popular position, most economic research confirms that the benefits to cattle producers due to economies of size in packing largely offset the costs associated with any market power exerted by packers. Research indicates that there is market power, but its effect has been small.

Fed Cattle Pricing

5. Innovation via AMAs originated with feeders who were attempting to capture value associated with improved quality. There has been tremendous variability in the adoption of AMAs, with the Texas-Oklahoma-New Mexico region by far being the largest users of AMAs.
6. Reliance on formula pricing significantly reduced transaction costs associated with negotiation and induced predictability in the supply chain.
7. Among the cattle market economists consulted, there was general agreement that price discovery in fed cattle markets is still robust despite the fact that less than 30% of the transactions are negotiated (or cash).
8. While some argue that imposing mandatory minimums on negotiated (or cash) transactions would improve price discovery in the fed cattle markets—accruing benefits to the cow/calf producer in the process—authors in this book argue it could have the opposite effect, potentially imposing huge costs that are passed down to cattle producers in the form of lower prices.
9. While the costs associated with imposing mandatory minimums could be huge, that is predicated on the statute being drafted in a way that is enforceable by USDA. The transaction types are so loosely defined that satisfying a mandate may simply be done by reporting a different transaction type—for example, even if the transaction was formula based, a buyer could make a phone call and subsequently report it as a "negotiation." The rules of what constitutes a negotiation would have to be carefully defined for mandatory minimums to have the intended effect.
10. While the economists consulted argued that fed cattle price discovery was still robust, they also noted that additional transparency in general would be good because it could help build confidence in the market. They also noted that a contract library could be a good option (or at least wouldn't hurt).

Capacity

11. The experts consulted in this study repeatedly stressed the cyclical nature of the cattle business. While cattle supplies have outpaced available packing capacity, that will not always be the case. As a result, anyone who decides to build additional capacity must understand those market dynamics and be aware that packer margins can plummet with that cycle. The decline in packing capacity has occurred over several decades; it is not just a recent event.
12. As a result, expansion of small and regional packing capacity needs to be done in a way that is sustainable and economically viable. While the program is still being implemented, the funding recently made available by the Biden Administration may help meet that demand for additional capacity.

Contributers

David P. Anderson is a Professor and Extension Economist with the Texas A&M AgriLife Extension Service. His work involves the analysis of livestock market economics and policy. David received his BS and MS from the University of Arizona and his Ph.D. from Texas A&M University.

John D. Anderson is a Professor and Head of the Department of Agricultural Economics and Agribusiness at the University of Arkansas. He also serves as Director of the Fryar Price Risk Management Center of Excellence. His work has involved describing and assessing the farm- and sector-level impacts of policy, regulatory, and market developments across a wide variety of agricultural commodities and markets. John received his Ph.D. in Agricultural Economics from Oklahoma

State University, his BS from the College of the Ozarks, and his MS from Arkansas State University.

Christopher T. Bastian is a Professor in the Department of Agricultural and Applied Economics at the University of Wyoming. His research has largely focused on market issues, production management, and natural resource concerns affecting agricultural producers, particularly related to livestock. Christopher received his Ph.D. in Agricultural and Resource Economics from Colorado State University and his BS and MS from the University of Wyoming.

Justin R. Benavidez is an Assistant Professor and Extension Management Economist with the Texas A&M AgriLife Extension Service. Justin works in the areas of farm management, livestock, row crops, farm policy, marketing, and water's impact on agriculture. Justin received his BS, MS and Ph.D. in Agricultural Economics from Texas A&M University.

Scott Brown is an Associate Extension Professor in the Division of Applied Social Sciences and the Director of Strategic Partnerships for the College of Agriculture, Food and Natural Resources at the University of Missouri. Scott received his Ph.D. in Agricultural Economics from the University of Missouri and his BS in Agricultural Business from Northwest Missouri State University.

Kenneth H. Burdine is an Associate Extension Professor of Livestock Economics at the University of Kentucky. Kenny's extension program largely focuses on marketing, profitability, and price risk management. Kenny received his BS, MS, and Ph.D. in Agricultural Economics from the University of Kentucky.

Brian K. Coffey is an Associate Professor in the Department of Agricultural Economics at Kansas State University. He teaches undergraduate courses in production economics and futures markets. His research is focused on the scholarship of teaching and learning, consumer demand analysis, and livestock economics. Brian received his Ph.D. in Agricultural Economics from Kansas State University and his BS and MS in Agricultural Economics from the University of Kentucky.

Stephen R. Koontz is a Professor in the Department of Agricultural and Resource Economics at Colorado State University. He has recently worked on a variety of market assessments regarding the thinning cash trade in fed cattle and beef. Stephen has a BS and MS in Agricultural Economics from Virginia Polytechnic Institute and State University and a Ph.D. in Agricultural Economics from the University of Illinois.

Joshua G. Maples is an Assistant Professor and Livestock Extension Economist at Mississippi State University. His primary extension and research area is livestock market analysis. Josh received his Ph.D. in Agricultural Economics from Oklahoma State University and his BS and MS in Agricultural Economics from Mississippi State University.

Charley C. Martinez is an Assistant Professor and Extension Economist in the Department of Agricultural and Resource Economics at the University of Tennessee. His work involves the fields of farm and financial management, and the analysis of livestock and meat market economics and policy. Charley received his BS in Agricultural Business-Ranch Management from Texas A&M University-Kingsville and his Ph.D. in Agricultural Economics from Texas A&M University.

Andrew M. McKenzie is a Professor and Associate Director of the Fryar Price Risk Management Center of Excellence in the Department of Agricultural Economics and Agribusiness at the University of Arkansas. His research interests include the role of transportation in grain marketing, price risk management strategies in poultry and grain markets, food safety issues, and the informational role played by financial and commodity markets in transmitting price signals. Andrew received his BA in Administrative Studies from the University of Dundee, his MS in Investment Analysis from Stirling University, and his Ph.D. in Economics from North Carolina State University.

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Ted C. Schroeder is a Professor in the Department of Agricultural Economics at Kansas State University where he conducts research on livestock and meat marketing and teaches classes in risk management and agricultural marketing. Ted received his Ph.D. in Agricultural Economics from Iowa State University and his BS in Agricultural Economics from the University of Nebraska.

Glynn T. Tonsor is an Assistant Professor in the Department of Agricultural Economics at Kansas State University. His current efforts are primarily devoted to a range of integrated research and extension activities with a particular focus on the cattle/beef and swine/pork industries. Glynn obtained his Ph.D. in Agricultural Economics from Kansas State University and his BS in Agricultural Business from Missouri State University.

Acknowledgments

Bart L. Fischer and Joe L. Outlaw

This book is the product of a partnership between the Agricultural and Food Policy Center (AFPC) at Texas A&M University and the Office of the Chief Economist at the United States Department of Agriculture (USDA–OCE). The work originated from a request by the bipartisan leadership of the Committee on Agriculture in the U.S. House of Representatives during the 116th Congress.

The project was partly funded via a cooperative agreement with USDA–OCE. Seth Meyer, Chief Economist, and Callie McAdams, Senior Economist, managed the project within USDA. We thank them both for their support and insightful comments throughout the project. We also thank the bipartisan staff on the House Agriculture Committee for their help and feedback throughout the project.

The core of this project is a series of papers commissioned from experts across the country. The authors were exceptionally diligent in meeting very stringent deadlines and in presenting the results of their work at a workshop in Kansas City, MO, on June 3–4, 2021. They were joined by four discussants who offered a diversity of perspectives at the workshop, as did many others who simply came to attend. This topic attracts a lot of interest and a variety of opinions, and that was on full display at the workshop.

Finally, this book would not be possible were it not for the exceptional team at AFPC that is frequently called on to analyze a wide array of policy issues related to agriculture. Brian Herbst coordinated the project within AFPC. David Ernstes served as technical editor for the book and formatted the final product. Sandra Norman managed conference registration and travel. Allison Wilton provided an initial review of each chapter. Finally, this was an all-hands-on deck project, with each member of our team playing a role in making sure the project was successfully completed on time.

Chapter 1

How We Got Here: A Historical Perspective on Cattle and Beef Markets

DERRELL S. PEEL

Introduction

> *"The beef cattle industry is caught up in difficult times.*
>
> *As economic pressures intensify, reactions tend to move away from the objective and toward the emotional. Calls for solutions are becoming more strident and many are taking the form of proposed legislative remedies. Increased regulation of how buyers and sellers do business, legislative or world court actions to stop imports of live cattle, laws to mandate the reporting of price information and terms of trade, country of origin labeling, and a host of other 'solutions' to low prices and to producer-level losses are being proposed.*
>
> *There is a danger in all this, and the biggest danger is not in the long history of, at best, mixed results in efforts by the government to legislate solutions to economic problems. The big danger is that all the attention on short-run and highly visible issues will block recognition of the problems that are long run and struc-*

tural in nature and, in the process, prevent efforts to move to programs and policies that have a legitimate chance of helping."

The quote above is an apt assessment of the current situation in the U.S. cattle and beef industry. However, the passage is not new; it was written by Dr. Wayne Purcell in 1999 (Purcell, 1999). The issues facing the beef cattle industry today are not new; indeed, they have changed little in the past 30 years, and some have roots that extend back over a century. It is perhaps reassuring that the industry has, for the most part, avoided embarking on policies targeting issues "that are more nearly peripheral in nature and often deal with the symptoms of economic problems rather that the causes" (Purcell, 1999). Mandatory Country of Origin Labeling (mCOOL) is a notable exception to that, but the United States did back away from the detrimental policy. However, like many other issues, mCOOL has not gone away. Indeed, the emotions, anger and frustration accompanying recent events such as the Holcomb packing plant fire in 2019, the ongoing COVID–19 pandemic beginning in 2020, and the winter storm of February 2021 have fueled demands for an array of potential legislative actions that attempt to jump to a solution without addressing the complex structural and behavioral issues that brought the industry to the current situation. The risk is that these overly simplistic solutions will have long-term detrimental impacts on cattle producers, the industry, and consumers, and jeopardize the ability of the industry to compete in dynamic global protein markets for a successful future.

The issues facing the beef cattle industry today are not new; indeed, they have changed little in the past 30 years, and some have roots that extend back over a century.

The risk is that these overly simplistic solutions will have long-term detrimental impacts on cattle producers, the industry, and consumers, and jeopardize the ability of the industry to compete in dynamic global protein markets for a successful future.

The more pressing need, as identified by Dr. Purcell, is to understand and address issues "that would help the long run and structural issues that are prompting the price pressures" (Purcell, 1999). There is critical need to understand why the industry has evolved to have the structure that exists today and to function the way that it does. Individual firms and producers respond to the economic incentives that influence their actions. Collectively, these actions sometimes produce an industry structure and market outcomes that may not be desirable, in some respects, to the broader industry. If the industry desires to change or modify those outcomes, it is imperative that proposed solutions carefully evaluate new or changed incentives and the likelihood that desired outcomes are feasible or sustainable and, most critically, to understand potential unintended consequences and undesirable outcomes that may accompany proposed solutions.

The objective of this chapter is to provide a brief history of the beef cattle industry and a historical perspective on structural changes and the evolution of industry characteristics and practices that determine the current structure and status of the industry. Profound changes in the beef cattle industry began in the 1960s and 1970s with the introduction of boxed beef technology fundamentally changing beef merchandising, the arrival of European continental genetics, and the development of commercial cattle feeding in the Plains. Arguably the most profound changes occurred in the 1980s and 1990s with dramatic increases in packer concentration, growth in cattle feeding, increased beef grading and dramatic changes in beef marketing, development of value-based cattle marketing, growth in international beef and cattle trade, and growing captive supply concerns. The 2000 to 2010 period saw recovery in beef demand from the late 1990s low, increasing use of alternative fed cattle marketing arrangements, dramatic growth in the ethanol industry leading to profound changes in crop agriculture and feed markets, and more development of branded and specialized beef markets. The period from 2010 to today has been characterized by several events—a historic drought in 2011 to 2013 resulting in unprecedented cattle prices in 2014 to 2015, reductions in packing capacity, the first significant cyclical expansion in cattle numbers in 25 years, unprecedented growth and expansion in global beef trade, and most recently, a barrage of black swan events since 2019 dominated by the COVID–19 pandemic.

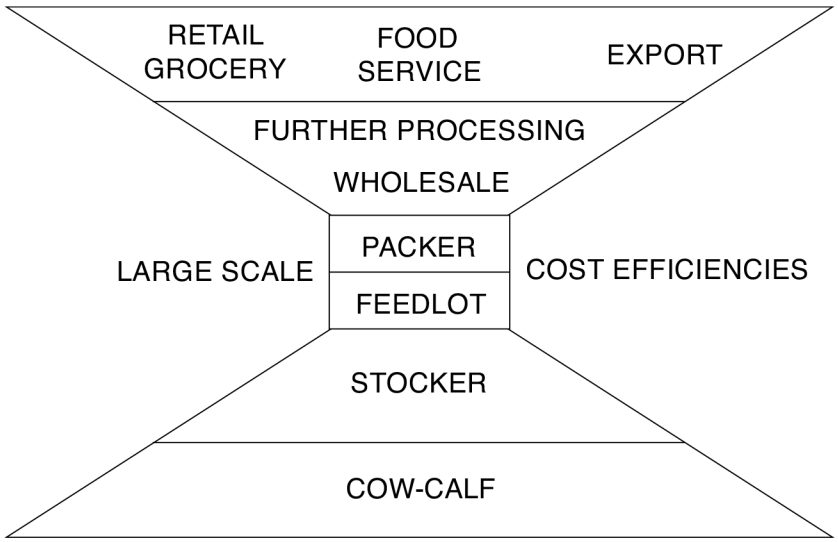
The Most Complex Set of Markets Anywhere

It is reasonable to ask why the beef cattle industry should be plagued with so many contentious issues that have persisted for so long. Much of the reason is attributable to the fact that the U.S. cattle and beef industry may well be the most complex set of markets in existence. In its entirety, the cattle and beef industry represents an extraordinarily complicated set of cattle production and marketing activi-

ties which provide the source of a massive set of beef products marketed through a diverse set of final markets and all coordinated by a multitude of interrelated market transactions.

No single graphic can represent the tremendous complexity of the beef cattle industry, but *Figure 1.1* provides a representation of some of the many factors that comprise the cattle and beef industry. *Figure 1.1* shows that cattle originate in a

Figure 1.1. Beef Industry Structure.



It is reasonable to ask why the beef cattle industry should be plagued with so many contentious issues that have persisted for so long. Much of the reason is attributable to the fact that the U.S. cattle and beef industry may well be the most complex set of markets in existence.

dispersed and diverse cow-calf production sector, which are assembled and aggregated through multiple production and marketing activities before being marketed from a relatively concentrated feedlot sector into a highly concentrated packing sector. Many beef products originating from beef packers are transformed into thousands of different beef products by further processors and food distributors before being marketed through a diverse set of supply chains that support retail grocery, food service and export markets. The list of factors that contribute to the vast complexity of the cattle and beef industry includes:

- Multiple distinct and separate production sectors (cow-calf, stocker, and feedlot),
- Geographically dispersed primary production with many small producers,
- Tendency for multi-year cycles of production/prices,
- Ruminant biology impacts, such as,
  - Long production lags,
  - Single offspring/interaction between breeding and production, and
  - Ability to use a wide variety of feed resources,
- Interaction between production and marketing due to
  - Variable production systems,
- Seasonality of the many production and product markets,
- Assembly of animals regionally into larger marketing groups,
- Joint production/disassembly of carcasses into a vast array of products,
- Product perishability,
- Multiple product marketing sectors,
- Many diverse final markets, and
- Dairy sector interaction with beef industry.

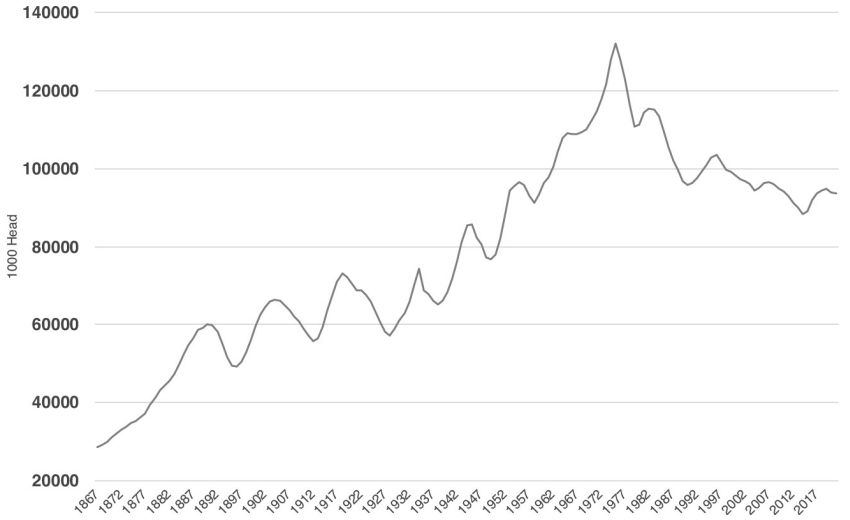
The complicated industry described above and illustrated in *Figure 1.1* involve many different economic decision-makers and these factors all contribute to an intricate set of markets over time and space needed to provide a steady flow of perishable products. The difficulty for market participants at all levels to recognize and appreciate the enormous complexity of this massive set of markets and relationships is understandable.

A Brief Early History of the North American Cattle Industry

Christopher Columbus brought cattle to the New World on his second voyage in 1493. In 1521, Hernán Cortés brought cattle to present day Mexico. The same year, Ponce de León brought cattle to present day Florida, though it likely was subsequent introductions that established cattle in the southeast United States. Cattle proliferated in central Mexico and moved north in the 16th century following the mining industry. By the early 17th century, cattle reached the Rio Grande and moved into present-day Texas, brought by the Spanish missions established in the region. Through the 17th and 18th centuries, Spanish cattle, escaped from or released by the missions and perhaps reflecting a touch of oxen breeding, became established and evolved into the iconic Texas Longhorn, running wild over a huge territory in present-day Texas.

The cattle industry that we recognize today really began in the post-Civil War period as returning soldiers established or reclaimed ranches abandoned before the war. Burgeoning beef demand in population centers in the eastern United States led to the roundup of millions of Longhorn cattle and resulted in the signature cattle drives in the late 19th century. It was also during this period that one of the most salient characteristics of the cattle industry emerged . . . the cattle cycle. *Figure 1.2* shows the inventory of cattle and calves since 1867 and the pronounced tendency of the industry to experience multi-year cycles of inventory expansion and liquidation. The cyclical tendency has persisted regardless of whether the industry was trending higher or lower in overall inventory and is still a characteristic feature of the industry today.

Figure 1.2. All Cattle and Calves, 1867–2021.



Source: USDA–NASS, compiled by LMIC.

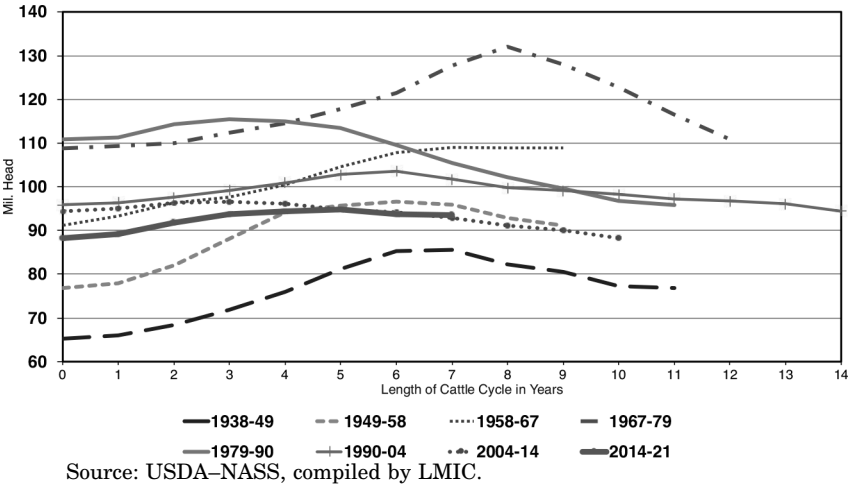
The era of open range and cattle drives was short lived as barbed wire fenced the range and westward expansion of railroads increased access to railheads. By the late 19th century, major stockyards developed next to packing companies in Chicago, Omaha, Kansas City, Fort Worth, and Oklahoma City. Cattle shipped to these terminal markets, mostly by rail, were traded by private treaty through stockyard commission companies. As the trucking industry developed, the influence of the railroads declined, and the role of the central stockyards declined. In the 1950s, packing companies began to relocate closer to cattle feeding and the large urban stockyards like Chicago, Kansas City, and Fort Worth declined and ultimately closed. Some of these terminal markets converted to auctions and continued as feeder cattle mar-

kets. The Oklahoma City stockyards, for example, changed to the auction format in 1961 and still conducts all sales through commission companies, a remnant of the terminal market structure. The St. Joseph stockyards recently announced that the auction would close in May 2021 after 134 years in business as stockyards and later an auction.

Inventory Trends and Cattle Cycles

Figure 1.2 highlights the long-term trends in the cattle industry. Cattle numbers grew, with cyclical variation, in a steady trend upwards to a sharp peak of 132 million head in 1975. After the peak, cattle numbers declined, with continued cyclical variation, to under 110 million head a decade later in 1985, then to less than 103 million head by 1995; By 2005, cattle numbered 95 million head. In the past 10 years, all cattle and calves' inventory has averaged 92.1 million head, ranging from a recent low of 88.2 million head in 2014 to a recent cyclical peak of 94.8 million head in 2019. The January 1, 2021, inventory total was 93.6 million head. The inventory cycles apparent in *Figure 1.2,* when plotted from low to low as repeating patterns in *Figure 1.3,* give rise to the so-called "Ten Year Cattle Cycle." In spite of this title, the figure shows that the last seven complete cycles have ranged from 9 years to 14 years, with only one cycle (2004 to 2014) being exactly 10 years in length.

Figure 1.3. Total Cattle Inventory by Cycle, United States, January 1.



Source: USDA–NASS, compiled by LMIC.

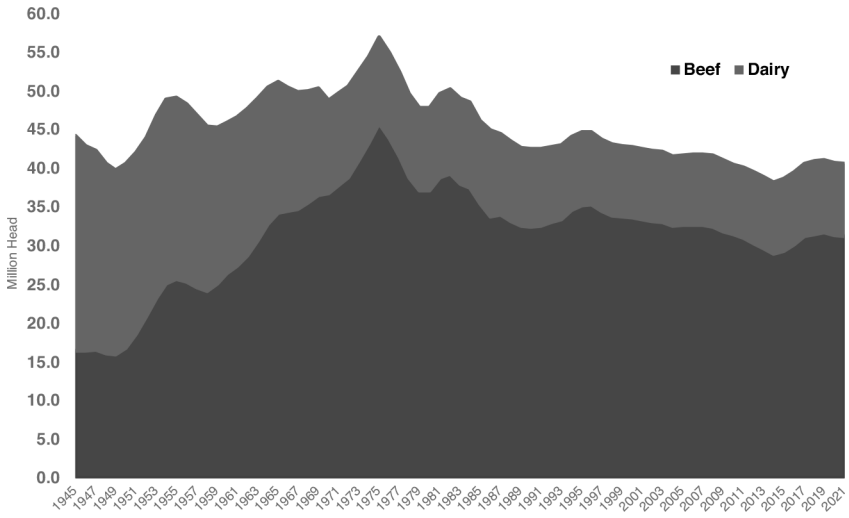
Table 1.1. Beef Cow Inventory, Top 15 States and United States, 1950, 1975 and 2021.

Rank	1950		1975		2021			
	State	1,000 Head	State	1,000 Head	State	1,000 Head	Percent of 1950	Percent of 1975
1	TX	3,302	TX	6,895	TX	4,685	141.9	67.9
2	NE	1,051	MO	2,759	OK	2,189	285.4	80.7
3	KS	928	OK	2,713	MO	2,035	342.6	73.8
4	SD	810	NE	2,374	NE	1,900	180.8	80.0
5	OK	767	SD	2,116	SD	1,799	222.1	85.0
6	MT	754	KS	1,978	KS	1,477	159.2	74.7
7	CA	622	IA	1,835	MT	1,419	188.2	83.9
8	NM	619	MT	1,692	KY	983	525.7	68.8
9	CO	615	FL	1,468	ND	975	293.7	78.5
10	MO	594	MS	1,458	FL	929	166.8	63.3
11	IA	588	KY	1,429	AR	925	451.2	73.5
12	FL	557	TN	1,349	TN	900	491.8	66.7
13	LA	475	AR	1,259	IA	890	151.4	48.5
14	WY	431	ND	1,242	WY	702	162.9	87.1
15	AZ	393	AL	1,238	AL	697	224.8	56.3
U.S.	—	16,743	—	45,712	—	31,158	186.1	68.2

The U.S. cow herd, consisting of beef and dairy cows, is the source of calf production and thus the ultimate supply of cattle for the beef industry. *Figure 1.4* shows the inventories of beef and dairy cows since 1945 and the changing roles of the two cattle sectors over time. Beef cows made up just 37 percent of the total cow numbers in 1945. Beef cow numbers grew rapidly and by the peak in 1975, beef cows represented a peak level of just over 80 percent of all cows. Beef cows have represented roughly 77 percent of the total cow inventory for the past 40 years with a recent low of 75.9 percent in 2014. On January 1, 2021, beef cows represented 76.7 percent of all cows.

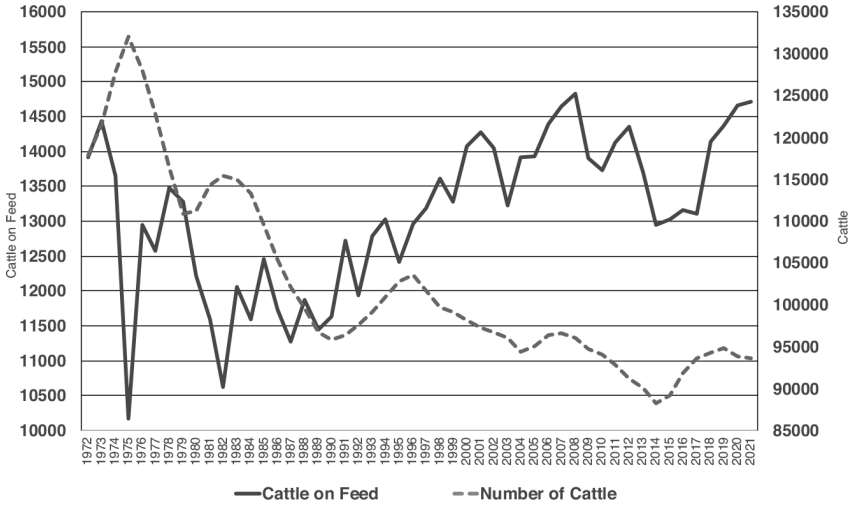
Table 1.1 shows the fifteen largest beef cow states at various points in time and regional changes in cow-calf production over time. In 1950, the beef cattle industry was concentrated even more in the West than today. For example, California, Colorado, New Mexico, and Arizona were all in the top fifteen states in 1950, but fail to make the list currently. *Table 1.1* shows that some states increased faster from 1950 to 1975, with some states having declined more from peak 1975 levels. Several states increased proportionately more than others over time. Most dramatic are the increases in beef cows since 1950 in Kentucky, Tennessee, and Arkansas, none of which made the list in 1950. North Dakota made the top fifteen by 1975 and increased to number nine currently. Several traditionally large beef cow states increased in rank from 1950 including Oklahoma and Missouri, while others remained highly ranked including Florida, Kansas, Montana, Nebraska and South Dakota. Iowa increased in rank from 1950 to 1975 then dropped significantly to 2021, at only 48.5 percent of the 1975 level.

Figure 1.4. United States Cow Inventory, 1945–2021.



Source: USDA–NASS, compiled by LMIC.

Figure 1.5. Cattle on Feed and All Cattle and Calves Inventory, 1,000 head, January 1.

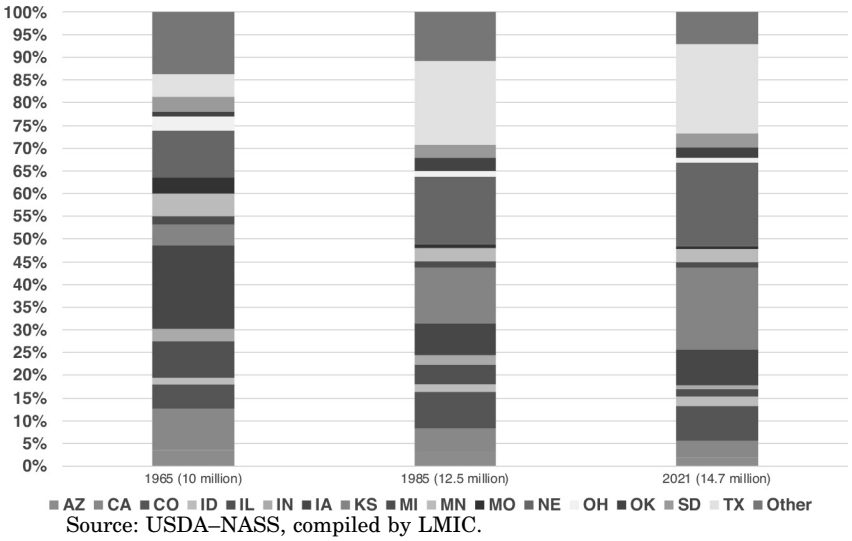


Source: USDA–NASS, compiled by LMIC.

Dairy Sector Impacts

The dairy industry operates under economic forces that drive milk production. While these are quite separate from the beef industry, the animals used in dairy production ultimately become part of the beef supply. Slaughtered animals include male dairy calves, culled dairy replacement heifers, and culled dairy cows. The dairy sector is generally more stable and not, for example, subject to the cyclical variation typical of the beef cattle industry. However, normal dairy industry dynamics can sometimes serve to compound and exaggerate beef industry dynamics and at other times offset and mute beef industry dynamics. On occasion, the dairy industry has been the source of dramatic shocks to cattle markets, most notably the infamous (from a beef perspective) dairy herd buyout in 1986. On average, the dairy sector contributes 15 to 20 percent of total beef supplies.

Figure 1.6. Cattle on Feed Share, Selected States, 1,000 head, January 1.



Source: USDA–NASS, compiled by LMIC.

Dairy animals are discounted for their poorer productivity (gains, feed efficiency, *etc.*) as well as carcass yield and muscle conformation. Dairy steers are typically placed on feed at light weights and fed in feedlots for roughly a year. Because dairy genetics are very uniform, dairy steers finish very predictably and consistently produce high levels of Choice and Prime carcasses.

The previously described dairy production practices are changing rapidly at the current time. The availability of sexed semen is allowing the dairy industry to focus artificial insemination on the highest quality cows for producing replacement heifers while breeding the remaining cows (sometimes using semen sexed for male animals) to beef breeds to produce beef-dairy crossbred calves that will perform and be valued more closely to beef calves. The sharp distinction between beef and dairy calves in beef production will become much more blurry in the coming years.

Cattle Feeding

Cattle feeding developed rapidly in the post-World-War II period in the Corn Belt as farmer-feeders used cattle and hog feeding to market corn production. During this period, interest in carcass grading increased as consumer preferences for marbled beef developed. After limited beginnings in the 1950s, large commercial feedlots developed in the Plains in the 1960s and cattle feeding expanded rapidly. The feedlot inventory was just under ten million head in 1965, increased to 12.5 million head in 1985, and was 14.7 million head in 2021 (*Figure 1.5*). *Figure 1.6* shows the shares of cattle on feed total by state and changes at these three points in time. The decrease in Midwest cattle feeding, including Iowa, Illinois, Indiana, and Ohio, is apparent in *Figure 1.6.* Just as obvious is the increase in cattle feeding in Texas, Kansas, Colorado, and additional growth in Nebraska. Cattle feeding in the Plains increased rapidly in the 1960s and early 70s with the development of irrigated crop agriculture that increased feedgrain supplies in the region and the use of steam flaked corn, which reduced the feed cost disadvantage of the plains compared to the Midwest. A smaller feed cost disadvantage combined with weather advantages to make the Plains region competitive with the Midwest. *Figure 1.7* shows annual cattle on feed inventories for Texas and Nebraska (the two largest cattle feeding states since 1977). The figure shows the rapid rise of cattle on feed in Texas in the late 1960s, passing Nebraska in 1971. January 1 feedlot inventories in Texas exceeded Nebraska from 1971 to 2015.

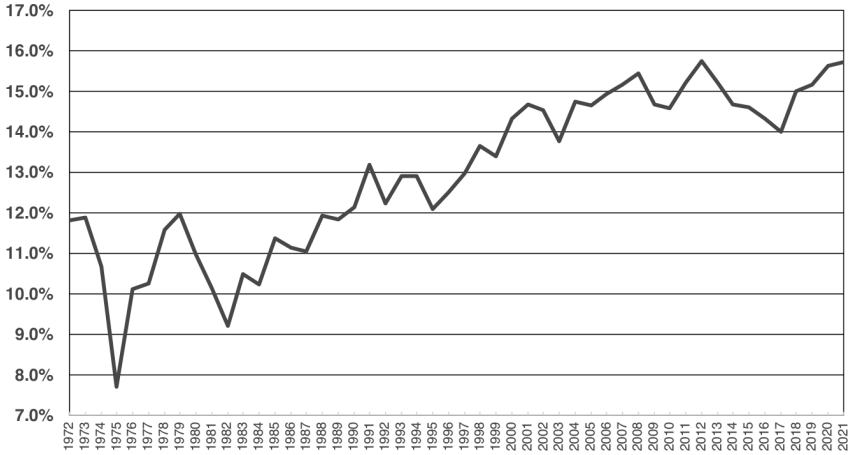
Figure 1.7. Cattle on Feed Inventory, 1,000 head, January 1.

Source: USDA–NASS, compiled by LMIC.

Figure 1.5 shows that feedlot production has generally increased since the 1980s. This is despite declining cattle numbers, also shown in *Figure 1.5. Figure 1.8* confirms that cattle on feed inventories have increased as a percent of total cattle inventories over the past 40+ years. *Figure 1.9* shows cattle on feed inventories as a percent of calf crop, as a percent of estimated feeder supply, and as a percent of total steer and heifer slaughter, all of which have trended up since the 1980s. *Fig-*

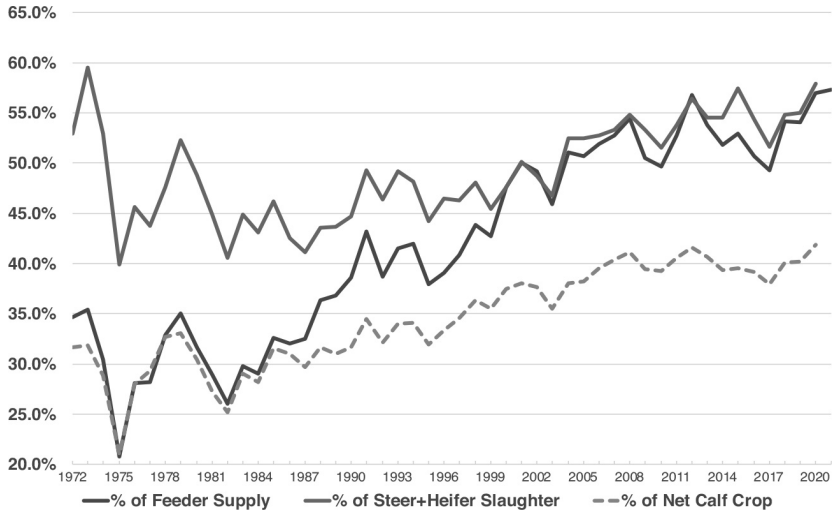
ure 1.10 shows that total feedlot capacity, as reported by USDA, has increased by roughly a million head in the past 20 years. Feedlots have been able to maintain inventories despite declining cattle numbers by reducing the turnover rate, *i.e.,* by increasing days on feed (*Figure 1.11*). This results from feeding cattle to bigger weights and by feeding significant numbers of lightweight placements, which need additional days on feed. *Figure 1.12* shows that feedlot placements have shifted in the past twenty years to include a larger percentage of heavy weight placements while maintaining the percentage of lightweight placements and reducing the proportions of traditional placements from 600 to 800 pounds. This has resulted in a more bimodal placement distribution in recent years.

Figure 1.8. Cattle on Feed Inventory as Percent of All Cattle and Calves, January 1.



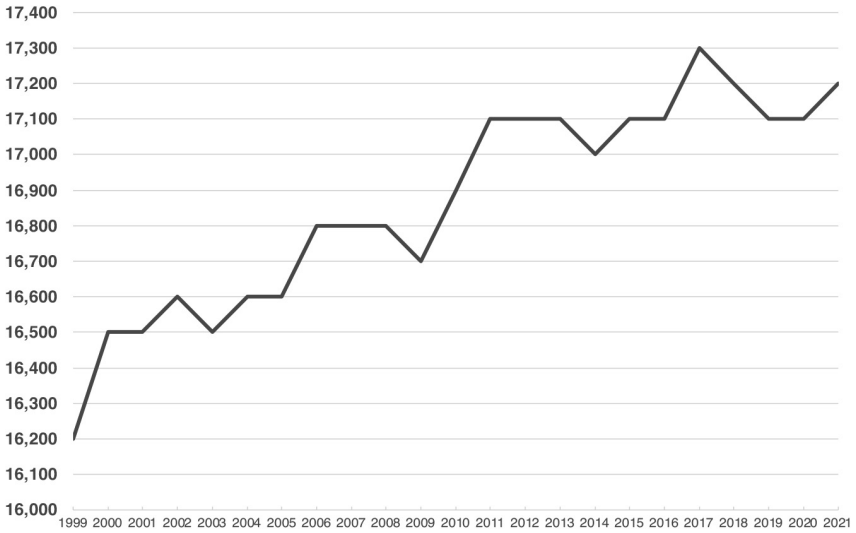
Source: Calculations by Peel from USDA–NASS data.

Figure 1.9. Cattle on Feed Inventory Increasing Relative to Industry, January 1.



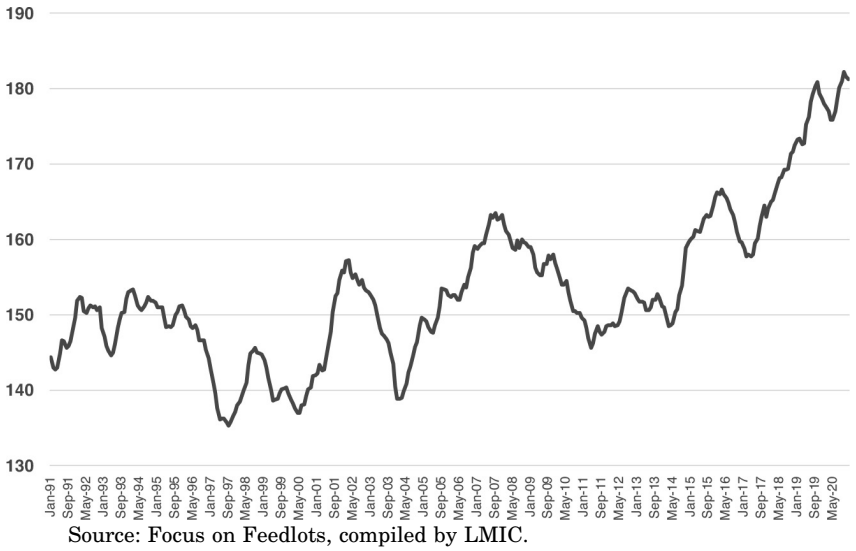
Source: Calculations by Peel from USDA–NASS data.

Figure 1.10. Feedlot Capacity, January 1, 1,000 head, 1999–2021.



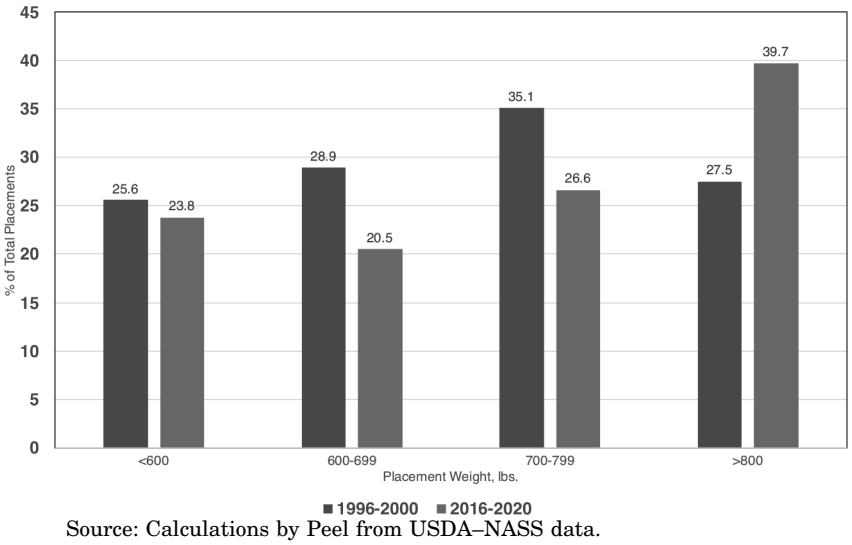
Source: USDA–NASS, compiled by LMIC.

Figure 1.11. Days on Feed, 12 month moving average, Kansas Focus on Feedlots.



Source: Focus on Feedlots, compiled by LMIC.

Figure 1.12. Distribution of Feedlot Placements by Weight.

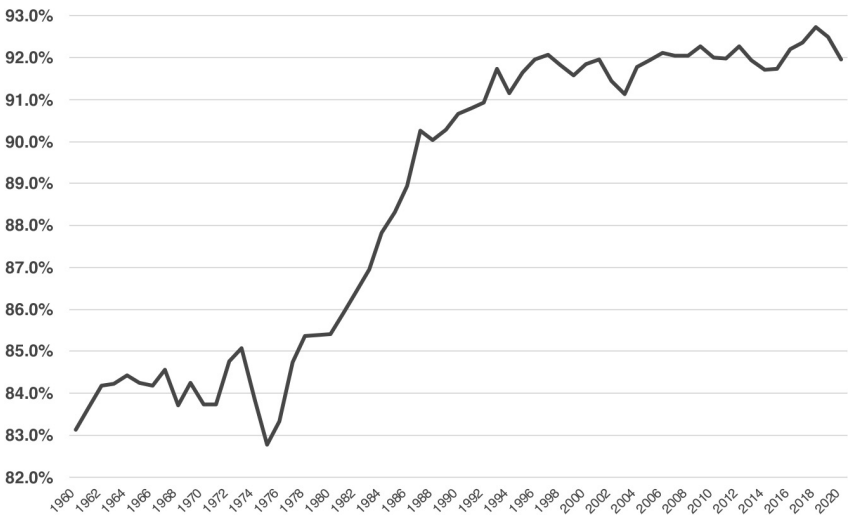


Source: Calculations by Peel from USDA–NASS data.

Heifer Feeding

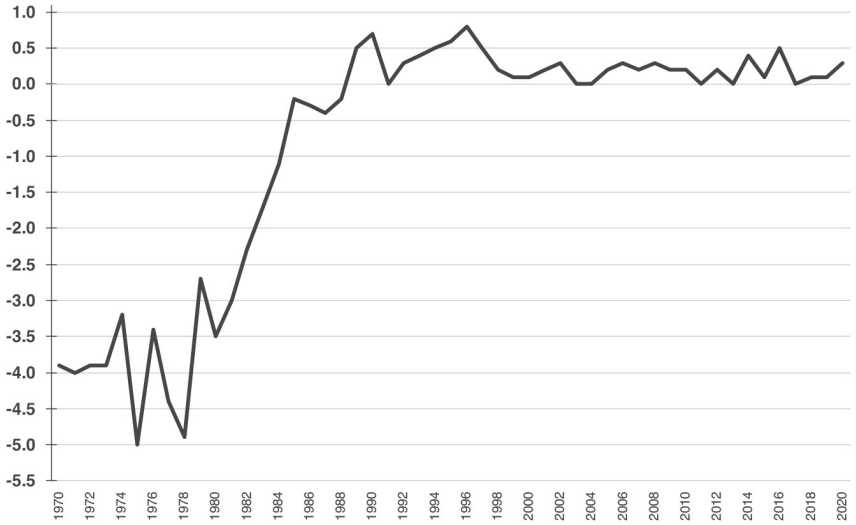
Beginning about 1980, heifer feeding received much more attention and improved rapidly and dramatically. Prior to that time, heifer feeding was treated as a residual—necessary, but not worthy of much management. *Figure 1.13* shows that prior to about 1980, heifer carcass weights averaged about 15 percent less than steer carcass weights. In a matter of about a decade, heifer carcass weights increased relative to steers and have averaged 91 to 92 percent of steer carcass weights for the past 30 years. At the same time, the fed heifer price improved from a roughly four percent discount to fed steer prices to a par level with fed steer prices (*Figure 1.14*). Of course, there are productivity differences in heifer gains and feed efficiency that are still reflected in the typical discount of feeder heifer to feeder steer prices.

Figure 1.13. Heifer Carcass Weight as Percent of Steer Carcass Weight, 1960–2020.



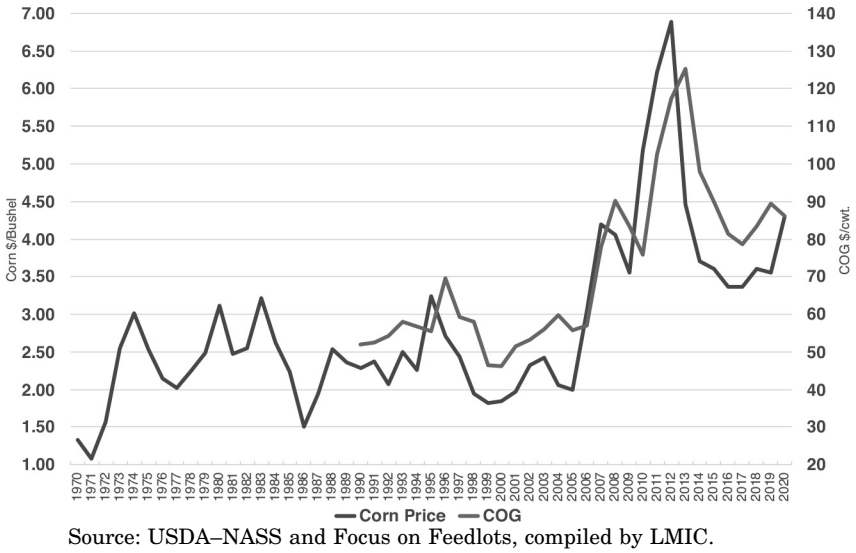
Source: Calculations by Peel from USDA–NASS data.

Figure 1.14. Percent Difference in Fed Heifer and Fed Steer Live Price, 1970–2020.



Source: Calculations by Peel from USDA–NASS data.

Figure 1.15. Corn Price and Feedlot Steer Cost of Gain (COG), 1970–2020.



Source: USDA–NASS and Focus on Feedlots, compiled by LMIC.

Ethanol Impacts

A fundamental change in cattle feeding occurred with the rapid expansion of the ethanol industry in 2006 to 2007. Corn used for food, seed and industrial purposes increased from an average of 2.4 billion bushels annually from 1997 to 2006 to an annual average of 6.2 billion bushels since 2007. National average corn prices averaged $2.27/bushel from 1970 to 2005 and have averaged $4.20/bushel in the period from 2006 to 2019 (*Figure 1.15*). Increased corn prices are reflected in higher feedlot cost of gain. *Figure 1.15* shows how feedlot cost of gain (COG) has increased similarly to the increase in corn prices. Ethanol production is heavily concentrated in the Corn Belt and the availability of distiller's grain feeds favors feed costs in the

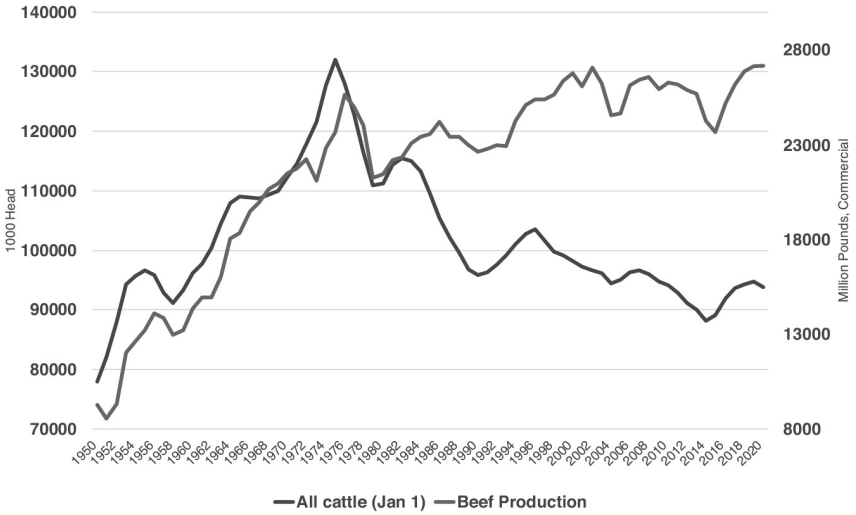
Corn Belt compared to the Plains. This was especially true in the initial years of the ethanol mandate. Economists predicted that the change in crop demand and use would have regional implications for cattle production with the competitive advantage shifting back to the Midwest (Peel, 2007). *Figure 1.7* shows that the gap between Texas and Nebraska cattle on feed inventories began to narrow after 2006 and by 2015, the combination of cost disadvantages and limited cattle supplies allowed Nebraska on-feed inventories to equal or exceed Texas from 2015 to 2019. In 2020 to 2021, increased cattle numbers and more time for market adjustments have allowed Texas to again regain the inventory advantage. However, a relative change in regional competitiveness remains.

The dramatic change in crop production due to ethanol production had other implications for cattle markets as well. Ethanol demand boosted corn acreage significantly. From 1997 to 2006, average annual corn planted acreage was 79.1 million acres which increased to 91.1 million acres from 2007 to 2016. Because of price relationships between corn and soybeans—and the fact that the two crops are often grown in fixed rotations—soybean acreage also increased after 2006. The increased crop acreage came from many places, but in the heart of the Corn Belt, more corn and soybeans meant less pasture. Total pastureland in Illinois, Indiana and Iowa decreased by 1.4 million acres, nearly 25 percent, between the 2007 and 2017 Census of Agriculture (USDA–NASS, 2009 and 2019). The number of beef cows in those three states also declined. The combined 5 year average inventory of beef cows in Illinois, Indiana, and Iowa decreased by 11.8 percent, nearly 200,000 head. This explains part of the decrease in Iowa's rank among major beef cattle states (*Table 1.1*).

Beef Production

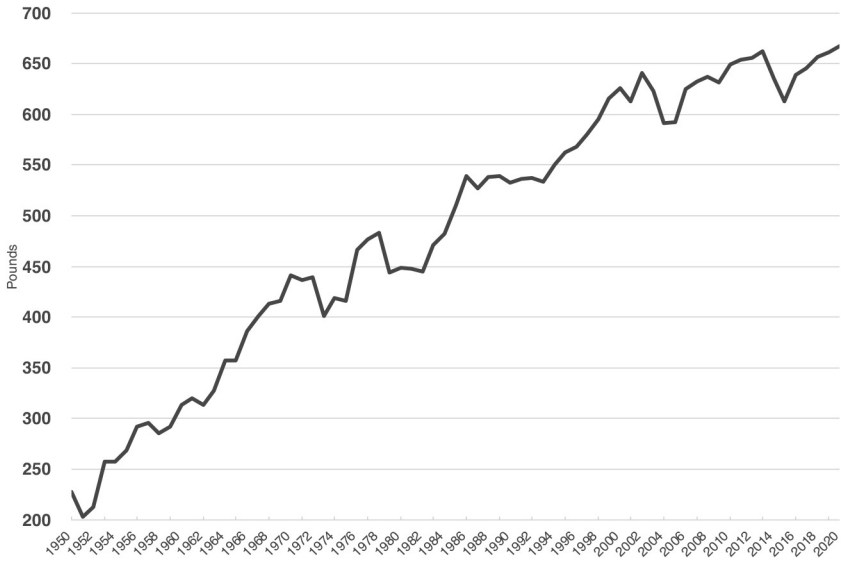
Following the peak cattle numbers in the mid-1970s, increased productivity in the beef industry helped maintain the level of beef production despite falling cattle numbers. Several factors contribute to this. In the short run, beef production and inventory adjustments are correlated. Thus, during liquidation phases of the cattle cycle, beef production increases as animals are removed from the breeding herd. In short, the industry must make beef production larger before it can get smaller. (Conversely, attempts to increase beef production require making a tight beef supply even tighter initially to save more females for breeding and invest in future production.) The inventory adjustments to beef production are temporary. Eventually, an ever-decreasing cattle inventory must necessarily lead to decreasing beef production.

Figure 1.16. All Cattle and Calves Inventory and Annual Beef Production, 1950–2020.



Source: USDA–NASS, compiled by LMIC.

Figure 1.17. Beef Production per Cow, 1950–2020.



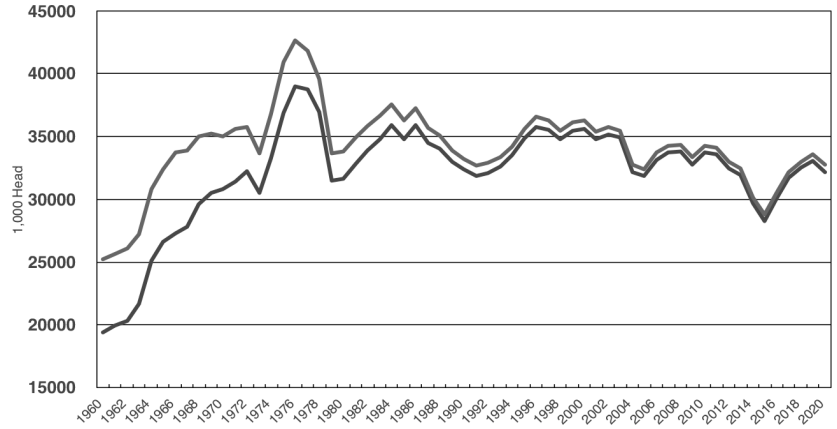
Source: Calculations by Peel from USDA–NASS data.

Figure 1.16 shows the relative change in beef production relative to cattle numbers since 1950. Beef production increased as cattle numbers increased until 1975 and has increased more slowly since then. It could be said that beef production has continued to grow despite the decrease in cattle numbers since 1975. It could also be said that increasing productivity since 1975 is the reason for declining cattle numbers since 1975. Beef production per cow is a broad aggregate measure of industry productivity that includes the inventory adjustments discussed previously, but also numerous other increases in productivity including larger carcass weights (discussed below), other improvements in management, and production efficiency. *Figure 1.17* shows that beef production per cow has generally increased since 1950 from less than 250 pounds per cow to over 660 pounds per cow currently.

Cattle Slaughter

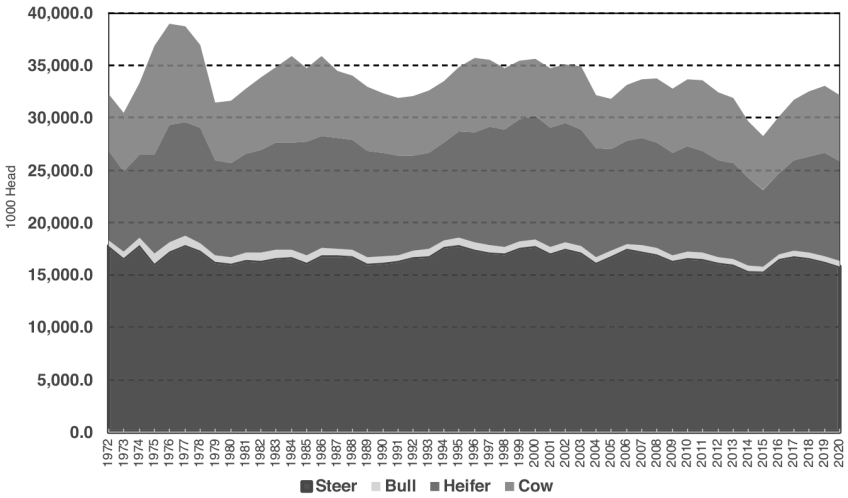
Cattle slaughter increased from 1960 as cattle numbers increased and reached a peak in 1976, 1 year after cattle inventories peaked and began a sharp liquidation (*Figure 1.18* and *Figure 1.2*). Total commercial cattle slaughter in 2020 was 32.8 million head, down 23 percent from the 1976 peak of 42.7 million head. Today, the vast majority of cattle slaughter is federally inspected resulting in the difference in commercial and federally inspected slaughter nearly disappearing in the past 3 decades (*Figure 1.18*). Total cattle inventories decreased 29 percent from the 1975 peak to current levels. *Figure 1.19* shows the breakdown of cattle slaughter by steers, heifers, cows, and bulls and highlights that steer slaughter averages 50 percent of total cattle slaughter and is quite stable over time. Female slaughter (heifers plus cows) makes up about 48 percent of total slaughter and are three to five times more variable compared to steers. This highlights the fact that the dynamics of heifer retention and cow culling that are the core components of the cattle cycle also produce variation in heifer and cow slaughter. It is this interaction between breeding and production and the corresponding female dynamics that drive most of the variation in cattle slaughter and beef production over time. One broad measure of productivity in the cattle industry is the production of steers and heifers for slaughter. This can be thought of as the industry extraction rate and is shown in *Figure 1.20*. Steer plus heifer slaughter as a percent of the total cattle inventory increased from 15 percent in 1960 to a peak of 30 percent in 2000 and declined to 27 percent in 2020.

Figure 1.18. Cattle Slaughter, 1960–2020.



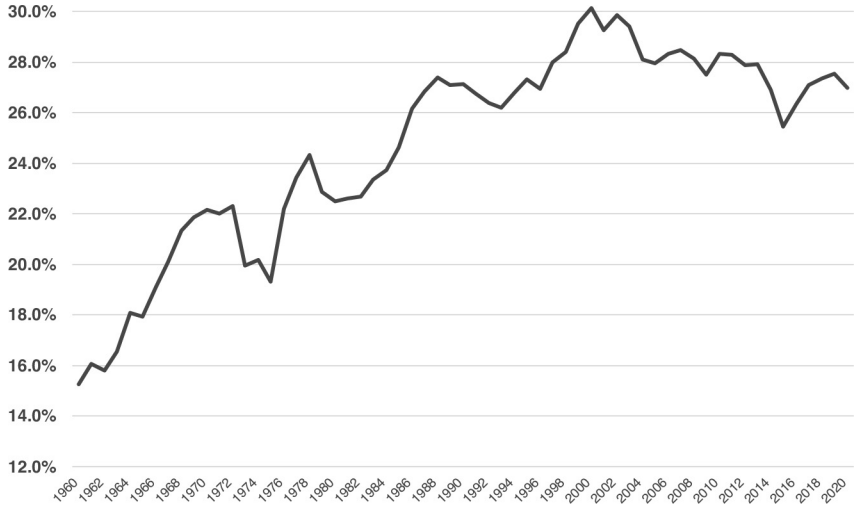
Source: USDA–NASS, compiled by LMIC.

Figure 1.19. Cattle Slaughter, Federal Inspection, 1972–2020.



Source: USDA–NASS, compiled by LMIC.

Figure 1.20. Steer and Heifer Slaughter as Percent of All Cattle and Calves, 1960–2020.



Source: Calculations by Peel from USDA–NASS data.

Carcass Weights

Carcass weights have increased on average since 1960. Steer carcass weights increased from 656 pounds in 1960 to 907 pounds in 2020, an average increase of 4.2 pounds per year (*Figure 1.21*). Heifer carcasses have increased from 546 pounds in 1960 to 834 pounds in 2020, increasing an average of 4.8 pounds per year (*Figure 1.21*). Increased attention to heifer feeding increased heifer carcass weight faster in the 1980s (*Figure 1.13*). Increased steer and heifer carcass weights are the result of genetics that have increased cattle size combined with feeding technology such as growth implants, ionophores, and beta agonists that push cattle weights. Feedlot production economics provide continued incentive for larger carcass weights, and it is not clear at what point a biological limit will be reached. However, there are moves at the cow-calf level to moderate cattle size to improve cow efficiency. Additionally, there are demand implications of larger and larger beef cuts (Maples, Lusk and Peel, 2017).

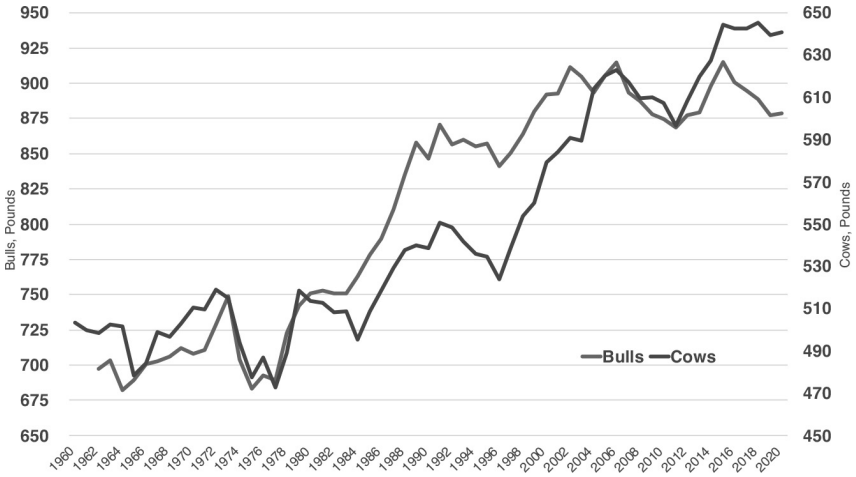
Bulls and cows are bigger as well with bull carcass weights increasing from 698 pounds in 1962 to 879 pounds in 2020, an average increase of 3.1 pounds per year (*Figure 1.22*). Cow carcass weights have increased from 499 pounds in 1962 to 641 pounds in 2020, increasing an average of 2.5 pounds per year (*Figure 1.22*). The difference in average cow size between dairy and beef cows means that the average cow carcass weight reflects the proportion of dairy and beef cows slaughtered. Separate data on beef and dairy cow slaughter has been available since 1986 and shows that beef cows have averaged 52 percent of total cow slaughter. Because of beef cow herd cyclical dynamics, the proportion of beef cows in the cow slaughter total has varied from 43 to 58 percent. The higher rate of increase of fed steer and heifer carcass weights compared to cow and bull carcass weights likely reflects the impact of the aforementioned feeding technologies. As a result, the gap between steer and bull carcass weights has been narrowing in recent years and annual average steer carcass weights in 2019 and 2020 exceeded the average bull carcass weight.[1]

[1] The fact that steer carcass weights exceeded bull carcass weights recently is a long-term structural trend that has been developing in the industry. In 1976, steer carcass weights exceeded bull carcass weights for a single year. This likely reflects industry adjustments to the spike peak in cattle numbers in 1975. The likelihood is that many young bulls were slaughtered as a result of the sharp decline in cow numbers in 1976 resulting in unusually low bull carcass weights for 1 year.

Figure 1.21. Steer and Heifer Carcass Weights, Average Annual, 1960–2020.

Source: USDA–NASS, compiled by LMIC.

Figure 1.22. Cow and Bull Carcass Weight, Annual Average, 1960–2020.



Source: USDA–NASS, compiled by LMIC.

Bull carcass weights increased more rapidly compared to cows in the 1980s. As a result, cow carcass weights declined relative to bull carcass weights from 1960 until the mid-1990s then increased (*Figure 1.23*). This may reflect the adoption of continental genetics and an industry push to increase frame size that accelerated in 1970s. Bulls reflected this size increase initially, increasing relative to cows until the mid-1990s before cow size began to catch up. Cow carcasses dropped from about 71 percent of bull carcass weights in the 1960s to a low near 62 percent in 1996 before increasing to 73 percent by 2020.

Beef Fabrication

The introduction of boxed beef fabrication technology in 1967 by Iowa Beef Processors (later IBP and later still Tyson) may well be the most significant factor impacting the beef industry in the past century. Boxed beef rapidly became the dominant wholesale beef technology in the 1970s and profoundly changed wholesale and retail beef markets because of the increased value and cost savings that accompany

boxed beef. Prior to boxed beef, carcasses were shipped to retailers or further processors for final fabrication. Swinging carcasses are very inefficient to ship compared to boxes that stack and utilize refrigerated shipping capacity much more efficiently. Moreover, fabricating carcasses into primals and subprimals at the point of slaughter removes bone, fat and trim that is costly to ship. Prior to boxed beef, most grocery stores had in-store butchers that fabricated retail cuts on-site. Some larger grocery chains had centralized facilities to provide partial fabrication of carcasses prior to shipping to store butchers. Restaurants likewise either utilized in-house butchers or relied on local further processors to source beef products. Boxed beef technology facilitated significant increases in total carcass value by allowing specific beef products to be directed efficiently to specific markets to meet product demand. Beef packers integrating boxed beef fabrication into the slaughter operations represented the first of many subsequent shifts of beef product development further upstream into increasingly centralized operations.

Figure 1.23. Cow Carcass Weight as Percent of Bull Carcass Weight, 1960–2020.

Source: Calculations by Peel from USDA–NASS data.

Declining beef demand in the 1980s (discussed below) led to a series of product changes and innovations that continue today. Growing consumer preferences for "lean" beef led to early interest in grass-fed beef in the 1980s and 1990s that was not, for the most part, very successful. However, this interest led to changes in wholesale beef product standards from traditional "commodity" trim of 1″ of fat cover to "close-trim" produced by physically removing fat during fabrication. It turned out that consumers mostly wanted closely trimmed fed beef rather than grass-fed beef that generally (at that time) had little marbling. Trimming fat at the packer level was additionally efficient by further reducing shipping costs and facilitating markets for edible and inedible tallow rather than simply being waste trim for downstream customers. Over time, more and more fabrication has shifted to the packer level moving from primals to subprimals to a growing set of specific beef products including more boneless and peeled (denuded of fat) products and ultimately to case-ready products. Packers increasingly have additional fabrication facilities producing value-added products including marinated and cooked products and, importantly, case-ready fresh beef for retail grocery. With a few notable exceptions, major grocery chains do not maintain butcher shops in stores and have little ability for in-store fabrication. Some small/independent grocers continue to utilize in-store butcher shops but now can source exactly the set of wholesale beef products desired for the grocery case. Previously grocery stores had to find a way to merchandise all the products that resulted from in-store carcass fabrication. Packers fabricate to specific product specifications for various retail grocery customers, further processing and food service customers, and a variety of export markets. As a result, the major packers produce several thousand different products from a basic fabrica-

tion process that begins with several hundred carcass products and byproducts of slaughter and fabrication. Some packing facilities in certain locations have some or all packing capacity dedicated to value-added programs that operate as sole-source for upstream suppliers and downstream markets.

Beef Further Processing and Distribution

The food service sector consists of a wide range of restaurants, schools, and institutions such as hospitals and other service facilities and was previously referred to as HRI (hotels, restaurants, and institutions). The end users in this sector rely on further processing and food distribution companies to provide specific beef products. Further processors amplify the set of packer-sourced wholesale boxed beef products into an even larger array of fresh and frozen beef products including portion-control cuts and products that are tenderized, marinated, seasoned, breaded, and partially/fully cooked. This sector provides a variety of services for food service customers in addition to product processing, including product aging (wet or dry), cold storage (refrigerated, deep chill (suspended fresh) or frozen), and packaging for back-of-house restaurant convenience and efficiency.

The COVID–19 pandemic revealed, somewhat to the shock and surprise of both consumers and producers, that the supply chains for retail grocery and food service are largely separate, very specialized, and quite complex. Not only are various beef cuts often used in different supply chains or used differently, but products like ground beef for retail grocery and for food service originate in very different supply chains (Peel, 2021). These specialized supply chains have developed over time to be efficient and reduce costs but are now revealed to be somewhat rigid and lack flexibility that could become more important in uncertain environments.

Figure 1.24. Percent of Beef Graded, Federally Inspected, 1976–2020.

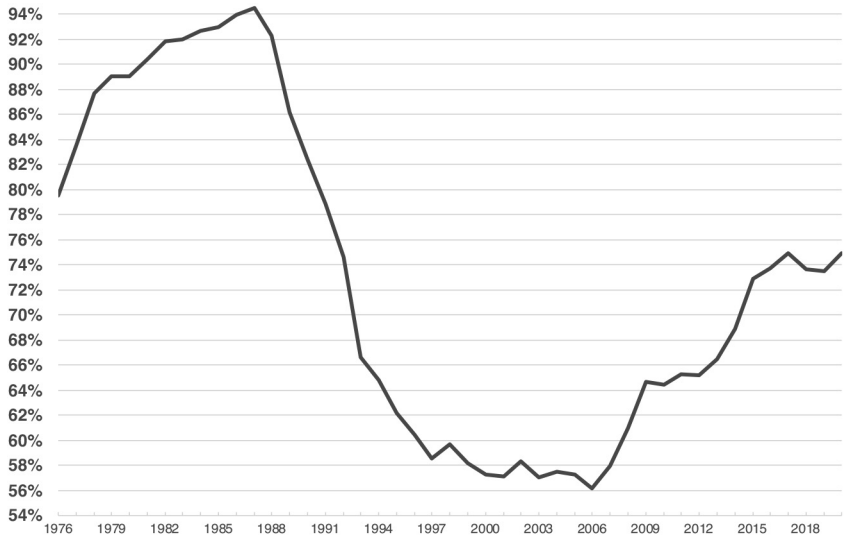
Source: Calculations by Peel from USDA–NASS and USDA–AMS data, compiled by LMIC.

Beef Grading

USDA commodity beef grades were developed in the first half of the 20th century and have been revised and adapted numerous times. The current set of carcass grades were established in 1941 and continue to be the basis for the majority of beef marketing. Grading is voluntary and the use of beef grades has changed considerably over time. In the era of carcass beef, many grocery stores did not rely heavily on grades. Much of the Choice and virtually all of the Prime beef was directed to the food service (HRI) trade. Instead of merchandising Select beef, retail groceries often purchased ungraded or "no-roll" beef. This changed dramatically in the 1980s as retail grocery switched to graded beef and actively marketed Select and Choice beef. *Figure 1.24* shows that in the 4 year period from 1989 to 1992, the percent of beef graded jumped from roughly 55 percent to about 82 percent. Recognizing that cull cow and bull carcasses are rarely graded, this means that nearly 100 per-

cent of steer and heifer carcasses were then graded. *Figure 1.25* shows the percent beef graded that is Choice. It appears that Choice grading declined sharply in the late 1980s and early 1990s, but this reflects the change in grading percentage from *Figure 1.24*. In other words, 94 percent Choice of 56 percent of beef graded in 1988 is roughly the same as 56 percent Choice of, say, 95 percent of steer and heifer beef graded in 1992. A similar explanation applies to *Figure 1.26* that shows the change in Prime grading over time. The important story for both Choice and Prime has been the increase in high quality beef grading in recent years. Choice beef grading percentage increased from roughly 56 percent in 2006 to over 74 percent currently. The increase in Prime grading has occurred more recently with percent of Prime beef less than four percent as recently as 2013 but increasing to nearly 11 percent in less than a decade. *Figure 1.24* indicates a slight decrease in percent of beef graded in recent years. This may be the result of growth in branded beef marketing programs that do not rely on commodity grades. Historically, commodity grades were developed to provide quality information to consumers in situations where products were marketed in commodity form rather than differentiated products. However, most branded beef programs continue to use USDA grades as a component of the brand specifications.

Figure 1.25. Percent of Beef Graded Choice, Federally Inspected, 1976–2020.

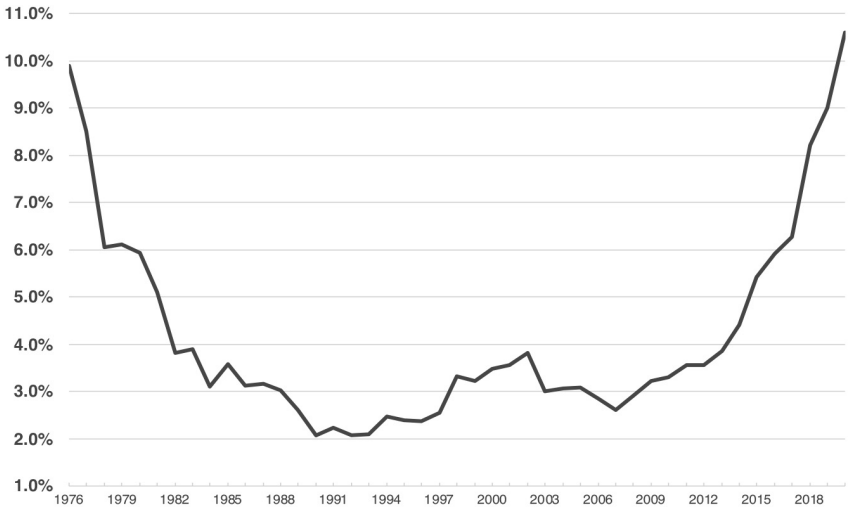


Source: USDA–AMS, compiled by LMIC.

Beef Demand

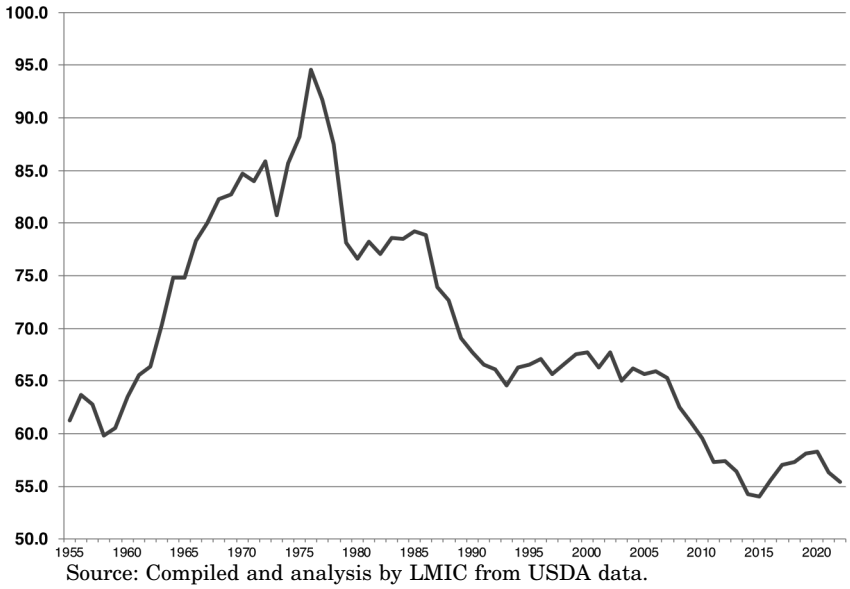
Economists define demand for beef (or indeed any product) as the consumers' willingness to purchase a given quantity of the product at a given price. If we know the range of quantities purchased over a range of prices, holding other factors that affect demand constant, we can draw a demand curve for the product. *Figure 1.27* shows per capita beef consumption since 1955. Beginning at about 61 pounds, per capita beef consumption increased to a 1976 peak of 95 pounds and has generally decreased, with periods of stable consumption to current levels of 55 pounds/capita. *Figure 1.27* is not a measure of beef demand but rather is better viewed as a measure of beef supply. Beef is a perishable product and will be consumed if produced and *Figure 1.27* reveals the available per capita domestic supply of beef, adjusted for population changes and net trade flows. However, *Figure 1.27* does show the central fact that beef consumption per person declined significantly starting in the late 1970s.

Figure 1.26. Percent of Beef Graded Prime, Federally Inspected, 1976–2020.



Source: USDA–AMS, compiled by LMIC.

Figure 1.27. Beef Consumption, Pounds per Capita, Retail Weight, 1955–2020.



Source: Compiled and analysis by LMIC from USDA data.

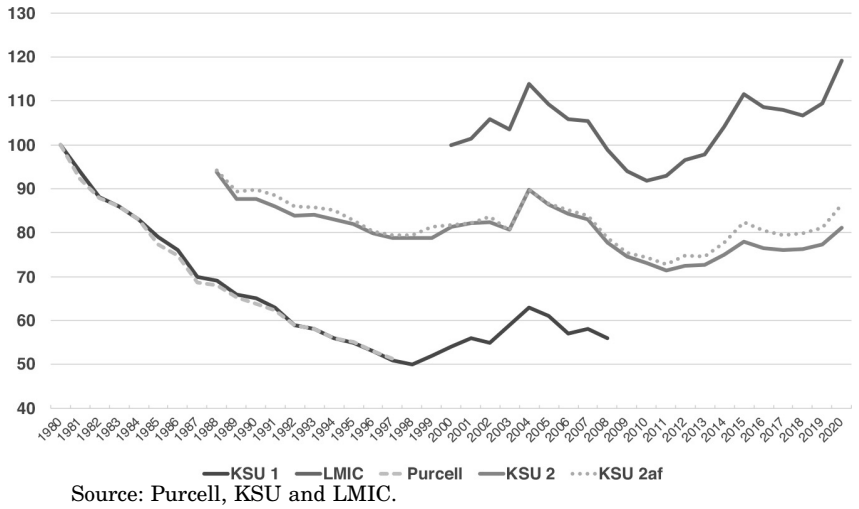
Figure 1.28. Retail Beef Price, Dollars per Hundredweight Deflated (2010 = 100), 1970–2020.

Source: Calculations by Peel from USDA–ERS data, compiled by LMIC.

The other principal component of beef demand is price. *Figure 1.28* shows inflation-adjusted retail beef prices since 1970. Real retail beef prices decreased from a peak in 1980 to a low in 1997 before generally increasing to current levels. Economists combine this quantity and price data into models that also account for other demand factors to create demand indices that show relative changes in beef demand over time. *Figure 1.29* is a plot of several beef demand indices from various researchers. These demand indices use different models, different base years and different price series (some are based on the Choice retail beef price and others on the broader All-Fresh retail beef price). Comparisons across indices are not valid, but each index over time and the relative pattern of changes across indices are revealing. The indices consistently show that beef demand decreased from 1980 to about 1998 then increased with another drop in 2010 to 2011 followed by general increases in the last decade.

While useful as a general indication of beef demand, there are numerous limitations to the aggregate demand analyses in *Figure 1.29*. The retail price series are imperfect measures of retail beef product prices. More importantly, retail grocery is only one consumer market channel and we do not have prices for beef in food service and export channels. Moreover, reducing beef consumption to a single aggregate measure glosses over the fact that beef is actually consumed as a broad set of specific products, each of which is a separate market and a separate demand, usually interrelated with many other beef product demands as well as other demand factors (Clark, 2019).

Figure 1.29. Beef Demand Indexes, Choice (KSU 1, KSU 2, Purcell) and All Fresh (LMIC, KSU 2af), 1980–2020.



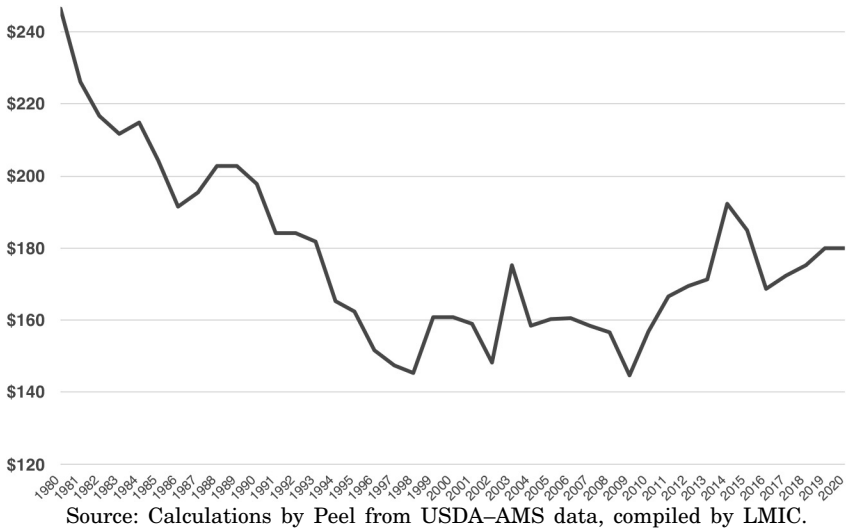
Source: Purcell, KSU and LMIC.

Choice and Select boxed beef prices are, in some ways, a better measure of the value of the entire set of beef products, but these also have many limitations. Boxed beef prices attempt to capture the wholesale value of beef products and convert them to a rough carcass equivalent. Boxed beef prices are calculated from of a set of roughly 50 reported wholesale cut prices. The set of products included in boxed beef prices changes over time to reflect changing fabrication styles and product mixes. This makes the reported boxed beef price more closely reflect the value at a point in time, but more difficult to compare over time. Today's boxed beef prices reflect products with substantially higher levels of fabrication than earlier. For example, in recent years, wholesale prices are reported for the Top Blade (used to make Flat Iron steaks) and the Chuck Tender, both derived from the Chuck Clod subprimal. These products offer higher value potential, but they also represent additional fabrication and labor cost. *Figure 1.30* shows inflation-adjusted Choice boxed beef prices since 1980. The figure indicates that wholesale beef values have generally increased since the late 1990s. Exactly what this means (especially for things like packer profitability) is not easily understood. The set of beef products originating at the packing level has expanded considerably but so has the amount of further processing requiring additional fabrication (and cost).

Packing Capacity and Industry Concentration

Suspicion and animosity between cattle producers and beef packers is nearly as old as the industry itself. Ward (2002) includes a quote from Senator John B. Kendrick, Wyoming in 1919: "This squall between the packers and producers in this country ought to have blown over forty years ago, but we still have it on our hands . . ." The "Big Four" meat packers at the turn of the 20th century were Armour, Swift, Cudahy, and Wilson. These companies and their descendants gave rise 80 years later to a new "Big Four," known today as Tyson, JBS, Cargill and National. The cost efficiencies associated with beef packing and fabrication (known as economies of size) are very strong economic drivers and, on the heels of the boxed beef revolution and continued fabrication and product innovations previously discussed, led to rapid concentration of beef packing in the 1980s (*Figure 1.31*). The four-firm concentration ratio is the percent of the market controlled by the four largest firms. The four-firm concentration ratio increased from less than 30 percent in the late 1970s to over 80 percent in just about a decade through a series of mergers and acquisitions by the largest firms (Ward, 2002). The four-firm concentration ratio has been relatively stable since the early 1990s, averaging 80.2 percent from 1993 to 2008, then stepping up in 2009, and averaging 84.6 percent the past decade (*Figure 1.31*).

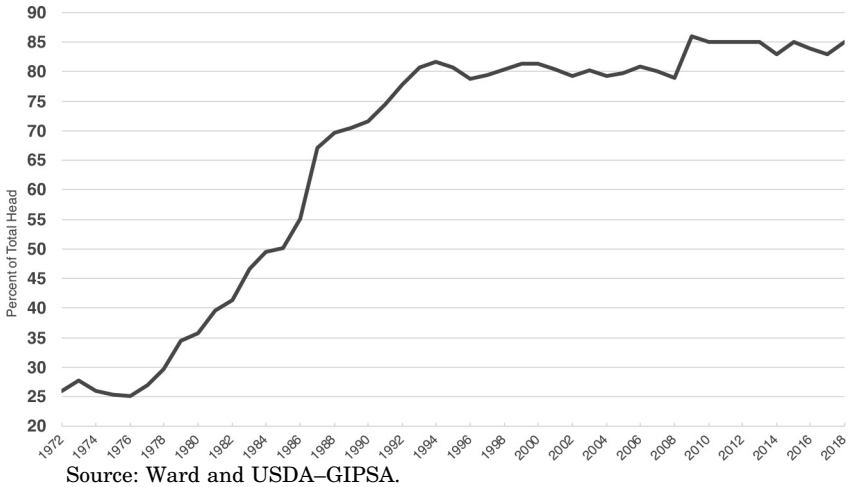
Figure 1.30. Choice Boxed Beef Price, Dollars per Hundredweight Deflated (2010 = 100), 1980–2020.



Source: Calculations by Peel from USDA–AMS data, compiled by LMIC.

Economies of size in beef packing is well documented and significant (*e.g.,* McDonald, *et al.,* 2000). The largest packing plants have considerable cost advantages over smaller (but still large) packing plants even half that size. However, increased concentration means that large firms have market power, thus raising the potential for anti-competitive behavior. Research shows that small but significant negative price impacts of market power are outweighed by several magnitudes in cost efficiencies that benefit producers and consumers (Peel, *et al.,* 2020).

Figure 1.31. Four-Firm Concentration Ratio, Steer/Heifer Packing, 1972–2018.



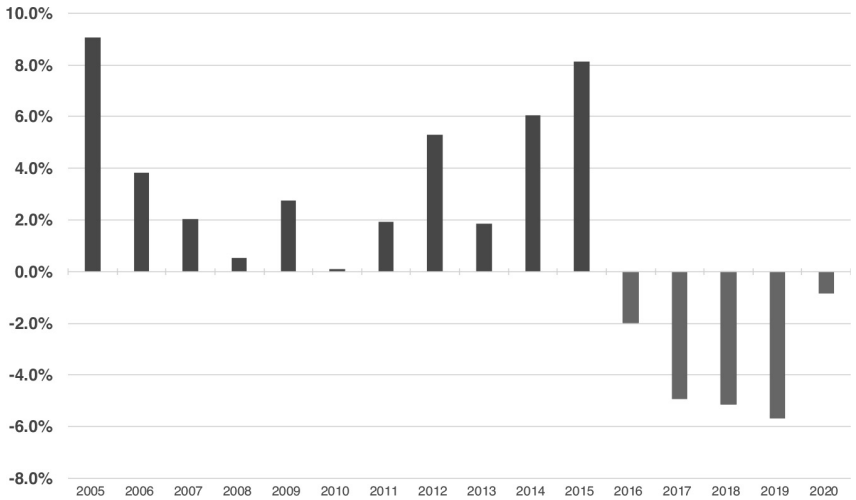
Source: Ward and USDA–GIPSA.

Much of the beef packing infrastructure in the United States was built in the 1980s when cattle inventories were 15 to 20 percent larger than today. In the intervening time, the cattle industry has operated with excess packing capacity as cattle numbers declined (*Figure 1.18*). Slowly, packing capacity declined with several permanent plant closures including the ConAgra plant in Garden City, Kansas in 2000 (the plant burned and was not rebuilt); the Tyson plant in Emporia, Kansas in 2008;

and the Cargill plant in Plainview, Texas in 2013. The reduction in packing capacity—combined with the cyclical herd expansion from 2014 to 2019—resulted, for the first time in more than 35 years, in a shortage of cattle packing capacity (*Figure 1.32*). Estimated steer plus heifer slaughter capacity has been less than slaughter since 2016, which means that the packing industry is meeting slaughter demands by increasing Saturday slaughter and stretching normal operating schedules. This fundamental change in fed cattle supply and demand balance is impacting fed cattle markets in ways not seen for many years.

The reduction in packing capacity—combined with the cyclical herd expansion from 2014 to 2019—resulted, for the first time in more than 35 years, in a shortage of cattle packing capacity.

Figure 1.32. Estimated Excess Steer and Heifer Packing Capacity, 2005–2020.



Source: Calculated by Peel from USDA–NASS and Cattle-Fax estimates.

Fed Cattle Pricing and Alternative Marketing Arrangements

Until the 1990s most fed cattle were priced on averages, at the pen level and even entire showlists. Very little quality differentiation meant that high quality cattle were undervalued, and low-quality cattle usually received the average price. Packers had little incentive to differentiate cattle quality since they had to process all the cattle anyway. All that was important to packers was to get the average correct. The lack of quality signals meant that producers had little incentive to improve cattle. The problem was apparent; quality grading was low and beef demand was declining. This led to a major push in the industry for "value-based marketing," which aimed to differentiate and value cattle according to quality differences. The result was the development of grid pricing in which a matrix of quality characteristics was applied to a base price to determine fed cattle premiums and discounts. Both buyers and sellers of fed cattle recognized the transaction costs of continually negotiating these grid sales. This quickly led to the use of formulas which incorporated the grid matrix and utilized a base price from an external source, most commonly a publicly reported cash price. In other cases, cattle were forward contracted. There were also concerns about packer-owned cattle, which diminished later as Cargill divested Caprock Cattle Feeders and JBS divested Five Rivers Cattle Feeding in the late-2010s.

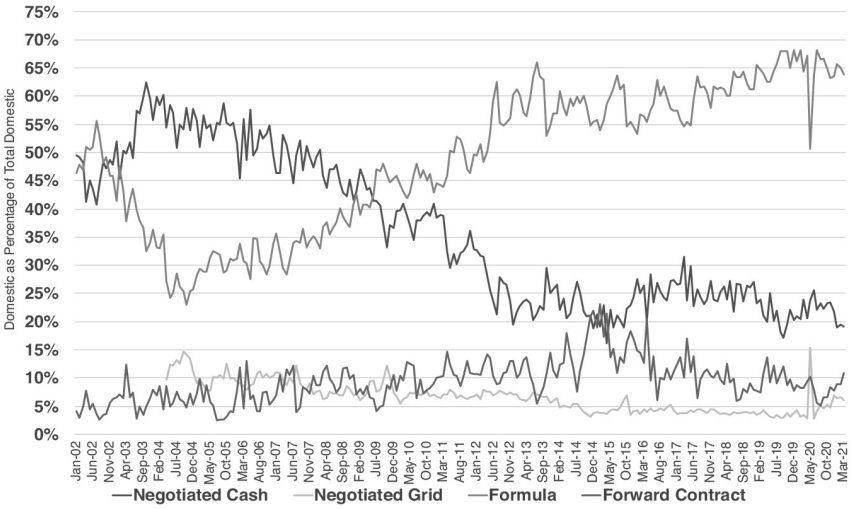
By the late 1990s, these various pricing and ownership arrangements led to concerns about "captive supplies" (later referred to as Alternative Marketing Arrangements or AMAs) and thinning cash markets.[2] One outcome was Livestock Mandatory Reporting (LMR) legislation requiring mandatory price reporting of fed cattle. The Act was implemented in 2001. *Figure 1.33* plots LMR data showing the percent-

[2] As discussed in detail in Chapter 5, AMAs commit cattle to packers in a formula relationship. While this has been referred to as "captive supplies," the inventory of fed cattle is not captive or under the control of the packer.

age of fed cattle pricing by various categories. The figure confirms that negotiated cash trades declined in the 2000s from roughly 55 percent to a level ranging from 20 to 25 percent. Negotiated cash trades have remained at this level for the last decade. Concerns about thin markets and price discovery in fed cattle markets have persisted and grown sharper recently. Several current proposals would mandate a fixed percentage of negotiated cash trade for fed cattle. Many of the issues and concerns about thin markets and price discovery are summarized in Peel, *et al.,* 2020.

Part of the complexity of the cattle industry is the significant regional variation in production and marketing practices and attendant diversity of cattle industry culture in various parts of the country.

Figure 1.33. Fed Cattle Pricing, 2002–2021.

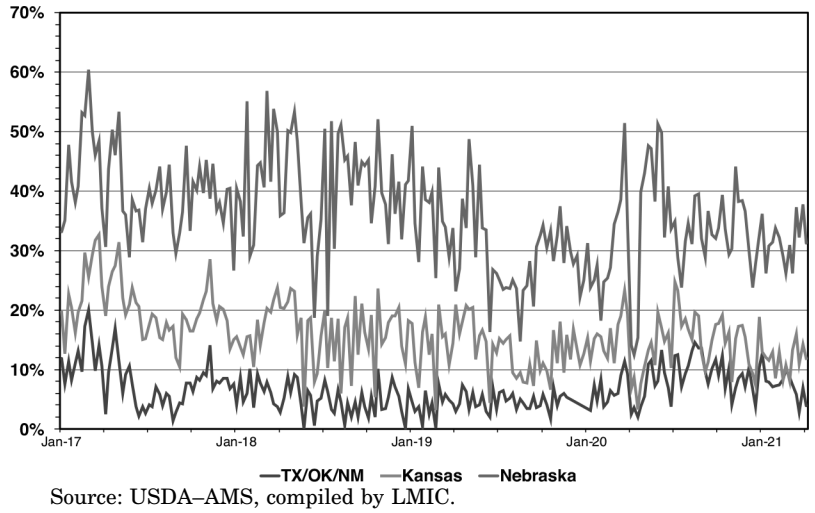


Source: USDA–AMS, compiled by LMIC.

Regional Fed Cattle Pricing Issues

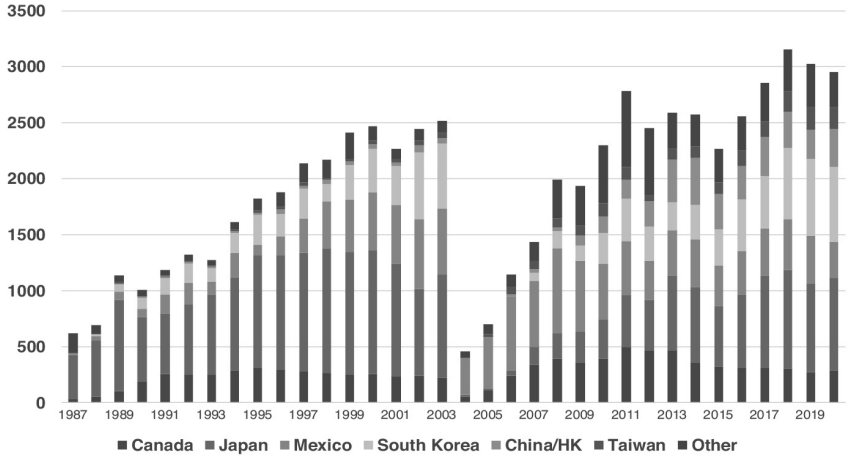
Part of the complexity of the cattle industry is the significant regional variation in production and marketing practices and attendant diversity of cattle industry culture in various parts of the country. The feedlot industry reflects this with characteristic differences in structure, business practices, and attitudes in different regions. The Midwest has a traditional history that evolved from farmer-feeders to smaller, independent feedlots. The southern and central plains include a higher proportion of large multi-feedlot operations and most of the largest cattle feeding firms are based in this region. These regional differences have led to marked differences in fed cattle pricing in different areas. *Figure 1.34* shows the average negotiated cash percentage for the three largest cattle feeding areas of Kansas, Nebraska, and Texas/Oklahoma/New Mexico. The cash trading percent is the lowest in the TX/OK/NM area and the highest in Nebraska. Regional variation in feedlot marketing practices is a significant contributor to the diverse concerns and variable perspectives about the nature of price discovery issues and proposed solutions that are currently evident in the cattle industry. Many concerns are couched in the context of price discovery (discussed in detail in Chapter 2) but really extend beyond price discovery per se into the long-standing suspicions related to concentration and market power.

Figure 1.34. Negotiated Cash Steers/Heifers as Percent of Sales by Region, Weekly, 2009–2021.



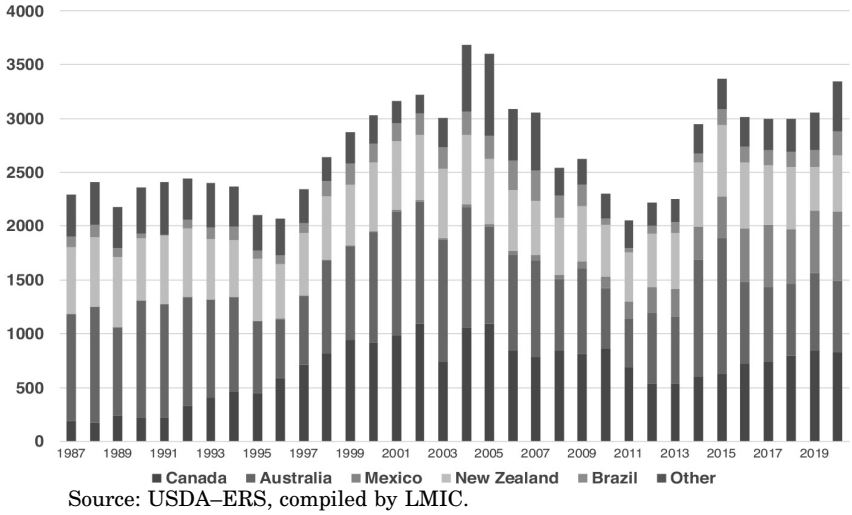
Source: USDA–AMS, compiled by LMIC.

Figure 1.35. U.S. Beef Exports, 1,000 Tons, 1987–2020.



Source: USDA–ERS, compiled by LMIC.

Figure 1.36. U.S. Beef Imports, 1,000 Tons, 1987–2020.



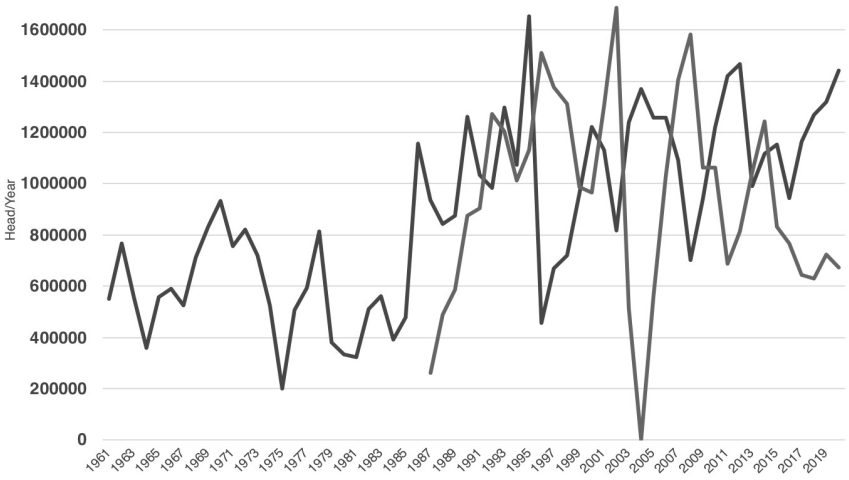
Source: USDA–ERS, compiled by LMIC.

International Trade of Beef and Cattle

International trade of beef and cattle continues to grow in importance to the beef cattle industry. The United States is both a major exporter and importer of beef, and is currently projected to be the number two global beef exporter and the number two global beef importer (USDA–FAS 2021). *Figure 1.35* shows U.S. beef exports to major destinations since 1987. Beef exports have grown significantly since the late 1980s with a major setback and long recovery after the first U.S. BSE (Bovine Spongiform Encephalopathy) case in late 2003. Recent growth in beef exports to China/Hong Kong represent potential to significantly expand beef exports beyond the current dominant markets of Japan and South Korea. U.S. beef imports from major sources are shown in *Figure 1.36.* The United States has long imported significant amounts of beef, primarily processing beef to support the food service ground beef market in the United States. An exception is beef imports from Mexico, which have grown sharply since 2013 and consists largely of cuts that are marketed to retail grocery.

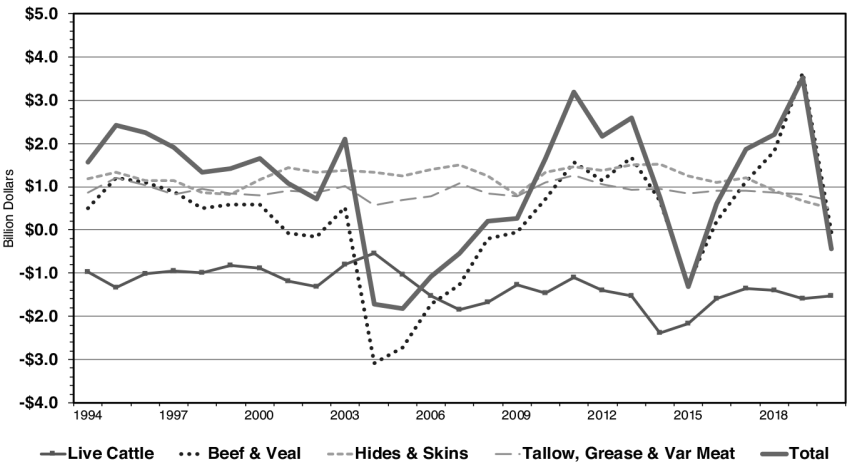
The increasingly integrated North American cattle and beef industry includes trade in live cattle between the United States, Mexico, and Canada. The United States imports a mix of feeder cattle, fed cattle and cull cows/bulls from Canada along with feeder cattle from Mexico (*Figure 1.37*). Cattle imports from Mexico have averaged 1.2 million head annually for the past decade. Imports of Canadian cattle have averaged about 800,000 head per year for the past decade. The United States does export some cattle to Mexico and Canada. These cattle exports are relatively small compared to cattle imports from Mexico. The number of cattle exported to Canada has increased since 2017 and the volume of cattle exported to Canada in 2020 was 40 percent of the volume of cattle imports from Canada. U.S. cattle trade with Mexico has a long and somewhat colorful history that includes trade during the Mexican Revolution (1910 to 1920) when the northern haciendas sold cattle to the United States to finance the Mexican Government, and Pancho Villa sold cattle stolen from the haciendas to the United States to finance the revolutionaries.

Figure 1.37. U.S. Imports of Mexican and Canadian Cattle, 1961–2020.



Source: USDA–ERS, compiled by LMIC.

Figure 1.38. U.S. Beef Industry Net Export Values, Annual, 1994–2020.



Source: USDA–FAS, compiled and analysis by LMIC.

The fact that the United States is both an exporter and importer of beef leads to many questions. The answer is a recognition that beef is not a single product but consists of many different products with varying demands and uses. The United States exports beef products that have higher value in foreign markets and imports products demanded in the United States that can be obtained more economically in foreign markets. As noted previously, beef imports are driven by the need for lean processing beef to support the enormous U.S. appetite for hamburgers. Though the volume of U.S. beef exports and imports is roughly equal, the value of products exported is typically higher than the value of beef products imported (*Figure 1.38*). *Figure 1.38* also shows that the total trade picture involves not only beef but live cattle, hides, variety meats and tallow. The net value of trade for all these markets has been about $1.5 billion annually for the last decade.

The value of international beef and cattle trade goes beyond the value reported in *Figure 1.38.* The disassembly of cattle into thousands of beef products inevitably leads to a mix of products that does not match consumer preferences in the United States, so some will have low demand. Some products, such as variety meats, would

have little or no value without exports and would be redirected to the pet food industry or to rendering. Other products would be consumed in the United States in the absence of exports, but at the expense of higher value demand for more preferred products. In other words, exporting less desired products boosts domestic beef demand by allowing consumers to focus their beef spending to their highest value. Beef is a perishable product which will be consumed by someone, and if all products must be consumed in the domestic market, it will happen only with lower total value. The value and importance of international beef and cattle trade to the U.S. beef cattle industry continues to grow.

Country of Origin Labeling

The 2002 Farm Bill included legislation to require country of origin labeling on beef and ground beef. While imported meats have been labeled since 1930, this law required meat from imported animals, along with ground beef, to carry detailed labels listing all origins for beef sold in retail grocery (Peel, 2009). The law did not apply to food service or highly processed products. The law specifically forbade USDA from implementing an animal identification system in order to verify the origin of domestically produced cattle. After several modifications and delays, mandatory country of origin labeling (mCOOL) was implemented in 2008. The United States lost a WTO case challenging the rule and ultimately removed the law in 2015 when faced with expensive tariffs from trading partners. Despite the lack of research that shows any demand increase or net value to the industry from mCOOL, along with numerous studies that verify the increased costs associated with mCOOL, the idea retains strong support among some cattle producers. It should be noted that there have never been any restrictions on the use of voluntary origin labels to the extent that such efforts provide value in beef product markets.

Where We Are Now

In many ways, the cattle and beef industry has evolved significantly over time. A growing set of beef products are marketed through a vast array of retail grocery, food service, and export markets. An expanding set of specialized beef markets is capturing additional product value for branded programs based on grass-fed, natural (defined variably), non-hormone treated, or other attributes or consumer-desired production practices. The importance and value of international beef and cattle trade continues to grow and offers the greatest potential for sustained growth in the industry. Beef exports and imports help to optimize the mix of beef products in domestic markets and increase value directly and indirectly. Value-based marketing has provided incentives for cattle producers to increase beef quality over time as indicated by sharply higher Choice and Prime grading percentages and strong beef demand in recent years.

On the other hand, little has changed. As indicated by the Purcell quote that began this chapter, the concerns, issues, and proposed solutions have changed little from cattle producers' perspectives. The adversarial relationship between producers and packers has not improved and is arguably worse than ever. Regional and sectoral differences among cattle producers are sharper and more bitter than ever. Producers have cycled through a veritable list of perceived villains over time including packer concentration/market power, price discovery, beef and cattle imports, and futures markets. Historically, periods of high cattle prices have significantly diminished producer concerns only to see them revived during typical industry dynamics. The turmoil of the past 2 years has revived all these concerns simultaneously and added a couple of new ones in the form of supply chains and cold storage. There are numerous, very real issues and concerns in cattle and beef markets now and going forward. These deserve serious attention and consideration, based on careful evaluation developed from past and needed future research. There are also many distractions. To conclude, it is worth repeating the words of Dr. Wayne Purcell:

> *"The big danger is that all the attention on short-run and highly visible issues will block recognition of the problems that are long run and structural in nature and, in the process, prevent efforts to move to programs and policies that have a legitimate chance of helping."*

Summary

This chapter had two principal objectives: (1) to highlight the extraordinary complexity of the beef and cattle industry and (2) to provide a historical perspective to understand how the industry has evolved over time to have the characteristics, structure, and practices that make up the industry today. Both are critical in the face of many varied legislative solutions being proposed at the current time. Whether we are considering proposals such as mandated cash trading levels, mCOOL, or others, it is essential that producers, industry leaders, and policymakers understand

the difficulty of successfully intervening in complex market systems without producing numerous and detrimental unintended consequences. Overly simplistic, one-size-fits-all legislative solutions to complex problems are almost certain to impede and interrupt the complicated, dynamic market signals and adjustments that coordinate a vast array of cattle and beef markets. The cattle industry has historically strongly embraced market systems. Many current proposals represent a significant departure from that market-oriented tradition and producers and policymakers are advised to proceed with great caution and deliberation before invoking simplistic solutions with great potential for long-term harm to the industry and to consumers.

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Chapter 2

Price Determination and Price Discovery in the Fed Cattle Market: A Review of Economic Concepts and Empirical Work

JOHN D. ANDERSON, ANDREW M. MCKENZIE, and JAMES L. MITCHELL

Introduction

Price discovery and price determination are closely related but distinct economic concepts related to the efficient and effective performance of markets. In discussions regarding the performance of prices in the fed cattle market, these two concepts are frequently not adequately distinguished. This leads to confusion regarding the perceived problems in the market, and consequently, potentially effective solutions. This chapter will describe both price discovery and price determination, focusing on the factors that influence the price discovery process in the fed cattle market. To assess the state of price discovery in regional fed cattle markets, an event study is performed using the reaction of regional cash fed cattle prices to unanticipated information in monthly *Cattle on Feed* reports. Results suggest that, while the information content of negotiated prices by region has changed in recent years, all regions continue to contribute to price discovery in the overall market. This result calls into question the need for proposed policy interventions to improve price discovery, as does the potential for such interventions to impede the ongoing market-driven evolution of pricing institutions in the sector. Few issues in the agricultural economy have attracted as much attention for as long a time as the behavior of prices in the fed cattle market. Questions about the accuracy and volatility of livestock prices—and particularly about the relationship of market structure to those issues—have been thoroughly investigated and hotly contested for well over a century now—with, it seems, little prospect for resolution even now.

A brief example from history should suffice to illustrate the impressive continuity between past and present controversies in the livestock and meat sector. In summarizing the results of a major Congressionally-mandated investigation into meatpacker business practices by USDA and the Federal Trade Commission (FTC) in the early twentieth century, Virtue (1920) notes that:

> One of the most general and persistent complaints of the feeders is that prices of livestock so frequently have no relation to cost of production, and, taken for short periods, no relation to natural market conditions; that these fluctuations introduce so great an element of risk as to make feeding one of the most hazardous of industries, resulting in disastrous losses to the feeders and in the end throwing a great burden on consumers as well. Well-informed stock men are convinced that these erratic price movements can be explained only on the theory of "manipulation" by packers, whom they regard as the beneficiaries of the changes. (p. 652)

The issues that concerned Virtue's "well-informed stock men" related to whether or not livestock prices accurately reflected underlying supply and demand conditions, how quickly those prices adjusted to new information, and whether or not the concentration of market power at the processing level led to intentional, strategic manipulation of these processes. This would be a pretty fair summary of the concerns of today's cattle market participants as well. In slightly more technical jargon, these are issues that touch on the distinct but related concepts of price determination and price discovery.

Price determination refers to how the forces of supply and demand for a particular product or commodity interact to produce an equilibrium price.

In contrast to price determination, price discovery refers to the means by which a particular buyer and seller arrive at a price on a specific transaction.

Definition of Terms

The terms "price determination" and "price discovery" are used virtually interchangeably in a great deal of non-technical communication about markets. However, among agricultural economists, these are terms of art with specific meaning, referring to different but related concepts relevant to any discussion of commodity pricing. In order to productively assess the impacts of changing institutional arrangements in the fed cattle market on price behavior, it is helpful to clearly distinguish between these concepts.

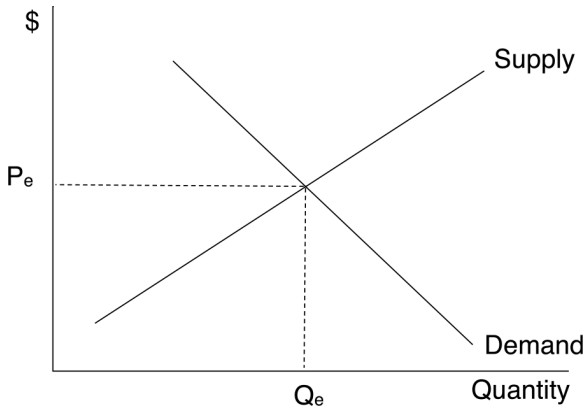
Price determination refers to how the forces of supply and demand for a particular product or commodity interact to produce an equilibrium price. It is concerned not with the outcome of any particular transaction but rather with the general price level that prevails based on fundamental conditions in the broader-market. Price determination is well-represented graphically by the classic, "Marshallian scissors" supply and demand graph, as depicted in *Figure 2.1.*[1] The interaction of market supply and market demand—reflecting the summation of individual participants on each side of the market—results in an equilibrium price and quantity.

In contrast to price determination, price discovery refers to the means by which a particular buyer and seller arrive at a price on a specific transaction. In reality, market supply and demand are not directly observable. Buyers and sellers lack perfect information, so the equilibrium price and quantity are not as readily transparent as *Figure 2.1* might imply. Thus bid (buyer) and ask (seller) prices will vary around the equilibrium price in the process of price discovery. This process is illustrated in *Figure 2.2,* in which the "true" supply and demand are bracketed by the upper and lower estimates of market participants. Bid and ask prices would be expected to fall between the high and low prices implied by the intersection of these supply and demand estimates, centering around the true equilibrium price.

Improving price discovery cannot be expected to improve the overall level of prices if prevailing supply and demand fundamentals are consistent with low prices.

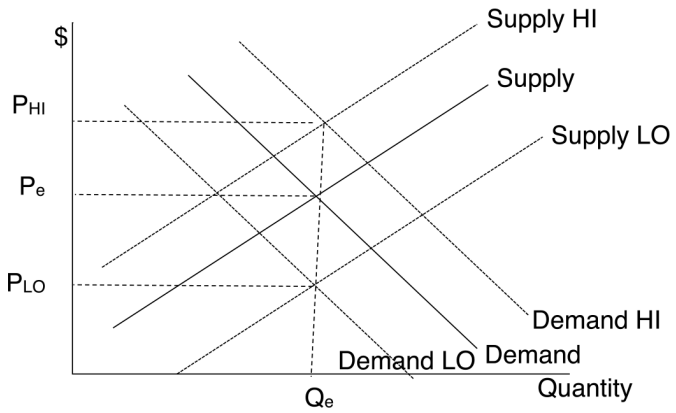
[1] The graphical representations of price discovery and price determination in *Figures 2.1* and *2.2* are common depictions of a market. In the context of specifically illustrating price determination and price discovery, though, these graphs borrow directly from Ward and Schroeder (2004).

Figure 2.1. Price Determination in a Hypothetical Market.



Notes: P_e and Q_e denote equilibrium price and quantity, respectively.

Figure 2.2. Price Discovery in a Hypothetical Market.



Notes: P_e and Q_e denote equilibrium price and quantity, respectively.

Price discovery is concerned directly with the mechanics by which individual transaction prices (and other terms of trade) are established rather than with broader, and generally more theoretical, issues of how supply and demand fundamentals affect the general price level (Tomek and Kaiser 2014). In effect, then, price determination represents a macro-level perspective on the equilibrium price while price discovery represents a micro-level perspective on the variability of prices around that equilibrium.

With these distinctions in mind, it is worth noting clearly what improving price discovery can and cannot do. Most importantly, improving price discovery cannot be expected to improve the overall level of prices if prevailing supply and demand fundamentals are consistent with low prices. That is, if supply and demand conditions in the market are consistent with low prices (price determination), then the interactions of buyers and sellers in specific transactions should produce a low average price (price discovery). Realistically, what improving price discovery can accomplish is to make prices more efficient.

Efficiency is another term that has a specific meaning among economists. A market is efficient if prices in that market reflect all available information (Fama, 1970). Janzen and Adjemian (2017) note that effective price discovery accomplishes the task of reflecting underlying information in a timely manner and does so via "*bona fide* transactions or standing bids and offers whose prices are known to all market participants" (p. 1192). This understanding of price discovery offers a useful perspective in that it allows potential price discovery issues to be separated from

mere discontent over price determination at a low price point. For example, are market transactions truly *bona fide?* In a heavily concentrated market where power between buyers and sellers is dramatically asymmetrical, are transactions a reliable reflection of underlying fundamental conditions or are they distorted by the impact of that power asymmetry on the negotiation process? Further, as the volume of transactions declines, are there sufficient transactions or open bids to inform the broader market? In other words, how many negotiated transactions are needed to adequately reflect underlying fundamental information? These and similar issues complicate the conceptually simple relationship between price discovery and price determination.

Complicating Factors: Market Concentration

The meatpacking sector is, and has long been, highly concentrated. The most recent annual report from USDA's Agricultural Marketing Service, Packers and Stockyards Division (2020) puts the four-firm concentration ratio for the steer and heifer processing sector at 85%, consistent with the level of concentration since the 1980s. Concentration ratios in regionally-defined markets are generally even higher (Ward, 1988). This high degree of market concentration has long fostered concern that prices are manipulated through non-competitive behavior (*e.g.,* see the earlier citation from Virtue, 1920). A great deal of work over many years has sought evidence of such behavior in the fed cattle market, but such work has consistently found little support for significant negative price effects of concentration (Ward, 1997; Ward, 1999; Crespi, Saitone, and Sexton, 2012).

Even aside from the intentional exercise of market power, concentration could have more subtle effects on price discovery. Concentration in the meatpacking industry has largely been driven by the significant economies of size associated with meatpacking operations (Ward, 1988). Bailey and Brorsen (1987) note that economies of size could directly influence price discovery. Larger firms have more total information (public plus private) simply by virtue of the volume of transactions to which they are party. If this combination of information is more accurate than public information alone, price discovery may be affected. Price adjustments to new information in concentrated markets may also be affected if one or two major firms play a price leadership role (Goodwin and Holt, 1999).

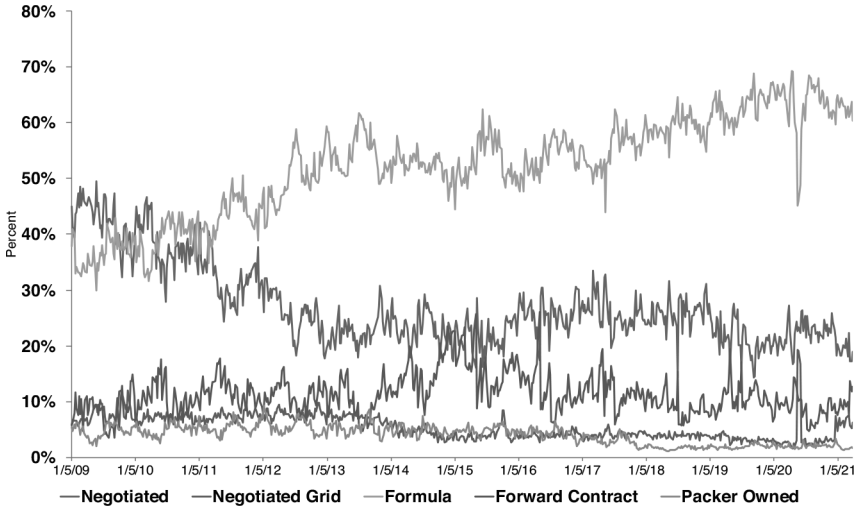
This high degree of market concentration has long fostered concern that prices are manipulated through non-competitive behavior. A great deal of work over many years has sought evidence of such behavior in the fed cattle market, but such work has consistently found little support for significant negative price effects of concentration.

Complicating Factors: Thin Market Issues

A market in which negotiated transactions over a given period of time are not sufficient to support efficient price discovery is a thin market (Anderson; *et al.,* 2007). In a thin market, prices may become a less reliable guide to actual value as supported by market fundamentals and, in so doing, contribute to resource misallocation (Adjemian, Saitone, and Sexton 2016). In a practical sense, in such a market, we would expect to see increasing variability of prices around the equilibrium price; and evaluations of price discovery on thin markets often involve some means of quantifying this phenomenon (Tomek 1980).

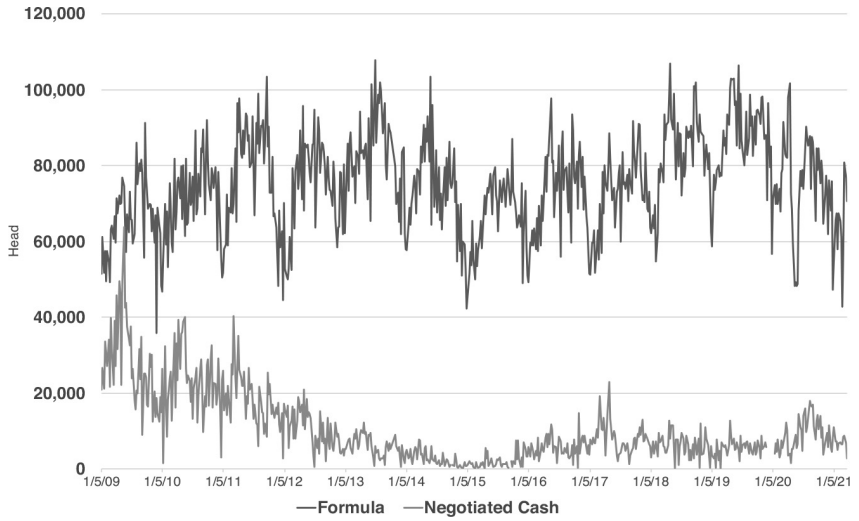
There is no doubt that pricing behavior in the fed cattle market has changed dramatically, particularly within the past decade, in ways that raise concerns about effective price discovery. While the total number of cattle traded each week remains quite large, negotiated transactions as a percentage of all transactions have fallen sharply. This is illustrated in *Figure 2.3,* which shows the percentage of total weekly fed cattle transactions accounted for by each transaction type reported by USDA's Agricultural Marketing Service from January 2009 through March 2021. The change in the proportion of negotiated cash transactions is significant. For example, in 2010, 45 percent of all fed cattle transactions were negotiated (either negotiated cash or negotiated grid); 39 percent were formula-based transactions. In 2020, just 26 percent of fed cattle transactions were negotiated while 63 percent were formula-based.

Figure 2.3. Weekly Live Cattle Transactions by Type: Percent of Total Weekly Transactions.



Source: USDA Agricultural Marketing Service, Livestock, Poultry & Grain.

Figure 2.4. Weekly Live Cattle Transactions by Formula and Negotiated Cash Sales: Texas/Oklahoma Reporting Region.



Source: USDA Agricultural Marketing Service, Livestock, Poultry & Grain.

The decline in negotiated transactions is more pronounced at the regional level. For example, in the southern Plains feeding region, the volume of negotiated transactions has become quite small in recent years. This is confirmed by *Figure 2.4,* which shows negotiated cash and formula-based fed cattle transactions in Texas/Oklahoma from January 2009 through March 2021. For the whole of 2020, negotiated cash transactions in this region amounted to just 12% of all fed cattle transactions.

To a large extent, formula-based transactions rely on some previous negotiated price as a key component of the pricing formula (Coffey, Pendell, and Tonsor, 2019). Thus, more and more formula transactions are dependent on negotiated prices that reflect fewer and fewer underlying sales. As Adjemian, *et al.* (2016) point out, this has the potential to propagate any pricing inefficiencies more broadly, thus magnifying any pricing problems that already exist. This is not a new concern. Schroeder, *et al.* (1998) report results of a survey of both feeders and packers regarding fed cattle pricing practices. Those survey respondents note the potential for quality differences between negotiated and formula sales to result in pricing inaccuracies. Livestock Mandatory Price Reporting (LMR) was intended to alleviate at least some of these concerns. For example, LMR made it impossible for packers to manipulate the base price in formulas by only reporting some of their negotiated prices (Matthews, *et al.,* 2015). However, as the negotiated side of the market has thinned further, concerns over pricing accuracy related to formula pricing have intensified.

While many researchers have acknowledged the thinness of the negotiated fed cattle market and the potential for price discovery problems which that implies, considerable empirical work with data available through LMR has yet to document significant problems (Crespi, Saitone, and Sexton, 2012; Brorsen, Fain, and Maples, 2018). In a deep-dive into livestock pricing practices initiated by Congressional action and making use of a unique data set on individual transactions compiled by USDA's Grain Inspection, Packers and Stockyards Administration, Muth, *et al.* (2007) found small negative price effects from the use of alternative marketing arrangements (AMAs, which include formula pricing). However, they also documented significant cost savings and quality improvements facilitated by AMAs—benefits that far outweighed the small negative price effects, such that eliminating AMAs would reduce both producer and consumer surplus in the sector. In a more recent study, Ward, Vestal, and Lee (2014) found that the relationship between negotiated and formula prices remained remarkably stable even as negotiated transaction volume declined. Thus, while negotiated transactions in the fed cattle market have clearly thinned, dramatically so in some regions, there is little objective evidence that this has adversely affected price discovery generally or that it has compromised the functioning of formula arrangements tied to negotiated prices.

> *While negotiated transactions in the fed cattle market have clearly thinned, dramatically so in some regions, there is little objective evidence that this has adversely affected price discovery generally or that it has compromised the functioning of formula arrangements tied to negotiated prices.*

The inability of researchers to document thin-market-related pricing problems in the fed cattle sector is not too surprising for two primary reasons. First, defining the point at which a market becomes "too thin" is notoriously difficult (Adammer, Bohl, and Gross, 2016). Previous work on thinning markets shows that relatively few transactions are required to maintain pricing efficiency as long as negotiated transactions are representative of the market as a whole (Tomek, 1980). Second, due to significant economies of size in packing plants, packers have a strong incentive to offer reasonably fair pricing terms in order to ensure optimal throughput for their plants over a long time horizon (Morrison, 2001; Anderson, Trapp, and Fleming, 2003; MacDonald and Ollinger, 2005; Crespi, Saitone, and Sexton, 2012).

Fed Cattle Price Discovery: An Event Study Evaluation of Market Efficiency

A natural question to ask, in light of the increased use of formula pricing and associated concern over the effectiveness of price discovery in an increasingly thin negotiated market is which, if any, of the major LMR regional markets best reflect market supply and demand fundamentals in their negotiated prices? We seek to shed light on this issue using an event study approach to measure price responses to unanticipated information contained in monthly USDA *Cattle on Feed* (*COF*) Reports. The objective of this event study is to determine whether the efficiency of price discovery has been affected by changes in fed cattle pricing practices. Specific objectives are twofold: (1) to determine whether the process of price discovery has changed over time as pricing practices have evolved and (2) to identify any differences in the efficiency of price discovery across regions correlated with regional changes in fed cattle pricing practices.

The issue of cattle market price discovery has drawn much attention in the literature, and a recent study by Coffey, Pendell and Tonsor (2019) found that the role played by the various LMR cash market regions has changed over the years. In particular, they highlighted the growing importance of Colorado as the share of negotiated transactions taking place in more traditional regions—*e.g.,* Texas/Oklahoma/New Mexico—has decreased.

A large amount of literature has shown that grain and livestock market futures prices respond to unanticipated information contained in USDA reports (Grunewald, McNulty, and Biere, 1993; Adjemian, 2012; Garcia, *et al.,* 1997; Isengildina-Massa, *et al.,* 2008a; Isengildina-Massa, *et al.,* 2008b; McKenzie, 2008; Sumner and Mueller, 1989; Karali, Isengildina-Massa, and Irwin, 2019). The unanticipated component of the report, which may be thought of as a market shock, is typically measured as the difference between analyst forecasts of the report and actual report numbers officially released by USDA. Thus, if it can be assumed that USDA reports contain valuable information, then significant price responses that are consistent with that information are indicative of price discovery. With this in mind, we examine the response of the five major LMR regional negotiated cash markets (*i.e.,* Colorado, Iowa/Minnesota, Kansas, Nebraska, and Texas/Oklahoma/New Mexico) to the release of unanticipated information about on-feed inventory, placements, and marketings, contained in *COF* reports. By isolating specific supply and demand shocks, this approach allows us to examine the extent to which market prices respond in a rational manner consistent with effective price discovery. Larger than anticipated increases in on-feed inventory and placements—which reflect larger cattle supplies—should elicit price decreases. Conversely, larger than anticipated increases in cattle marketings—which reflect both increased demand and expectations for smaller remaining short-run supply—should result in price increases.

Each component of the *COF* report provides the market with information that is used to make inferences about current and future beef production. On-feed inventory and marketing more closely relate to near term production, and shocks would be expected to have impacts on current cash market prices or nearby futures contract prices. On the other hand, surprises to cattle placements which have implications for future beef production and affect supplies in future months should influence deferred live cattle futures contract prices and cash prices several months after the *COF* report release date. However, the exact timing of price impacts with respect to surprises in placements is somewhat ambiguous depending upon cattle weights and is ultimately an empirical question. For example, nearby live cattle futures prices and current cash prices could be impacted through a feedback effect whereby the expectation of future price decreases could increase current supplies and depress current cash prices.

Grunewald, McNulty and Biere (1993) found that surprises to both placements and marketings moved deferred live cattle futures prices, but only surprises to marketings affected nearby futures prices. Specifically, when placements are one percent higher than expected, this results in a 0.07 to 0.09 percent decrease in deferred futures prices; when marketings are one percent higher than expected, deferred futures prices increase by 0.15 to 0.18 percent. In contrast, Karali, Isengildina-Massa, and Irwin (2019) showed that surprises to both placements and marketings affected nearby live cattle futures prices prior to 2000, while only shocks to marketings impacted nearby futures prices after 2000. Their results are similar to Grunewald, McNulty and Biere. For example, when placements are one percent higher than expected, nearby futures prices prior to 2000 decrease by 0.04 percent, and when marketings are one percent higher than expected, nearby futures prices increase by about 0.1 percent over the 1977 to 2016 period.

Data

Monthly livestock market analyst forecasts reported in the *Cattle Buyers Weekly* newsletter and USDA announcements of monthly on-feed inventory, placements and marketings contained in *COF* reports were collected over the January 2004 to December 2020 period.[2] Each month, between four to eight analysts make projections, which are reported in *Cattle Buyers Weekly* on the Monday prior to a Friday's *COF* release date. The average trade estimate is taken to be the median analyst forecast. USDA numbers and analyst forecasts are reported for the current month as a percentage of the comparable month a year ago. Market surprises, or the unanticipated component of the reports, were then measured as the percentage difference between the USDA numbers and the median analyst forecasts for on-feed inventory, placements, and marketings with respect to each monthly report over the sample period.

In addition, weekly weighted average of live steer and heifer cash prices of the five major LMR regions (Colorado, Iowa/Minnesota, Kansas, Nebraska and Texas/Oklahoma/New Mexico) were collected over the same January 2004 to December

[2] *Cattle Buyers Weekly,* on occasion, did not publish a monthly preview due to a publishing break or business travel. Over the sample period, this occurred twelve times (September 18, 2017, January 18, 2016, December 14, 2015, July 16, 2012, February 15, 2010, April 13, 2009, September 15, 2008, October 16, 2006, January 16, 2006, September 19, 2005, October 18, 2004, and February 16, 2004).

2020 period. *COF* reports are typically released on Friday afternoons each month at 2:00 p.m. central time.[3] To measure LMR region cash price responses to market surprises in on-feed inventory, placements, and marketings, prices for the immediate week prior to a *COF* report release and for the immediate week following a *COF* report release were logged and the percentage change in price around each of the *COF* report months calculated.[4]

Methods

A typical event study model can be written as an Ordinary Least Squares (OLS) regression:

$$(1)\ P_{+1} - P_{-1} + \tilde{a} + \tilde{b}\ (COF_{ijt}^{USDA} - COF_{ijt}^{Private}) + e_t,$$

where in our study, $P_{+1} - P_{-1}$ represents the logged percentage change in the negotiated cash fed cattle price from the week prior to the report release to the week following the report release. The term ($COF_{ijt}^{USDA} - COF_{ijt}^{Private}$) represents the surprise or shock element of *COF* reports, where COF_{ijt}^{USDA} represents the USDA forecast of either on-feed inventory, placements, or marketings related information i, observed in month j and year t, and $COF_{ijt}^{Private}$ represents the median livestock market consensus forecast of either on-feed inventory, placements, or marketings related information i, observed in month j and year t (and is a mean zero normally distributed error with constant variance term).

In the traditional event study approach, the estimated regression coefficient measures the average price response to a one percent change in the surprise element of USDA reports. Thus, it is assumed that LMR cash prices only react to the element of *COF* report information that was not anticipated by the analysts and the private-sector livestock industry. While we assume that rational LMR cash price reactions to *COF* surprises are indicative of price discovery, we acknowledge that these cash prices are also likely influenced by other market conditions and are likely noisy estimates of price discovery.

We present several different event study results based on equation (1) regressions of cash price changes on *COF* market surprises. First, we analyze our model using data from the full sample period, January 2004 to December 2020. Second, we analyze our model including only observations where placement surprises and marketings surprises would be expected to induce price reactions in the same direction. Our objective is to remove *COF* surprises associated with noisy price signals and only analyze the price impact of consistent, unambiguous bull or bear market surprises. Given that, *a priori,* we would expect price responses to be negatively correlated to placement surprises and positively correlated to marketings surprises, our goal is to remove monthly observations with either (a) larger than expected placements and larger than expected marketings, or (b) lower than expected placements and lower than expected marketings. Specifically, we only retain observations for months when positive placement surprises are simultaneously observed with negative marketings surprises (bear market shocks) and negative placement surprises are simultaneously observed with positive marketings surprises (bull market shocks). Third, and again to measure price discovery with respect to clear signals, we retain only observations with large placements (3% or larger in absolute terms) and/or marketings surprises (1% or larger in absolute terms) within our second (consistent bull or bear shock) data category.

[3] There were 4 missing observations for the Texas/Oklahoma/New Mexico series and 26 missing observations for the Colorado series because no prices were reported in those regions in certain weeks. The Colorado missing observations occurred between May 2018 and December 2020.

[4] It should be noted that the immediate week prior to a *COF* release is actually the 5 days (Monday to Friday) of the *COF* release week. Given that, *COF* reports are released on Friday afternoons at 2 p.m. central time, a small percentage of the week's LMR recorded prices may have occurred after the *COF* release.

Figure 2.5. Market Surprises or Analyst Forecast Errors (FE) of Cattle on Feed, Placements, and Marketings: 1/16/04 to 12/18/20.

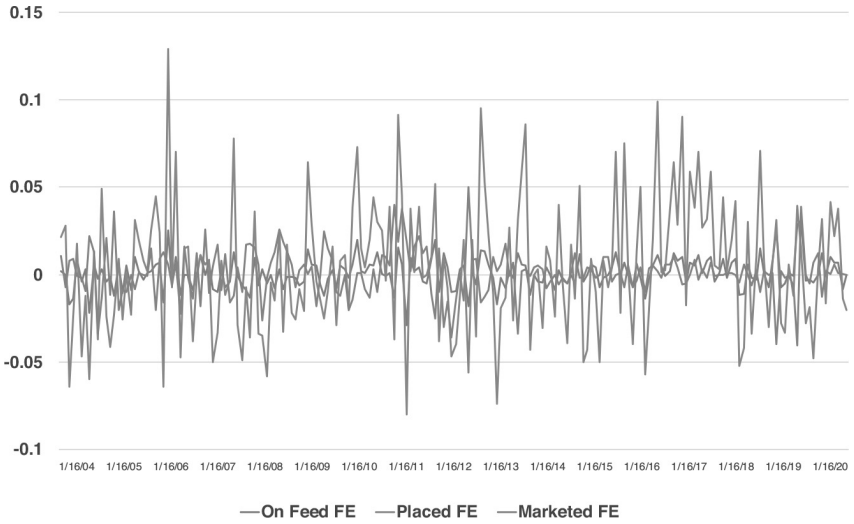


Table 2.1. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises to Cattle on Feed, Placements and Marketings 1/16/04 to 12/18/20.

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Feed	1	**0.81	**−0.31	**−0.14	*−0.13	−0.11	−0.1	*−0.12
Placed		1	−0.1	*−0.12	*−0.13	−0.1	−0.11	*−0.12
Marketed			1	0.1	0.08	0.09	*0.13	0.06
Texas [a]				1	**0.98	**0.93	**0.93	**0.90
Kansas					1	**0.94	**0.94	**0.91
Nebraska						1	**0.96	**0.94
Colorado							1	**0.91
Iowa [b]								1

*indicates the Pearson correlation coefficient is significant at the 10% level on a two tailed test.
**indicates the Pearson correlation coefficient is significant at the 5% level on a two tailed test.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

In addition, and to make a fairer comparison between LMR markets, the second, third, and fourth applications of our analysis only include months where there are no missing observations across all five reporting regions. Finally, using our second (consistent bull or bear shock) data category, we split the sample between January 2004 to December 2013 and January 2014 to December 2020. Our objective in this case is to examine if the primary LMR cash market price discovery locations change over time. Our motivation stems from the fact that since 2014, the percentage volume of negotiated cash transactions occurring in the Texas/Oklahoma/New Mexico region has decreased dramatically. Prior to 2014, this region accounted for 20% to 40% of negotiated transactions, with the number decreasing consistently over the period (Coffey, Pendell and Tonsor, 2019). However, in the post-2014 period, this number had dropped to around 10% of negotiated transactions, which begs the question as to whether the price discovery role played by this market has also diminished over time.

Results

The size of market surprises for on-feed inventory, placements, and marketings is illustrated graphically in *Figure 2.5.* Clearly, the magnitude of these surprises has remained constant over time, suggesting that the price discovery role played by *COF* reports has likely not diminished. Surprises to placements are typically much larger than either marketings or on-feed inventory surprises, with the latter by far the smallest. In addition, there does not appear to be any systematic bias in analyst forecasts with over-estimates equally as likely as under-estimates.

Table 2.2. Response of Negotiated Live Cattle Cash Prices to Market Surprises in Placements and Marketings 1/16/04 to 12/18/20.

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Intercept	0.002	0.003	0.003	0.003	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Placed	−0.074	*−0.076	−0.063	−0.06	−0.069
	(0.046)	(0.045)	(0.047)	(0.048)	(0.042)
Marketed	0.154	0.122	0.142	0.217	0.073
	(0.130)	(0.125)	(0.132)	(0.139)	(0.118)
R-Squared	0.023	0.021	0.017	0.026	0.017
LM(1)	0.528	1.018	0.297	0.369	0.132
	(0.467)	(0.313)	(0.586)	(0.544)	(0.716)
B–P	0.446	0.198	0.312	0.188	0.751
	(0.800)	(0.906)	(0.855)	(0.910)	(0.687)
F Test	2.169	2.058	1.632	2.198	1.648
	(0.117)	(0.131)	(0.198)	(0.114)	(0.195)
Observations	188	192	192	166	192

Standard errors of coefficients are presented in parentheses in top half of table.

LM(1) is Breusch-Godfrey (Lagrange Multiplier test for first order autocorrelation). The test statistic is specified as Chi-Squared with 1 degree of freedom and p-values are presented in parentheses below the test statistic.

B–P is Breusch-Pagan test for heteroscedasticity and p-values are presented in parentheses below the test statistic.

F-test for the hypothesis that all of the coefficients (excluding the constant) are zero with p-values in parentheses.

* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Table 2.3. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises with consistent Bull or Bear Market Surprises to Placements and Marketings 1/16/04 to 12/18/20.

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Feed	1	**0.86	** −0.80	** −0.25	** −0.23	* −0.19	−0.15	−0.14
Placed		1	** −0.67	** −0.29	** −0.30	** −0.24	** −0.23	* −0.20
Marketed			1	**0.27	**0.26	**0.24	*0.20	*0.21
Texas [a]				1	**0.97	**0.89	**0.89	**0.84
Kansas					1	**0.92	**0.93	**0.87
Nebraska						1	**0.95	**0.94
Colorado							1	**0.88
Iowa [b]								1

* indicates the Pearson correlation coefficient is significant at the 10% level on a two tailed test.
** indicates the Pearson correlation coefficient is significant at the 5% level on a two tailed test.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Table 2.4. Response of Negotiated Live Cattle Cash Prices to Consistent Bull or Bear Market Surprises in Placements and Marketings 1/16/04 to 12/18/20.

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Intercept	0.001	0.001	0	0	−0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Placed	−0.102	−0.118	−0.078	−0.1	−0.049
	(0.074)	(0.078)	(0.080)	(0.084)	(0.076)
Marketed	0.183	0.154	0.203	0.119	0.198
	(0.195)	(0.205)	(0.211)	(0.221)	(0.199)
R-Squared	0.096	0.094	0.07	0.057	0.051
LM(1)	0.562	0.617	0.365	0.171	0.293
	(0.453)	(0.432)	(0.546)	(0.679)	(0.588)
B–P	2.116	0.88	1.053	0.244	1.705
	(0.347)	(0.644)	(0.591)	(0.885)	(0.426)
F Test	**4.028	**3.955	*2.847	2.303	2.058
	(0.022)	(0.023)	(0.064)	(0.107)	(0.135)
Observations	79	79	79	79	79
Placed	*** −0.148	*** −0.157	** −0.130	** −0.130	* −0.100
	(0.055)	(0.058)	(0.060)	(0.062)	(0.056)

Table 2.4. Response of Negotiated Live Cattle Cash Prices to Consistent Bull or Bear Market Surprises in Placements and Marketings 1/16/04 to 12/18/20.—Continued

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
R-Squared	0.085	0.087	0.058	0.054	0.039
Marketed	** 0.361	** 0.361	** 0.341	* 0.294	* 0.285
	(0.146)	(0.153)	(0.156)	(0.165)	(0.148)
R-Squared	0.074	0.067	0.058	0.04	0.046

Standard errors of coefficients are presented in parentheses in top half of table.
LM(1) is Breusch-Godfrey (Lagrange Multiplier test for first order autocorrelation). The test statistic is specified as Chi-Squared with 1 degree of freedom and p-values are presented in parentheses below the test statistic.
B–P is Breusch-Pagan test for heteroscedasticity and p-values are presented in parentheses below the test statistic.
F-test for the hypothesis that all of the coefficients (excluding the constant) are zero with p-values in parentheses.
* Indicates significance at the 10% level.
** Indicates significance at the 5% level.
*** Indicates significance at the 1% level.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Correlations between market surprises and LMR cash price changes around the *COF* report releases for our whole January 2004 to December 2020 sample period are presented in *Table 2.1* and highlight several important implications of the data. First, on-feed inventory and placement surprises are highly positively correlated (0.81), such that including both as explanatory variables in a regression would likely lead to problems of multicollinearity. With this is mind, and given that preliminary specifications indicated that on-feed inventory surprises were insignificant and added no explanatory power beyond placement surprises, we present models and results with on-feed inventory surprises excluded. Second, as expected, on-feed inventory and placement surprises are negatively correlated to marketings. Larger than expected on-feed inventory and placement numbers, which correspond to higher supply, tend to occur when marketings, which are associated with lower supply and higher demand, are lower than expected. Third and consistent with economic theory, on-feed inventory and placement surprises—supply side shocks—are negatively correlated to LMR cash price changes, while marketings surprises—demand side shocks—are positively correlated to LMR cash price changes. Fourth, cash price changes across all five LMR market regions are highly positively correlated ($\rho > 0.9$), suggesting that these markets are well integrated and that price discovery signals are quickly transmitted.

Table 2.5. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises with only large Surprises in both Marketings and Placements with consistent Bull or Bear Market Surprises to Placements and Marketings 1/16/04 to 12/18/20.

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Feed	1	** 0.88	** −0.81	** −0.35	** −0.32	* −0.25	* −0.23	−0.19
Placed		1	** −0.67	** −0.33	** −0.32	* −0.23	* −0.23	−0.17
Marketed			1	** 0.33	** 0.32	* 0.27	* 0.24	* 0.25
Texas [a]				1	** 0.97	** 0.87	** 0.89	** 0.82
Kansas					1	** 0.91	** 0.93	** 0.86
Nebraska						1	** 0.96	** 0.94
Colorado							1	** 0.89
Iowa [b]								1

* indicates the Pearson correlation coefficient is significant at the 10% level on a two tailed test.
** indicates the Pearson correlation coefficient is significant at the 5% level on a two tailed test.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Regression results based on equation (1), which measure immediate LMR cash price responses to *COF* surprises for the full sample period, are reported in *Table 2.2.* Results show that although all cash price responses are of the expected signs, only Kansas prices have a small but significant response to placement surprises. A 1% larger than expected increase in placements results in a 0.076% decrease in Kansas prices, which is roughly in line with previous research measuring cattle futures price reactions (Grunewald, McNulty, and Biere,1993; Karali, Isengildina-Massa, and Irwin, 2019). Also, R-squared values of around 2% show that COF sur-

prises explain little of the price variation across LMR markets. If anything, *COF* reports, on average, provide very noisy price signals.

Consistent Bull and Bear Market Pricing Signals

Turning to results for our models designed to measure clearer bull and bear market pricing signals, we can see much stronger correlations between LMR cash prices for all regions and *COF* surprises in *Table 2.3*. However, a natural and expected effect of organizing our data in this manner is to induce a high degree of correlation ($\rho = -0.67$) between placements and marketings. As such, our regression models based on this data will suffer from muticollinearity between placements and marketings. It should be noted that the consequences of mulitcollinearity is to reduce the precision or accuracy of our coefficient estimates and increase their standard errors, reducing our ability to detect significant effects in our multiple regression models. However, importantly, the predictive and explanatory power of such models in terms of R-squared values is not diminished, and the joint contribution of our explanatory variables (placement and marketings surprises) can still be measured. Therefore, in the top half of *Table 2.4* we present our consistent Bull or Bear market surprise models results for our multiple regression specifications (with both placement and marketings surprises included as explanatory variables), and for comparison purposes we present regression results for placement and marketing surprises modeled separately as explanatory variables.

Table 2.6. Response of Negotiated Live Cattle Cash Prices to only large Surprises in both Marketings and Placements with consistent Bull or Bear Market Surprises to Placements and Marketings 1/16/04 to 12/18/20.

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Intercept	−0.001	− 0.002	− 0.003	− 0.002	− 0.004
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Placed	− 0.083	− 0.092	− 0.039	− 0.058	− 0.008
	(0.075)	(0.080)	(0.083)	(0.085)	(0.079)
Marketed	0.225	0.215	0.259	0.191	0.265
	(0.196)	(0.207)	(0.215)	(0.221)	(0.205)
R-Squared	0.129	0.123	0.079	0.066	0.061
LM(1)	0.26	0.084	0.273	0.381	0.452
	(0.610)	(0.772)	(0.601)	(0.537)	(0.501)
B–P	2.11	0.927	0.451	0.015	1.306
	(0.348)	(0.629)	(0.798)	(0.993)	(0.521)
F Test	** 3.862	** 3.659	2.22	1.828	1.681
	(0.027)	(0.033)	(0.119)	(0.171)	(0.196)
Observations	55	55	55	55	55
Placed	** − 0.141	** − 0.148	* − 0.106	* − 0.107	− 0.076
	(0.056)	(0.059)	(0.061)	(0.063)	(0.059)
R-Squared	0.107	0.105	0.053	0.052	0.031
Marketed	** 0.370	** 0.376	** 0.327	* 0.292	* 0.278
	(0.145)	(0.154)	(0.158)	(0.163)	(0.150)
R-Squared	0.109	0.101	0.075	0.057	0.061

Standard errors of coefficients are presented in parentheses in top half of table.

LM(1) is Breusch-Godfrey (Lagrange Multiplier test for first order autocorrelation). The test statistic is specified as Chi-Squared with 1 degree of freedom and p-values are presented in parentheses below the test statistic.

B–P is Breusch-Pagan test for heteroscedasticity and p-values are presented in parentheses below the test statistic.

F-test for the hypothesis that all of the coefficients (excluding the constant) are zero with p-values in parentheses.

* Indicates significance at the 10% level.

** Indicates significance at the 5% level.

*** Indicates significance at the 1% level.

[a] Texas refers to the Texas-Oklahoma-New Mexico market.

[b] Iowa refers to the Iowa-Minnesota market.

Table 2.7. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises with consistent Bull or Bear Market Surprises to Placements and Marketings 2004 to 2013.

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Feed	1	** 0.88	** − 0.81	* − 0.22	− 0.21	− 0.18	− 0.15	− 0.12
Placed		1	** − 0.71	* − 0.25	* − 0.25	* − 0.21	− 0.2	− 0.16
Marketed			1	* 0.29	* 0.27	* 0.24	0.2	0.21
Texas [a]				1	** 0.97	** 0.88	** 0.90	** 0.83

Table 2.7. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises with consistent Bull or Bear Market Surprises to Placements and Marketings 2004 to 2013.—Continued

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Kansas					1	**0.91	**0.93	**0.87
Nebraska						1	**0.96	**0.94
Colorado							1	**0.89
Iowa [b]								1

*indicates the Pearson correlation coefficient is significant at the 10% level on a two tailed test.
**indicates the Pearson correlation coefficient is significant at the 5% level on a two tailed test.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Table 2.8. Correlations between Weekly Changes in Negotiated Live Cattle Cash Prices and Market Surprises with consistent Bull or Bear Market Surprises to Placements and Marketings 2014 to 2020.

	Feed	Placed	Marketed	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Feed	1	**0.84	** − 0.72	* − 0.43	− 0.38	− 0.4	− 0.31	* − 0.44
Placed		1	** − 0.70	* − 0.43	* − 0.45	* − 0.43	* − 0.41	* − 0.46
Marketed			1	0.33	0.37	*0.46	*0.41	*0.44
Texas [a]				1	**0.98	**0.95	**0.89	**0.93
Kansas					1	**0.96	**0.95	**0.92
Nebraska						1	**0.92	**0.95
Colorado							1	**0.86
Iowa [b]								1

*indicates the Pearson correlation coefficient is significant at the 10% level on a two tailed test.
**indicates the Pearson correlation coefficient is significant at the 5% level on a two tailed test.
[a] Texas refers to the Texas-Oklahoma-New Mexico market.
[b] Iowa refers to the Iowa-Minnesota market.

Although, as expected, coefficients are not significant for our multiple regressions, the R-squared values are much higher in comparison to our full sample results presented in *Table 2.2.* The Texas/Oklahoma/New Mexico and Kansas markets appear to best incorporate the *COF* information with around 10% of the weekly price variation following the report release dates explained by surprises to placements and marketings. In contrast, only 5% of the weekly price variation is explained by the surprises in the Colorado and Iowa/Minnesota markets. These price impacts are confirmed by our separate regression results shown at the foot of *Table 2.4.* Clearly, by focusing on unambiguous bull and bear market signals in *COF* reports over the full sample period, our results show that the primary price discovery markets are Texas/Oklahoma/New Mexico and Kansas. These results are perhaps not surprising given that the Texas/Oklahoma/New Mexico and Kansas markets accounted for around 50 to 70% of the overall volume of negotiated transactions/marketings over the sample period (Coffey, Pendell and Tonsor, 2019).

Table 2.9. Response of Negotiated Live Cattle Cash Prices to Consistent Bull or Bear Market Surprises in Placements and Marketings 2004 to 2013.

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Intercept	0	0	− 0.001	− 0.001	− 0.002
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)
Placed	− 0.048	− 0.063	− 0.05	− 0.068	− 0.007
	(0.093)	(0.097)	(0.104)	(0.107)	(0.101)
Marketed	0.255	0.222	0.228	0.151	0.249
	(0.207)	(0.216)	(0.232)	(0.239)	(0.225)
R-Squared	0.086	0.078	0.061	0.045	0.045
LM(1)	0.177	0.16	1.508	0.475	0.487
	(0.674)	(0.689)	(0.220)	(0.491)	(0.485)
B–P	0.434	0.151	0.756	0.211	1.384
	(0.805)	(0.927)	(0.685)	(0.900)	(0.501)
F Test	*2.713	*2.451	1.889	1.368	1.358
	(0.075)	(0.095)	(0.161)	(0.263)	(0.265)
Observations		61	61	61	61
Placed	* − 0.129	* − 0.134	* − 0.123	− 0.116	− 0.087
	(0.066)	(0.068)	(0.073)	(0.075)	(0.071)
R-Squared	0.062	0.061	0.045	0.039	0.024
Marketed	**0.331	**0.322	*0.308	0.257	0.26
	(0.145)	(0.151)	(0.162)	(0.167)	(0.157)

Table 2.9. Response of Negotiated Live Cattle Cash Prices to Consistent Bull or Bear Market Surprises in Placements and Marketings 2004 to 2013.—Continued

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
R-Squared	0.081	0.071	0.057	0.039	0.045

Standard errors of coefficients are presented in parentheses in top half of table.

LM(1) is Breusch-Godfrey (Lagrange Multiplier test for first order autocorrelation). The test statistic is specified as Chi-Squared with 1 degree of freedom and p-values are presented in parentheses below the test statistic.

B–P is Breusch-Pagan test for heteroscedasticity and p-values are presented in parentheses below the test statistic.

F-test for the hypothesis that all of the coefficients (excluding the constant) are zero with p-values in parentheses.

* Indicates significance at the 10% level.

** Indicates significance at the 5% level.

*** Indicates significance at the 1% level.

[a] Texas refers to the Texas-Oklahoma-New Mexico market.

[b] Iowa refers to the Iowa-Minnesota market.

Large Bull and Bear Market Pricing Signals

We find similar results when we further breakdown the consistent bull and bear market data to focus only on large surprises to placements and marketings. The correlations between surprises and prices presented in *Table 2.3* and the large bull and bear market pricing signal regression results shown in *Table 2.6* again highlight the importance of Texas/Oklahoma/New Mexico and Kansas markets for price discovery. Again, COF surprises account for twice as much of the weekly price variation in these markets compared with Colorado and Iowa/Minnesota markets.

Table 2.10. Response of Negotiated Live Cattle Cash Prices to Consistent Bull or Bear Market Surprises in Placements and Marketings 2014 to 2020.

Parameters	Texas [a]	Kansas	Nebraska	Colorado	Iowa [b]
Intercept	0.005	0.005	0.005	0.006	0.004
	(0.005)	(0.006)	(0.005)	(0.006)	(0.004)
Placed	− 0.21	− 0.208	− 0.104	− 0.137	− 0.126
	(0.174)	(0.184)	(0.158)	(0.182)	(0.133)
Marketed	0.199	0.451	1.042	0.887	0.669
	(1.198)	(1.264)	(1.084)	(1.250)	(0.916)
R-Squared	0.189	0.207	0.23	0.195	0.241
LM(1)	0.823	0.824	1.159	0.368	0.359
	(0.364)	(0.364)	(0.282)	(0.544)	(0.549)
B–P	0.478	0.229	0.123	0.617	0.797
	(0.788)	(0.892)	(0.941)	(0.735)	(0.671)
				(0.671)	
F Test	1.748	1.959	2.238	1.82	2.383
	(0.208)	(0.175)	(0.141)	(0.196)	(0.126)
Observations	18	18	18	18	18
Placed	* − 0.230	* − 0.254	* − 0.211	* − 0.228	* − 0.194
	(0.120)	(0.127)	(0.112)	(0.127)	(0.093)
R-Squared	0.188	0.2	0.183	0.168	0.214
Marketed	1.216	1.457	* 1.547	* 1.553	* 1.279
	(0.862)	(0.905)	(0.756)	(0.875)	(0.648)
R-Squared	0.081	0.071	0.057	0.039	0.045

Standard errors of coefficients are presented in parentheses in top half of table.

LM(1) is Breusch-Godfrey (Lagrange Multiplier test for first order autocorrelation). The test statistic is specified as Chi-Squared with 1 degree of freedom and p-values are presented in parentheses below the test statistic.

B–P is Breusch-Pagan test for heteroscedasticity and p-values are presented in parentheses below the test statistic.

F-test for the hypothesis that all of the coefficients (excluding the constant) are zero with p-values in parentheses.

* Indicates significance at the 10% level.

** Indicates significance at the 5% level.

*** Indicates significance at the 1% level.

[a] Texas refers to the Texas-Oklahoma-New Mexico market.

[b] Iowa refers to the Iowa-Minnesota market.

Consistent Bull and Bear Market Pricing Signals over the 2004 to 2013 *versus* the 2014 to 2020 Period

Tables 2.7 and *2.8* show surprise and price correlations over the 2004 to 2013 and 2014 to 2020 periods, respectively. The most noticeable difference is that the correlation between placement and marketings surprises and all LMR cash prices has doubled over the more recent 2014 to 2020 period. LMR cash markets are now more responsive than ever to unambiguous price signals contained in *COF* reports. Our regression model results presented in *Tables 2.9* and *2.10* confirm this finding. Turning first to *Table 2.9,* our results highlight the important price discovery role played by Texas/Oklahoma/New Mexico and Kansas markets over this earlier period. R-squared values and F-tests are much larger for these two markets compared with the others and, in particular, the Colorado and Iowa/Minnesota markets. In contrast, the 2014 to 2020 regression results presented in *Table 2.10* with respect to R-squared values show that prices responsiveness and discovery is now more equally shared across LMR markets. However, a word of caution is in order as the 2014 to 2020 results presented in *Table 2.10* are only based on 18 observations and are subject to high levels of multicollinearity. This issue is reflected in the lack of precision of the coefficient estimates (high standard errors) and insignificant F-tests.

Implications for the Fed Cattle Market

Because the fed cattle market has become a highly concentrated market characterized by a relatively low volume of negotiated cash transactions, questions about the efficiency and accuracy of prices ought to be taken very seriously: such markets are undoubtedly susceptible to price discovery problems, including intentional manipulation. Evidence of such problems in the fed cattle market is sparse, however, despite intense investigation by numerous researchers using varied data and methodology over many years. Results presented here are broadly consistent with those previous findings. Analysis of fed cattle cash price response to unanticipated information in the monthly *COF* report suggest that all regions respond to such information in a manner consistent with active price discovery—that is, prices adjust quickly and consistent with the expectations of economic theory in response to unanticipated information.

> *Much of the present concern over fed cattle price discovery has focused on the Texas/Oklahoma/New Mexico reporting region because of the relative thinness of negotiated trade in that region in recent years (see* ***Figure 2.4****). The analysis presented here suggests that price discovery in this region has actually been among the most active of any of the reporting regions over the period of this study.*

Much of the present concern over fed cattle price discovery has focused on the Texas/Oklahoma/New Mexico reporting region because of the relative thinness of negotiated trade in that region in recent years (see *Figure 2.4*). The analysis presented here suggests that price discovery in this region has actually been among the most active of any of the reporting regions over the period of this study. While negotiated prices in the region have become less responsive to unanticipated information since 2014, the (admittedly limited) data on response to information shocks since then does not suggest that the price discovery process in Texas/Oklahoma/New Mexico is notably different than in any other region, including regions (*e.g.,* Nebraska, Iowa/Minnesota) with much higher proportions of negotiated transactions.

Summary and Conclusions

A clear understanding of price discovery processes and mechanisms in the fed cattle market is important because a number of policy interventions have been proposed with the specified intent of improving price discovery. Without question, the fed cattle market has thinned rather dramatically over the past decade or so in terms of negotiated spot market transactions as a share of total transactions. While this situation raises legitimate concerns—particularly in light of formula transactions that rely on negotiated trades for price benchmarks—there is little evidence that the effectiveness of price discovery in the fed cattle market has been compromised, either by the thinning of negotiated trade or by market concentration in the meatpacking sector.

The fact that the thin and highly-concentrated fed cattle market does not exhibit clear signs of non-competitive pricing behavior does not suggest that market participants should have no concerns about price discovery. The reliance of formula prices on negotiated prices is reason enough to pay particular attention to the manner in which prices are established in the market. Negotiated prices not only reveal information about supply and demand fundamentals in the fed cattle market; they also contribute substantially to formula prices that control ⅔ or more of fed cattle

trades. For both of these reasons, negotiated trades in the fed cattle market have some characteristics of a public good; therefore, market participants have a strong interest in ensuring that negotiated trades occur in sufficient quantity to fulfill this public good role (Koontz and Purcell, 1997). A number of complicated issues arise with respect to how this interest is best addressed. What volume of negotiated trades is necessary for efficient price discovery? Theory and empirical work, as reviewed in this volume, suggest that the figure may be quite small—smaller than market participants (at least on the selling side) are apparently comfortable with. If interventions to increase negotiated trade volume are undertaken, what form of intervention is appropriate? Market-based incentives or regulatory decree? In either case, it may well be that intervention disrupts the organic development of market institutions (both formal and informal) that are appropriate and effective for the circumstances of this particular market. After all, formula pricing has not been imposed on the fed cattle market by force: packers and feeders have mutually decided that it presents an effective and efficient way for them to transact routine business. It may well be that in seeking to preserve price discovery by familiar means, beneficial market innovations may be undermined, with unforeseen consequences for both individual market participants and for the sector as a whole.

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Chapter 3

How Market Institutions, Risks, and Agent Incentives Affect Price Discovery: Fed Cattle Market Implications

CHRISTOPHER T. BASTIAN, CHIAN JONES RITTEN, and AMY M. NAGLER

Introduction

Concerns continue to grow regarding declining negotiated cash trade volumes and related impacts on fed cattle market price discovery. Various policy proposals to address these concerns center on the premise that mandating increased volumes of negotiated cash trade will fix the fed cattle market environment and price discovery will be improved (Brown, 2021; Nepveux, 2021). It is important to understand what price discovery is, and how various factors such as market institutions, risks faced by buyers and sellers, and related market agent incentives impact price discovery and resulting price levels (also called price determination). Such knowledge will improve our understanding of the potential success of policy proposals aimed at addressing price discovery concerns in fed cattle markets.

Price Discovery *versus* Price Determination

As noted in Chapter 2, price discovery refers to the process by which a buyer and seller arrive at a price for a specific transaction. Negotiations that include all of the buyer's bid prices and the seller's asks or offer prices are part of the price discovery process. Price discovery directly relates to the mechanics by which individual transaction prices (and other terms of trade) occur rather than general market price levels.

Price determination refers to the general price level that prevails after a number of individual transaction prices occur. Once the buyer and seller come to agreement on the terms of trade, including price, that individual transaction price becomes a potential piece of information signaling what those particular cattle were worth. Generally, an average of the individual fed cattle transactions prices during a specified time period, for a particular region, is reported by the United States Department of Agriculture Agricultural Marketing Service (USDA–AMS). Negotiated cash transactions are reported twice daily to AMS, and price information from these transactions appears in various reports. Transaction prices for other marketing methods are reported after the cattle are delivered to the packers, and this price information may be based on market conditions 1 to 2 weeks earlier (Schroeder, Tonsor, and Coffey, 2019). These publicly available prices represent price determination information for the fed cattle market for the reporting period.

Factors Affecting Price Discovery and Price Determination

What factors affect price discovery? Anything that impacts buyers' bids, and/or sellers' offers during bargaining affects price discovery. Economic theory and research indicate a number of factors influence price discovery in fed cattle markets, including knowledge of supply and demand, trading institutions, risks traders face, risk preferences of traders, and expectations of value formed via multiple sources of old and current market information.

Supply and Demand

Individual buyers and sellers adjust to supply and demand factors at the time they negotiate price. For example, if feedlots have a higher number of cattle available, the supply of cattle has increased. This in turn means an individual buyer representing a packer could bid lower prices and still attract cattle. A seller (feedlot) would likely accept a lower price in this situation in order to sell cattle currently nearing slaughter weight. Alternatively, if demand for beef strengthened and resulting boxed beef prices were increased, buyers would need to increase bid prices to attract cattle into packing plants, and sellers would likely only accept a higher sale price during bargaining. Thus, price discovery adjusts to, and reflects, supply and demand conditions. As a result, the forces of supply and demand for a particular product or commodity generally drive price determination or price levels (Tomek and Kaiser, 2014).

Trading Institutions

Trading institutions are the mechanisms, including both formal and informal rules defining how agents interact, through which buyers and sellers discover transaction prices and other terms of trade (Nagler, *et al.,* 2015; Tomek and Kaiser, 2014;

Note: Research referenced in this chapter using experimental economics methods by the authors was primarily supported by the Paul Lowham Research Fund. All opinions expressed here are those of the authors and not the funding source.

Davidson and Weersink, 1998). The three most relevant trading institutions for cattle markets are Double Auction, English Auction, and Private Negotiation.

The double auction is the trading institution used in live (fed) and feeder cattle futures transactions. Buyers start at low bid prices and sellers start at higher ask or offer prices. During haggling, buyers raise their bid prices and sellers lower their offer prices until a buyer's bid equals a seller's offer (Menkhaus, Phillips, and Bastian, 2003). During bargaining, multiple buyers and sellers may be haggling for the same futures contract or set of contracts. The double-auction institution is information rich since all buyers and sellers can see each other's bids and offers during bargaining. This information allows agents to know what level successful bids and offers need to be. Discovery of transaction price occurs relatively quickly in this trading institution.

The English auction is a trading institution commonly used in livestock cash market transactions. Its use has declined significantly for fed cattle, but it remains relatively prominent in feeder cattle markets. Sellers bring their cattle to the auction site, and a number of cattle are brought into a sale ring around which buyers and sellers are typically seated. Some information about the cattle is given prior to the sale, and then an auctioneer calls out a beginning bid level. Buyers signal to the auctioneer their willingness to pay higher prices, as the auctioneer indicates higher bid levels. This continues until no buyer is willing to pay a higher bid price (Menkhaus, Phillips, and Bastian, 2003). The buyer agreeing to the highest bid price purchases the cattle as long as the seller agrees to accept this price. Buyers are competing against each other to "win" the cattle with the highest bid price they are willing to pay. Sellers are passive and either accept or reject the winning bid for their cattle. Since buyers and sellers at the sale ring hear the bid prices, the English auction also is a relatively information-rich trading institution.

Private negotiation is a less formal trading institution where one buyer and one seller negotiate privately. During negotiation, the buyer starts at a low bid level and increases that level while the seller starts at a high offer price and reduces that level (Menkhaus, Phillips and Bastian, 2003). Trade occurs when the buyer and seller agree on price and any other relevant terms of trade. As there are no other buyers or sellers involved, the only information available during bargaining is the bid and offer prices given by the buyer and seller pair. This institution is less information rich when compared to auctions as other buyers' bids (as in the case of the double and English auctions) and other sellers' offers (as in the case of double auction) are not available to the two traders while discovering price.

Research conducted at the University of Wyoming used experimental economics methods to test whether differences in price discovery and price levels occur in these trading institutions (Menkhaus, Phillips, and Bastian, 2003). The laboratory setting allows researchers to control the market environment including supply and demand conditions, trading institution, and number of buyers and sellers transacting in the market (Friedman and Sunder, 1994; Roth, 2015). These experiments rely on induced-value theory and pay participants based on their trading behavior to create economic incentives similar to what is seen in cattle markets (Friedman and Sunder, 1994; Roth, 2015). These experiments are used because data for privately negotiated transactions in cattle markets are usually not available. Additionally, econometric analyses of transactions may suffer from dynamic supply and demand conditions that affect variability of price levels, making it difficult to determine the impact of the trading institution alone.[1]

Since the underlying supply and demand conditions are known and constant across the trading institutions in the laboratory market experiments, the research compared market outcomes to predicted competitive equilibrium price levels (Menkhaus, Phillips, and Bastian, 2003). The resulting price levels were nearly 17% higher in English auction and 4% higher in double auction than the predicted equilibrium, but price determination for private negotiation was nearly 10% below the competitive equilibrium price (*Figure 3.1*).

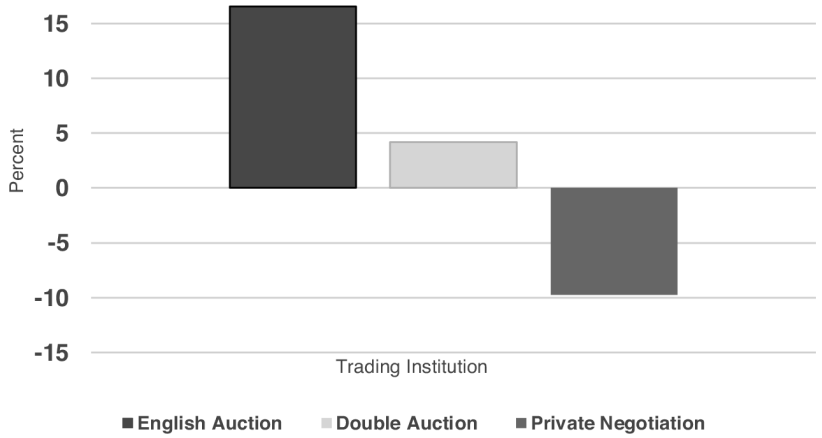
The underlying supply and demand conditions as well as number of buyers and sellers were exactly the same across each institution in these markets. Thus, no arguments of market structure or concentration giving buyers an advantage in private

[1] These results come from laboratory market studies. Some have criticized that subject pools used in such experiments do not behave the same as agricultural producers. Nagler, *et al.* (2013) test behavior in laboratory market experiments across students and agricultural professionals. They find the same treatment effects across the two subject pools. Bastian (2019) examines bargaining behavior across market experiments using students and agricultural professionals and generally finds no difference across the bargaining strategy variables tested. Further, Frechette (2015) examines the broader experimental literature and concludes that results are generally consistent regardless of subjects used, lending further support to these experimental results.

negotiation could be made in these experiments. Trading institution alone was the only difference across each set of experiments.

Why did English auction result in a price that was higher and more favorable to sellers while private negotiation resulted in price being lower and more favorable to buyers? The English auction institution facilitates prices being driven up as buyers must compete against each other to purchase product while sellers are passive during bargaining. The double auction has lower price levels than the English auction, but very near the competitive equilibrium. The only difference is that sellers are also competing with other sellers for buyers' bids in the double auction. The simple addition of sellers competing amongst each other while simultaneously buyers are competing amongst each other leads to lower transactions prices that are closer to the predicted value than in the English auction. This result also is partially driven by individual bids and offers being known to all traders during price discovery.

Figure 3.1. Percent Difference in Price Level from Competitive Equilibrium by Trading Institution.



Private negotiation, which is the dominant trading institution found in fed cattle markets, results in much lower price levels than auction markets. Given the low-price level in private negotiation, can we conclude the price discovery process is broken in private negotiation? No. First, it is important to understand that a major difference in this institution is the lack of buyers competing against buyers and/or sellers competing against sellers during bargaining. Additionally, an individual buyer and individual seller don't have the benefit of seeing other bids and offers during price discovery. Thus, individual bargaining behavior may impact price discovery and resulting price determination in private negotiation, which is likely mitigated by agent competition and bid/offer information in the auction institutions. One factor affecting bargaining behavior during price discovery in private negotiation relates to actual or perceived risks faced by participants in the market. Research indicates that advance production risk, matching risk, and negotiation failure risk greatly impact trader incentives and resulting behavior when transactions are privately negotiated (Menkhaus, *et al.,* 2007; Sabasi, *et al.,* 2013; Jones Ritten, *et al.,* 2020).

Risks and Agent Incentives

Advance Production Risk

Sellers in agricultural markets, including fed cattle markets, generally make decisions to produce inventory or product prior to sale (Nagler, *et al.,* 2015; Menkhaus, *et al.,* 2003). When sellers produce goods in advance of sale, this requires sellers to incur production costs prior to any promise of revenue. Thus, sellers are at risk of losing some or all of their production costs if prices fall below cost of production, or when sellers fail to reach an agreement with any buyer. This risk of losing some or all of the production cost is called advance production risk or inventory loss risk (Sabasi, *et al.,* 2013; Menkhaus, *et al.,* 2007).

Research finds that advance production risk affects price discovery and price levels in privately negotiated markets (Menkhaus, *et al.,* 2003; Menkhaus, *et al.,* 2007). Sellers facing this risk are more likely to make concessions during bargaining and

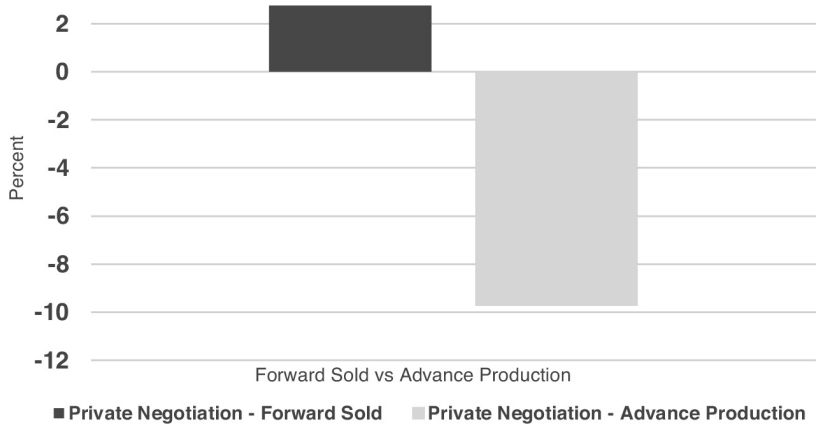
accept lower trade prices rather than risk losing all of their production cost for a product. Moreover, buyers knowing sellers face this risk are less likely to offer high bid prices given sellers signal they are willing to accept lower prices (Menkhaus, *et al.,* 2007). Research compares prices in private negotiation markets where sellers only produce what they agreed to sell (*i.e.,* produce only what they have forward sold) to sellers producing inventory prior to negotiating price (Menkhaus, *et al.,* 2003). They found price levels were near equilibrium when inventory was sold prior to incurring production cost (2.75% above equilibrium) and nearly 10% below the competitive equilibrium when inventory was produced in advance (*Figure 3.2*).[2]

Matching Risk

This advance production risk is coupled with what is called matching risk (Menkhaus, *et al.,* 2007). This is the risk of being matched with someone in the market that has already traded and feels less pressure to trade compared to their trading partner. It also encompasses trading with someone who is better at bargaining. For example, if you as a seller are paired with a buyer who has already purchased cattle and is less interested in your cattle, that buyer may bid less aggressively, making it harder to reach agreement on price. This can also occur if a buyer meets with a seller who has already sold what they planned to that period. This risk creates a potential cost for the trader to try and find someone else interested in trading. Research indicates that what happens with traders affected by this risk is they become more willing to make concessions when haggling over price to ensure a trade occurs rather than risk being matched with someone they are unable to trade with (Menkhaus, *et al.,* 2007).

Research investigating the impact of increased and decreased opportunities to match with a trade partner finds matching risk can have a significant impact on price discovery and price levels (Menkhaus, *et al.,* 2007). The research compares the following matching scenarios: (1) All traders in the market are able to match three times with different trade partners (used previously by Menkhaus, *et al.,* 2003); (2) All traders in the market are able to match five times with trade partners; (3) Concentrating the market by cutting the number of buyers in half but doubling each of the buyers demand schedules and having five potential opportunities to match per trading period; and, (4) Concentrating the market by reducing the number of sellers by half but doubling supply schedules and having five matching opportunities per trading period. By doubling the demand (buyers) or supply (sellers) schedules, the underlying supply and demand remained constant and the predicted equilibrium was consistent across treatments (Menkhaus, *et al.,* 2007). In this study, sellers also faced advance production risk.

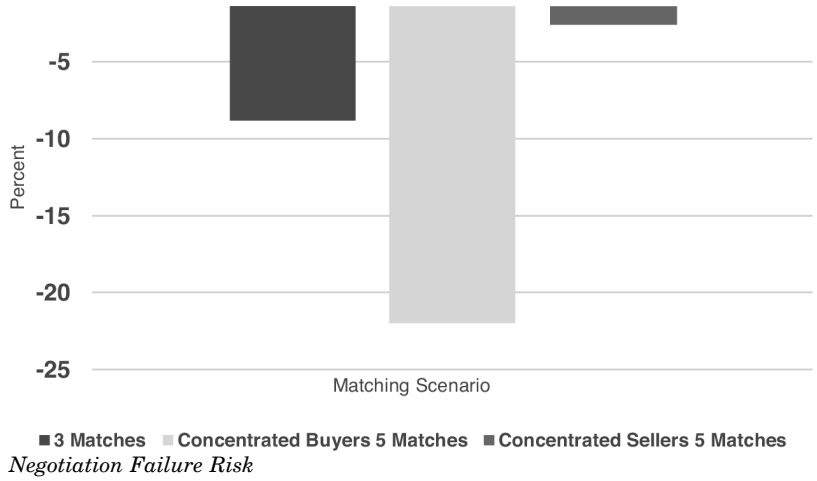
Figure 3.2. Percent Difference in Price Level Given Advance Production Risk.



[2] It should be noted that other research using the same supply and demand conditions find similar tendencies for private negotiation with advance production, but the magnitude of difference is somewhat smaller. Rahman, *et al.* (2019) find price levels are 6.55% below the competitive price with private negotiation and advance production.

Results show that increasing the number of matches from three to five with all trade partners, increased prices from about 9% under the competitive price to only 3% under the competitive price (*Figure 3.3*). By concentrating the number of buyers, doubling the demand of each buyer, and forcing the market to have five matches, matching risk had a large impact on price discovery and price level. With these big buyers, half the sellers were not matched with a buyer during each matching opportunity (there were two buyers as opposed to four sellers). The simple change of having fewer buyers relative to sellers increased matching risk. During this experiment even though there was a chance to be matched, half the sellers were randomly matched with buyers while half were not matched with a buyer during each matching opportunity. Unmatched sellers were forced to wait for an opportunity to sell, and once matched, these sellers faced the risk that the buyer had the supply needed. As a result, sellers were willing to make concessions in bargaining to reduce the chance they would be stuck with unsold inventory. Moreover, buyers experiencing less aggressive offer prices and bigger concessions from sellers, bid lower prices during bargaining. Average price levels were 22% below the competitive equilibrium in this scenario (*Figure 3.3*). When sellers were concentrated, buyers faced the same random chance of not being matched with a seller, as was the case in the concentrated buyer scenario. That is, half of the buyers were waiting to bargain with a seller during a matching opportunity while the other buyers bargained to purchase inventory. Thus, unmatched buyers faced the risk of less inventory being available for purchase once they had an opportunity to match with a seller. Sellers were able to increase their offer prices and buyers bid higher prices when matched with sellers to ensure product purchases. Price levels in this concentrated seller scenario were only one percent below, and not statistically different from, the competitive equilibrium price (Menkhaus, *et al.,* 2007). We don't see the same magnitude of price difference between the concentrated scenarios because sellers still face and respond to advance production risk. Thus, the simple act of not being able to meet with a trade partner can make a significant difference in price discovery and resulting price levels.

Figure 3.3. Percent Difference in Price Level Given Matching Risk.



Negotiation Failure Risk

Negotiation failure risk is the risk of not coming to agreement. Even though time and effort are spent bargaining, there is a risk that no price or terms of trade are agreed upon (Jones Ritten, *et al.,* 2020). If such a risk is realized, the persons involved must search for someone else to trade with. At that point, valuable time has been lost, increasing the chance that the next trading partner has either acquired or sold what they need to, *i.e.,* matching risk increases. In the case of the fed cattle market, this realized risk could result in sellers holding onto cattle longer while incurring more costs until they find a willing buyer. For buyers, it could mean not having the amount of cattle desired for the slaughter plant at a given time.

Focus group results in Wyoming found that producers generally felt they had to accept a buyer's terms rather than risk a failed negotiation (Bastian, *et al.,* 2018). At the time of this writing, empirical research indicating the magnitude of impact

from negotiation failure on commodity prices was unavailable, but it is expected that negotiation failure exacerbates the impact of both advance production and matching risks.

Given the nature of these risks (advance production, matching, and negotiation failure) research suggests sellers are more likely to be at a bargaining disadvantage than buyers when private negotiation is the trading institution (Bastian, 2019; Menkhaus, *et al.,* 2003; Menkhaus, *et al.,* 2007). Moreover, recent empirical research related to producers and bargaining outcomes in other commodity markets supports these findings (Courtois and Subervie, 2015; Shokoohi, Chizari, and Asgari, 2019). Price discovery within this institution, where these risks are present, generally results in price levels below the predicted equilibrium even with the same supply, demand, and number of firms.

Risk Preferences

Individual risk preferences affect bargaining behavior and resulting price discovery. Those agents who are more risk averse (buyers or sellers) tend to bargain for less advantageous transaction prices, leading to low individual earnings (Muthoo, 1999; Krishna, 2010). Risk averse buyers involved in auctions or private negotiation tend to have higher bids to reduce the chance of not purchasing product, and risk averse sellers tend to give lower offers or asking prices to ensure a successful sale. Jones Ritten, *et al.* (2020) tested risk preferences across groups that first participate in a privately negotiated market experiment *versus* those that do not. The authors confirm previous findings that higher risk aversion resulted in lower earnings for market participants. Additionally, those who participated as a seller in a market experiment had significantly higher loss aversion compared to buyers, and those with higher loss aversion tended to bargain less aggressively and earned significantly less in the market.

Market Information

The above factors: trading institution, various risks, and risk preferences all interact with expectations of value when buyers and sellers enter into a transaction. One factor affecting expectation of value is product quality. Quality in fed cattle markets is generally measured in terms of yield and quality grades. Expectation of animal value generally increases as perceived quality increases. Increased quality, in turn, alters the levels at which bids and offers and resulting transaction prices occur (Jones, *et al.,* 1992; Ward, *et al.,* 1996; Ward, 1992).

Market information helps market agents form expectations about animal value prior to negotiating price. Research indicates that several sources of market price information affect price discovery and price determination for fed cattle. These market price sources include negotiated cash prices, boxed beef prices, and live cattle futures prices (Jones, *et al.,* 1992; Matthews, *et al.,* 2015; Ward, *et al.,* 1996; Ward, 1992; Ward, 1981).

It is important to understand how these sources of market information affect price discovery. Reported prices are based on transactions that happened from 1 day to 1 or 2 weeks prior (for alternative marketing methods) when traders enter into negotiation, which give traders a general idea of price level. This information is tempered by any knowledge of other factors that could be affecting value of the animals available for sale. For example, let's say you expect the number of cattle to come out of feedyards this week is going to be down compared to last week. This signals that current supplies could be less than last week, so bids and offers should reflect that current information or expectation. Perhaps recent news indicates an increase in demand for beef in the near future, which signals to traders that current demand conditions are changing compared to last week. Thus, the price discovery process utilizes past price information, but traders also add any other current knowledge or expectations to their bids and offers.

Market traders are continually updating their information and expectations as they enter into negotiations. Together with the factors discussed previously, market information plus any current supply and demand information affect price discovery. Different individuals with different risks and risk preferences are using that information, weighting its importance, forming expectations and making bids and offers to discover price. Thus, the price discovery process becomes dynamic and constantly incorporates new and updated information while being filtered through individual traders' perceptions of risk, quality, and animal value during bargaining.

Trade Volume and Price Discovery

How does trade volume impact the price discovery process? Let's start with the idea of a single transaction between a buyer and seller. Since the agents may face different risks and risk preferences, and weigh market information differently, bids

and prices could result in a price that may be different than what current supply and demand conditions indicate. The difference between the transacted price *versus* what supply and demand conditions indicate could be large or small. As other transactions occur, the probability that prices are incorporating current supply and demand information more appropriately should increase. Thus, agricultural economists view more transactions as improving the accuracy of price determination and reported information about price levels. Tomek (1980, p. 435) states, "If . . . the average of transaction price is an estimate of the true equilibrium price, the variance of the mean of transaction prices decreases as the number of transactions increases . . .". Thus, increased trade volume should improve the chance that an average reported price is accurate. Moreover, with more transactions, price determination generally adjusts more quickly given current supply and demand conditions, *i.e.,* is more efficient (Fama, 1970; Janzen and Adjemian, 2017).

Given the above discussion, it is expected that volume affects the accuracy of past market price information used in the price discovery process. Research has found efficient price discovery and good market outcomes can occur with relatively low volumes of transactions or trade across various agricultural products and may change with differing supply and demand conditions (Peel, *et al.,* 2020; Adjemian, *et al.,* 2016; Adjemian, Saitone, and Sexton, 2016; Tomek, 1980).

Fed Cattle Market Implications

Factors motivating current concerns and the resulting calls for policy related to price discovery are understandable. Increased use of Alternative Marketing Agreements (AMAs), which rely primarily on previously reported negotiated cash prices, have reduced the volume of cattle being traded in cash or spot transactions (Peel, *et al.,* 2020). Moreover, private negotiation is the primary trading in [situation] through which negotiated cash prices are discovered for fed cattle.[3] Thus, sellers (feedlots) transacting fed cattle in cash markets face advance production, matching, and negotiation failure risks. It is likely that increased use of AMAs exacerbates these risks for those feedlots only selling cattle via negotiated cash trade, and puts them at a relative bargaining disadvantage (Sabasi, *et al.,* 2013).

A potential outcome of a policy mandating increased cash trade volume is that buyers will transact more cash-traded cattle, thereby reducing matching and negotiation failure risks for those feedlots (sellers) relying solely on cash trade.[4] Hence, policy proposals aimed at reducing the use of AMAs and mandating increased cash trade volumes seemingly address a primary issue for sellers relying on negotiated cash trades. The current expectations of fed cattle sellers seem to be that mandating increased negotiated cash trade volumes will improve price discovery and potentially increase price levels.

A primary question is whether policies mandating increased levels of negotiated cash trade volumes fully address risks and incentives for all agents trading in fed cattle markets, and thus making expectations of improved price discovery and price determination a realization. The reality is that feedlots will still face advance production risk, and while potentially reduced, they will still face some level of matching and negotiation failure risk even with a policy mandating increased negotiated cash trade volumes in place.

Research at the University of Wyoming tested scenarios where 25%, 50%, and 75% of the traders transacted produced inventory in an initial bargaining period, while those not allowed to trade in the first period (75%, 50%, 25%, of traders, respectively) waited for a second bargaining opportunity in which all market participants could trade (Sabasi, *et al.,* 2013). The first bargaining period mimicked incentives faced by buyers and sellers in a market environment with the existence of AMAs. These AMAs scenarios were compared to a base scenario of no pre-committed trade (Sabasi, *et al.,* 2013). Results indicate average prices were generally slightly higher in the AMAs bargaining period *versus* the second bargaining period mimicking the spot market, but they were generally not statistically different from each other. The researchers then compared agents not allowed to trade in the first period

[3] At the time of this writing the authors are not aware of any English auctions still being used to sell fed cattle. If any do exist, it is expected that the volume sold via auction is very small relative to the total volume being traded in fed cattle markets. This decline in English auction has likely occurred due to increased transactions costs and risks related to both quantity and quality variability for buyers relative to current market institutions being used.

[4] The realization of this outcome depends on the inability of buyers to adapt current AMA purchasing behavior to meet regulatory agent definitions of "negotiated trade" (Peel, *et al.,* 2020). It seems feasible that buyers could potentially record a small amount of bid and offer communication related to last week's price, while using the structure of current AMA contracts with sellers, thereby meeting the regulatory definition but not fully meeting the intended policy objective. If this occurs, the likelihood of any change in current market outcomes is minimal.

versus those that did. They found that generally sellers not allowed to trade in the first period negotiated for slightly lower prices compared to those that did, but seller price levels were not statistically different across the two groups. So, sellers not involved in the first bargaining period (AMAs) seemed to be somewhat disadvantaged, but the non-existence of AMAs in the base treatment did not result in significantly higher price levels for sellers. This result is very similar to empirical analyses that have examined the impact of AMAs on spot prices (Key, 2011; Muth, *et al.,* 2008; Schroeder, *et al.,* 1993; Vukina, Shin, and Zheng, 2009; Ward, Koontz, and Schroeder, 1998).

Why weren't price levels higher in the non-AMAs scenario? First, it is important to remember that supply and demand conditions generally drive price levels, and the supply and demand levels were the same across all scenarios. Second, sellers still faced advance production risk and matching risks associated with bargaining ability of buyers during the first bargaining period. Generally, AMAs reduce the advance production risk for sellers and matching risk for both buyers and sellers engaged in those agreements. These reductions in risk create significant incentives for buyers and sellers to be involved with AMAs. A probable outcome of mandating increased negotiated cash trade is that some feedlots may have improved bargaining outcomes because of reduced matching risk, but those feedlots who have reduced sales opportunities via AMAs due to the policy will have worse outcomes. Thus, it seems unlikely that mandating increased volumes of negotiated trade will achieve desired expectations of increased price levels overall.

Summary and Conclusions

Recent policy proposals to address price discovery concerns in fed cattle markets assume that mandating increased volumes of negotiated cash trade will improve the fed cattle market environment and price discovery (Brown, 2021; Nepveux, 2021). It is important to understand that a number of factors impact agent incentives when transacting fed cattle and resulting price discovery. Private negotiation is the dominant trading institution in fed cattle markets, and as a result, advance production, matching, and negotiation failure risks greatly impact bargaining outcomes. Policies focused on reducing AMAs and increasing negotiated cash trade volume do not fully address these risks and resulting incentives of agents involved in fed cattle markets. Some feedlots who sell fed cattle via negotiated cash trade may have reduced matching and negotiation failure risk as a result, but it is likely that economic surplus will be redistributed from agents (both buyers and sellers) utilizing AMAs to those benefitting from the policy.

Trade volume impacts the potential accuracy of past price information used in price discovery. Research varies regarding necessary threshold levels of trade volume needed for improved price discovery, and as a result, the dynamic process of price discovery likely will be marginally impacted by policies aimed at increasing negotiated cash trades. Moreover, as price determination is generally driven by supply and demand conditions, expectations that policies aimed at increasing negotiated cash trade will significantly raise price levels are generally not supported by economic theory or numerous research findings.

An additional issue is that such policies may have a negative impact on total economic surpluses generated by current fed cattle markets. AMAs reward quality, create improved production and processing efficiencies, reduce production costs per head through better plant utilization and spreading of fixed costs, and reduce search and transaction costs for cattle (Peel, *et al.,* 2020; Koontz and Lawrence, 2010; Anderson, Trapp, and Fleming, 2003; MacDonald, *et al.,* 2000). Research also indicates average beef quality has increased given the use of AMAs thereby creating value for consumers (Muth, *et al.,* 2007). These outcomes mean greater economic surplus has been created due to the use of AMAs. Thus, a potential outcome is that policies aimed at increasing negotiated cash trades and thereby reducing AMAs may have the unintended consequence of reducing overall economic surpluses currently achieved in the fed cattle and beef sector.

> *A potential outcome is that policies aimed at increasing negotiated cash trades and thereby reducing AMAs may have the unintended consequence of reducing overall economic surpluses currently achieved in the fed cattle and beef sector.*

Policies aimed at improving fed cattle markets and related economic surpluses must take into account the risks and incentives faced by all market agents. Peel, *et al.* (2020) propose that adding a transparent electronic trading platform for spot market transactions could improve price discovery in fed cattle markets with even a small amount of transactions. We extend that suggestion here as an alternative for consideration to policies focused on mandating increased negotiated cash trade.

Research suggests that a double auction would likely be the best trading institution for such an endeavor (Menkhaus, *et al.,* 2003). Price discovery will tend to be efficient in this institution provided a sufficient number of buyers and sellers participate. This trading institution also would mitigate some of the risks that seem to dominate bargaining outcomes in private negotiation. Any market alternative must reduce transaction costs for participants in order to be viable (Davidson and Weersink, 1998). Thus, development of several contracts with different specifications related to quality and yield grade that seem to be sought after in both negotiated cash and AMAs transactions, as well as specified premiums and penalties for spot delivery of cattle not meeting specifications, could be used to facilitate quicker trade. Resulting trade information would be reported and thereby add to price discovery. The question is whether enough incentives exist or whether other incentives would have to be provided to attract sufficient buyers and sellers. This alternative ultimately seems more beneficial than mandating increased volume of negotiated cash trades.

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Chapter 4

Enhancing Supply Chain Coordination through Marketing Agreements: Incentives, Impacts, and Implications

TED C. SCHROEDER, BRIAN K. COFFEY, and GLYNN T. TONSOR

Prologue

The U.S. cattle sector is an important segment of the overall farm economy representing about 18% of agricultural commodity receipts.[1] The cattle and beef industry, in addition to being a massive economic sector, is immensely complex, diverse, and dynamic. The vast array of cattle and beef operations and associated business interests naturally creates a diversity of perceptions, opinions, and tradeoffs associated with alternative policies. As public university economists, our goal is to provide information, analysis, and opinions regarding how and why the industry has evolved so interested parties can better understand economic drivers of industry change. We provide this information using publicly available data, review of published work, and through countless industry participant discussions and interviews over the years to appreciate the intricate workings of the industry. We expect a variety of opinions will be present relative to issues addressed in this chapter. We hope our thoughts help guide and inform the dialogue.

Introduction

Dramatic changes in the ways fed cattle are being purchased and valued through marketing agreements have occurred because of substantial economic incentives to improve vertical coordination and align value signals along the supply chain. Packers and feeders have forged marketing agreements because they address supply chain coordination challenges more effectively than negotiated cash fed cattle trade. Incentives to adopt marketing agreements are multi-faceted, interconnected, and emanated in part to better meet customer demands. Having evolved over a few decades, marketing agreements have become integral in coordinating the beef supply chain. Structural changes in how fed cattle value is determined have resulted in thinly traded negotiated cash markets in some regions, raising concerns about reliability of reported trade and efficiency of cash market price discovery. Thinning negotiated cash cattle trade has resulted in reduced transparency of market information apprising industry participants of evolving supply and demand fundamentals. Tradeoffs between supply chain enhancements facilitated through marketing agreements and reduced market information due to thin negotiated cash trade need to be more clearly understood as strategies and policies are deliberated to address concerns.

The purpose of this chapter is to identify and discuss major economic drivers of marketing agreements and associated outcomes. We also assess market information needs in light of shifts away from cash negotiated fed cattle trade toward marketing agreements. Specific objectives include:

1. Document changes over time in how fed cattle are marketed.
2. Identify and summarize the major incentives for cattle feeders and beef packers to adopt marketing agreements and associated tradeoffs relative to negotiated cash trade.
3. Outline current challenges regarding market transparency in marketing agreements that need to be addressed.
4. Present potential methods Livestock Mandatory Reporting (LMR) might capture and illuminate improved market information contained in marketing agreement price reporting.
5. Outline summary thoughts and recommendations.

Changing Marketing Methods

Fed cattle marketing methods have undergone a major transformation over the past 15 years, as illustrated in *Figure 4.1.* In the early 2000s, cash negotiated trade represented about 55% of typical weekly national fed cattle volume. Negotiated grid and forward contract trade represented roughly 10% each with the remaining 30% being formula trade. Around 2007, formula trade started to increase its relative share of fed cattle marketing so that by 2020 about 60 to 70% of fed cattle were formula purchases. During this same time cash negotiated trade dwindled to 20 to 25% with negotiated grid and forward contracts combined representing the remaining 15% of trade volume.

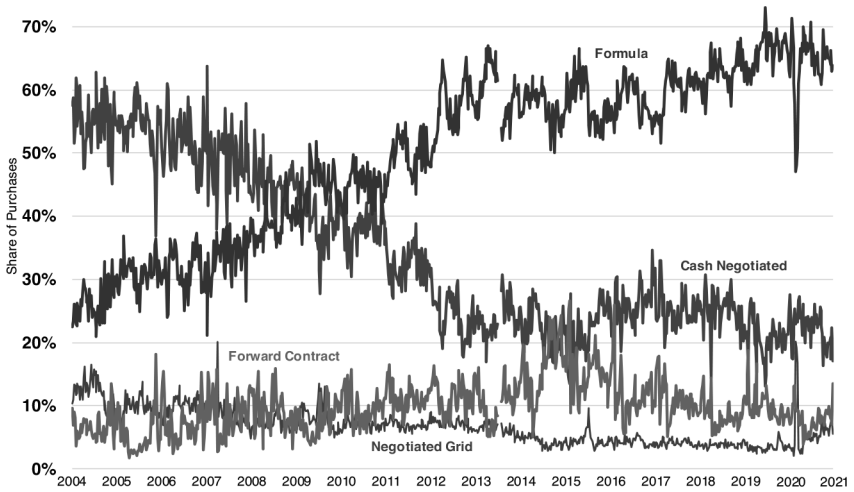
Integral to understanding what these major trends imply about market performance and associated supply chain impacts are the definitions of what types of fed cattle transaction types are included in each category by the United States Department of Agriculture Agricultural Marketing Service (USDA–AMS, 2020):

[1] *https://www.ers.usda.gov/topics/animal-products/cattle-beef/sector-at-a-glance/*.

1. *Cash negotiated* trade represents cattle purchased by the packer where the price is negotiated with the seller and cattle scheduled to be delivered to the plant within 30 days.
2. *Forward contract* trade is an agreement for the purchase of cattle in advance of slaughter where the base price is established referencing the CME Live Cattle Futures contract.
3. *Negotiated grid* purchases involve negotiating the base price between the packer and cattle feeder at the time of the agreement with delivery expected within 14 days. The final net price is determined after slaughter and carcass grading by adjusting the negotiated base price by grid premiums or discounts based on carcass attributes.
4. *Formula* trade represents cattle committed for slaughter by any means other than cash negotiated, forward contract, or negotiated grid.

These delineations are important because as we discuss marketing agreements in this chapter, we are essentially referring to formula trade (although in places we also include negotiated grids and we specifically note when we do so). However, formula trade, as reported by USDA, is a broad category and details vary considerably across associated transactions. Variation within formula trade compounds market transparency concerns as formula trade has increased in popularity. This issue is addressed specifically later in this chapter.

Figure 4.1. Shares of Weekly National Live Cattle Purchases by Transaction Type, April 11, 2004–March 14, 2021.



Source: USDA–AMS archived by LMIC. All live, dressed, steers, heifers, other fed cattle, cows and bulls. Negotiated grid was not tracked prior to April 2004.

Incentives and Tradeoffs of Marketing Agreements and Cash Negotiated Trade

In this section we summarize past research that has investigated incentives associated with adoption of marketing agreements and consequences of reduced cash negotiated trade. Much of the synthesis in this section originates from information gleaned from work by Anderson and Trapp (1999), Boykin, *et al.* (2017), RTI International (2007), Schroeder and Graff (2000), Schroeder, *et al.* (2002), Schroeder, *et al.* (1997), Tonsor, *et al.* (2010), Liu, *et al.* (2009), Peel, *et al.* (2020), and numerous discussions with industry participants over the years by the authors.

Tradeoffs associated with wide-spread adoption of marketing agreements displacing cash negotiated fed cattle trade are both numerous and complex. Private incentives of cattle feeders and beef packers to adopt marketing agreements are well documented and straightforward. However, there are also broader supply chain forces which encourage marketing agreements. Furthermore, externalities associated with widespread decline in cash negotiated trade can create adverse consequences associated with the transition to marketing agreements.

A stylized summary of cattle feeder and beef packer incentives and implications associated with various ways fed cattle are purchased is provided in *Tables 4.1* and *4.2.* We compare *Live* and *Dressed Negotiated* (*i.e.,* cash negotiated trade); *Forward Contract; Negotiated Grid;* and *Formula* separated into two alternative valuation methods of *Marketing Agreement Non-Grid* and *Marketing Agreement Grid.* The color coding (red, yellow, and green shading in the tables refer to relative effectiveness of each marketing method in addressing each consideration) used in the tables is based on a synthesis of past research noted above, numerous informal discussions with industry participants, and our assessment. Specific selection of colors in some cells entails some subjectivity; the overall implications we report across marketing methods are stark and, we argue, robust.

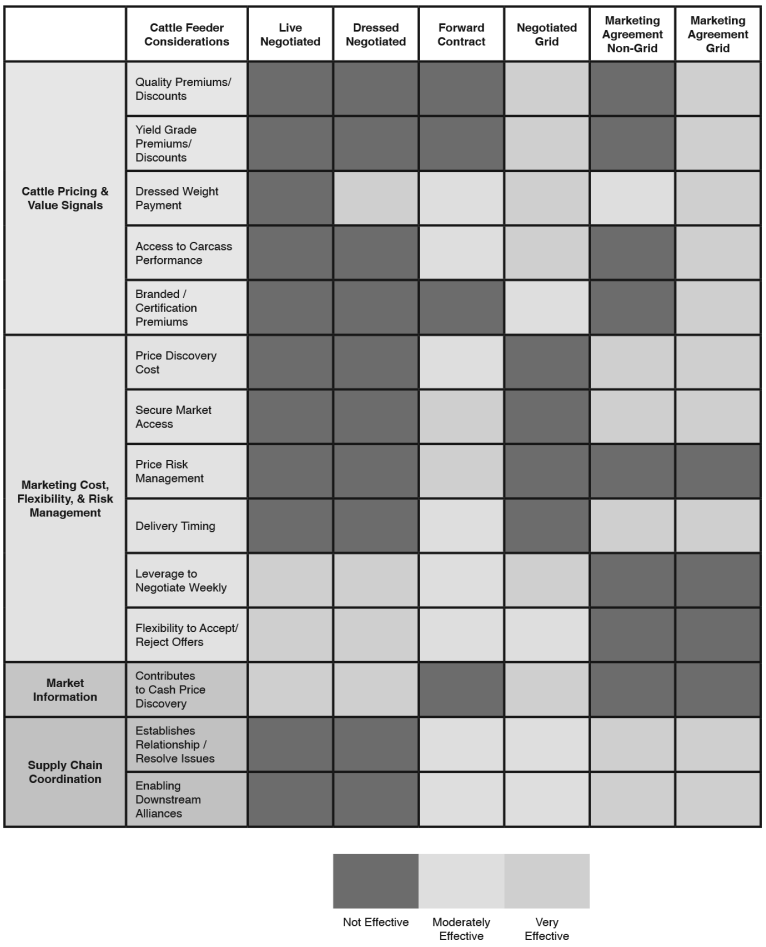
Cattle Feeder Incentives and Tradeoffs

For cattle feeders, the various fed cattle pricing and valuation methods offer highly varied incentives that differ across marketing methods (*Table 4.1*). To facilitate interpretation, we grouped the various individual impacts of each marketing method (individual rows in *Table 4.1*) into (1) Cattle Pricing and Value Signals; (2) Marketing Cost, Flexibility, & Risk Management; (3) Market Information; and (4) Supply Chain Coordination.

Cattle Pricing and Value Signals

As noted in Chapter 1, there exists a long history of concerns that fed cattle pricing mechanisms being used to market fed cattle using cash negotiated methods (often referred to as average pricing) were insufficient at sending value signals and providing incentives to cattle feeders to improve fed cattle quality. This is not a new concern. Conferences held some 30 years ago organized by the *Research Institute on Livestock Pricing* focused on concerns associated with inadequate value signals being sent through traditional fed cattle negotiated cash trade. These concerns, still present today, led to the design and adoption of value-based grid pricing of fed cattle. Variation in grid premiums and discounts across packers due to differentiated customer demands, coupled with varied cattle feeder comparative advantages, encouraged cattle feeders to target specific packer grids. Feeders consider their particular grids in feeder cattle procurement, feeding management, and marketing decisions. These actions naturally led many feedlots to form direct ties to a single packer with whom they entered into a marketing agreement.

Table 4.1. Relative Ability of Alternative Fed Cattle Marketing Methods to Address Cattle Feeder Considerations.



Marketing agreements assure feeders financial rewards for incurring added costs associated with these practices. There is no such guarantee when selling specific cattle in the negotiated spot market. This is immensely important to recognize as we consider the future implications of marketing agreements in the fed cattle and beef supply chain.

Grid pricing is the main way value signals associated with quality, yield, and various differentiated branded programs are sent to cattle feeders. As such, the most effective cattle marketing methods to ensure price differentials reflect quality is through use of grids. Negotiated grids and marketing agreements with grids are the most effective of the marketing methods used in the industry to directly link value with quality. Furthermore, grid information sent back to cattle feeders to enable them to better manage feeder cattle procurement, feeding protocols, and cattle harvest timing created even greater value for cattle feeders to enter into marketing agreements.

As we present later, growing incentives to continue to develop marketing agreements have arrived or are on the horizon. For example, various certification systems and brands have developed. Such programs require feeders to invest in genetics, upstream alliances, and production practices to consistently meet specifications. Marketing agreements assure feeders financial rewards for incurring added costs associ-

ated with these practices. There is no such guarantee when selling specific cattle in the negotiated spot market. This is immensely important to recognize as we consider the future implications of marketing agreements in the fed cattle and beef supply chain.

Marketing Cost, Flexibility, & Risk Management

In the late 1980s, Cactus Feeders and IBP, Inc. entered into what was recognized as the first large-scale fed cattle marketing agreement between a cattle feeder and beef packer (Stalcup, 2004). Among major incentives noted at the time were reducing costs and eliminating distractions associated with weekly negotiating of fed cattle trade. Not long after, other cattle feeders entered into agreements, adding market access to a growing list of recognized incentives. Reduced costs and market access, which are present with or without a grid, remain among the most prominent reasons cattle feeders enter into marketing agreements. Most recently during the COVID–19 pandemic that reduced packing plant operational capacity, discussions with industry participants suggested some producers with marketing agreements had higher priority, more reliable, and more timely market access than cattle feeders who were attempting to negotiate spot trade each week. As packer operational capacity was challenged, contractual commitments for fed cattle to be delivered would be prioritized by packers over purchasing cattle in the spot market.

Though marketing agreements reduce week-to-week marketing and price discovery costs and ensure market access, they also reduce flexibility for the cattle feeder and packer. Negotiated cash trade enables producers to readily reject cattle purchase offers and, if leverage swings in their favor, utilize that leverage to pursue more desirable terms of trade. When leverage is unfavorable for the cattle feeder, spot markets tend to have greater challenges in negotiating desirable outcomes. Cattle feeders who prefer greater independence, have comparative advantage for negotiating individual transactions, and value increased ability to accept or reject prevailing offers are more inclined to negotiate weekly trade on the spot market. Opportunities to take advantage of short-term leverage swings are largely non-existent in marketing agreements.

Most recently during the COVID–19 pandemic that reduced packing plant operational capacity, discussions with industry participants suggested some producers with marketing agreements had higher priority, more reliable, and more timely market access than cattle feeders who were attempting to negotiate spot trade each week.

Market Information

Perhaps the single most common concern about not negotiating spot market prices regularly is the associated impact on market information. This concern has circulated across industry participants as well as policy-making arenas for a long time (Peel, *et al.,* 2020) and was a major reason Livestock Mandatory Reporting (LMR) was launched some 20 years ago (Parcell, *et al.,* 2016). However, with the recent precipitous decline in negotiated cash market fed cattle trade together with large fed cattle suppliers challenging packer slaughter capacity, focused effort on finding ways to "fix" this problem has again elevated. We address the issue of market information and formula trade later. For now, we simply note cash negotiated trade is reported by USDA–AMS during the week the price is agreed upon. In contrast, formula trade price information is reported the week the cattle are delivered to the packer and often based on reported negotiated prices from 1 to 2 weeks earlier. As such, formula trade does not contribute much new information to price discovery. Furthermore, because of how broadly the formula price category is defined and reported by USDA (*i.e.,* it encompasses all trade that is not categorized into one of the other reported methods), formula market information currently reported is not highly informative. Concerns are compounded by formula trade often relying on reported negotiated prices as a base price. As formula trade volume grows, a larger portion of cattle are partially priced by a negotiated price based on a thinner market (Schroeder, *et al.,* 2018).

Supply Chain Coordination

The cattle producer—beef packer relationship has often been described as confrontational. Whether that is widely true or selectively present is debatable, but it is not ubiquitous. Having an adversarial relationship with your customers as a cattle feeder or your main suppliers as a packer is not conducive to coordinating the supply chain, quickly resolving conflicts that might arise, or working together to solve problems. The importance of establishing strong buyer-supplier relationships (SBSR) has been clearly established in the supply chain literature (Board, 2011;

Kannan and Tan, 2006). Recent literature has focused even further on advantages of multiple vertical layers of supply chain relationships (*e.g.,* think of cow-calf-backgrounder-feeder-packer) (*e.g.,* Kataike, *et al.,* 2019). Established marketing agreements where both the supplier and buyer mutually benefit from the agreement creates strong business relationships that facilitate a collaborative relationship. This directly improves several dimensions of the supply chain, which is further discussed in the next section addressing impacts of cattle purchasing methods on packers/customers.

When a catastrophic event occurs, such as the Holcomb plant fire in August 2019, those with established relationships are able to more effectively work together to mitigate negative impacts. Due to the strong and lasting business relationship, both the feeder and the packer have an incentive to work together to adjust timing, scheduling, logistics, and other coordination issues to continue serving downstream customer needs.[2]

Packer/Customer Incentives and Tradeoffs

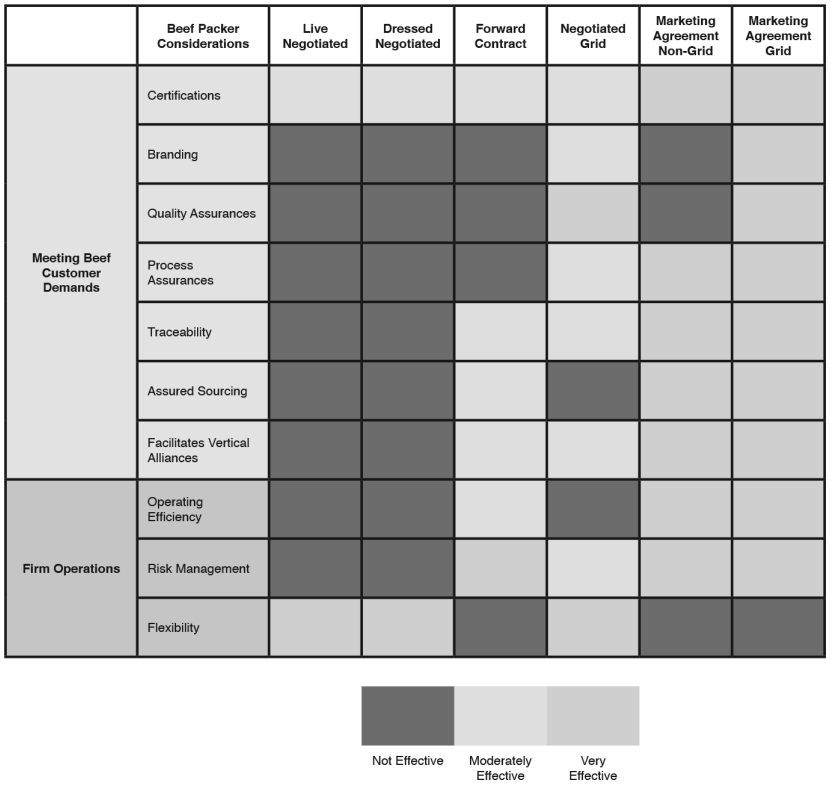
Table 4.2 summarizes a similar color-coded matrix to that of *Table 4.1* but is focused on beef packer/customer considerations regarding fed cattle marketing agreements. Similar to the previous discussion relative to cattle producer considerations, we focus on relative rankings of the various fed cattle purchase methods for beef packers. Since the noted attributes also often influence beef customers who are further downstream in addition to packers, we refer somewhat more generally to fed cattle and beef customer impacts.

Meeting Beef Customer Demands

A host of factors influence beef packer ability to meet downstream customer demands. Many of these refer to specific product and service differentiation including Certifications, Product Branding, Quality Assurances, Process Assurances, and Traceability. Having a known supply of cattle and known suppliers enables better quality control and production process assurances. These motives are further emphasized later in this chapter, but they are not only immensely important to customers—their importance will continue to grow in the future as consumer demands and expectations evolve. These considerations are most effectively accomplished through marketing agreements with known sources of fed cattle in the production pipeline.

[2] These sentiments were shared with us in personal confidential discussions with several industry participants.

Table 4.2. Relative Ability of Alternative Fed Cattle Marketing Methods to Facilitate Meeting Beef Customer Preferences.



Having assured sources of fed cattle through marketing agreements also makes animal traceability easier and product volumes assured so the packer is a reliable supplier to downstream customers with product-specific demands. Predictable supply is essential for product branding, whether at retail or food service. Supply chain management incentives related to certification and branding are a major part of marketing agreements discussed regarding cattle feeders.

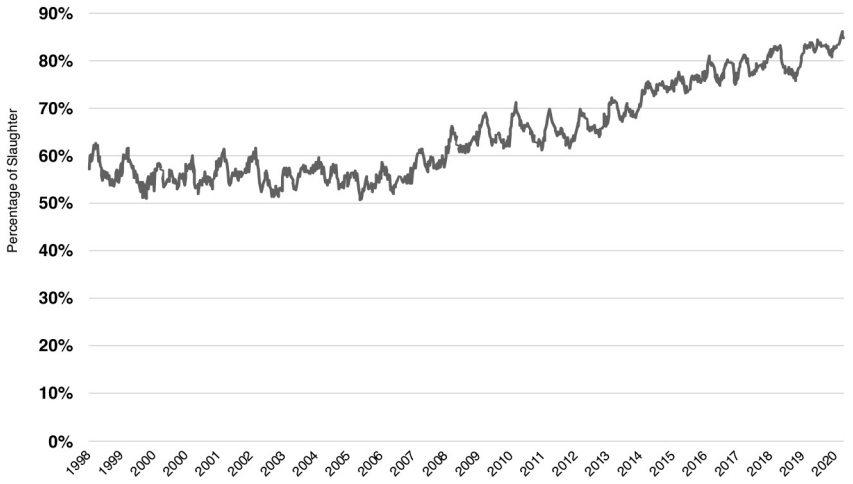
Firm Operations

Incentives for packers to enter into early marketing agreements in the late 1980s and 1990s were mostly associated with enhancing firm operations. In particular, marketing agreements reduce the cost of regularly searching for and bidding on cattle. The agreements provide consistent, predictable slaughter quantities in a business where operating plants at capacity provides substantial per-unit cost savings (Barkley and Schroeder, 1996). These incentives alone were enough to encourage packers to enter into marketing agreements even without the further supply chain enhancements noted above. Since the time of the early agreements, meeting customer demands has become a much more prominent incentive to establish marketing agreements (RTI International, 2007).

One noteworthy tradeoff for packers that use marketing agreements is reduced flexibility. If a packer, for whatever reason, wishes to increase slaughter volume significantly relative to existing marketing agreements, their main option is to use the negotiated cash market for sourcing. If, on the other hand, they wish to reduce slaughter volume, adhering to existing agreements may not allow it. As such, packers give up flexibility in cattle procurement when they enter into marketing agreements. However, counter-balancing the reduced cattle purchasing flexibility, RTI International (2007) packer surveys revealed marketing agreements increased packer flexibility in meeting downstream customer demand.

Enhanced vertical supply chain coordination among cattle producers, processors, and other participants is probably the most important benefit that has resulted from marketing agreements. Better buyer-supplier communication improves value signals, reduces costs, improves scheduling, enhances ability to resolve problems, and enables downstream alliances. These outcomes are all beef supply chain benefits associated with marketing agreements that ultimately benefit beef consumers.

Figure 4.2. National Weekly Percentage of Steers and Heifers Grading Choice and Prime, 1998–March 2021.



Source: USDA–AMS as compiled by LMIC.

Evidence Summary of Cattle and Packer Marketing Agreement Incentives

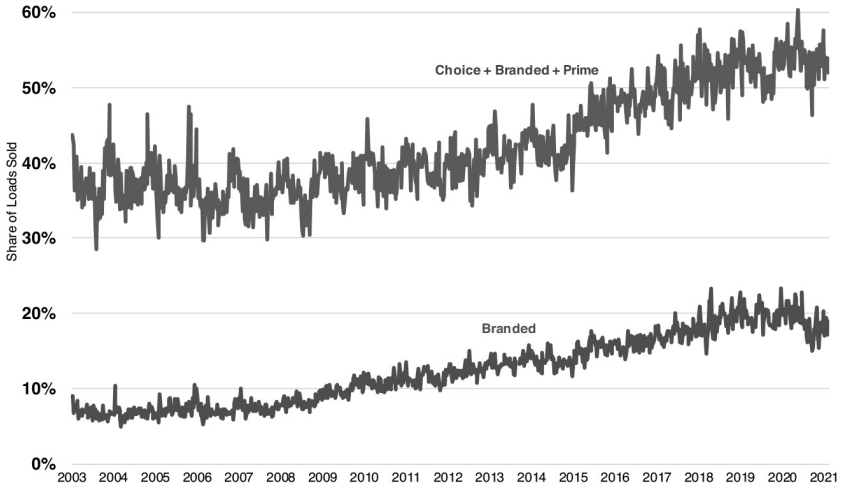
Quality Grade Impacts

It is abundantly clear from the previous discussion that marketing agreements have incentivized higher-quality fed cattle production, especially through the use of grids. This begs the question: *Has the increase in marketing agreements led to higher quality beef being produced?*

USDA *Market News* publishes weekly in the NW_LS196 estimated grading percent report a breakdown of steers and heifers offered for quality grading by grade category. *Figure 4.2* illustrates the trend over time in percentage of steers and heifers grading Prime or Choice (the two highest grades) from 1998 to March 2021. During the late 1990s to about 2007, roughly 55% of steers and heifers graded Choice or higher. The percentage of steers and heifers grading Prime or Choice trended upward since 2007 to greater than 80% in 2020 to 2021. Prime and Choice beef has increased substantially resulting in higher quality beef available for consumers at a more affordable price.

Further demonstration of increasing beef quality over time is apparent in wholesale boxed beef sales. *Figure 4.3* illustrates sales of Choice and higher-quality boxed beef (Choice + Branded + Prime) as well as just Branded boxed beef sales on a weekly basis starting in February 2003 when USDA–AMS first started reporting. Branded sales data are reported separately. Choice and higher-grade sales went from representing about 35% in the early 2000s to about 55% since 2017. Branded beef increased from about 7% to about 20% over the same time frame. Marketing agreements rewarding higher quality grades through grid premiums have increased concurrent with beef quality over time, providing evidence grid pricing incentives have been effective.

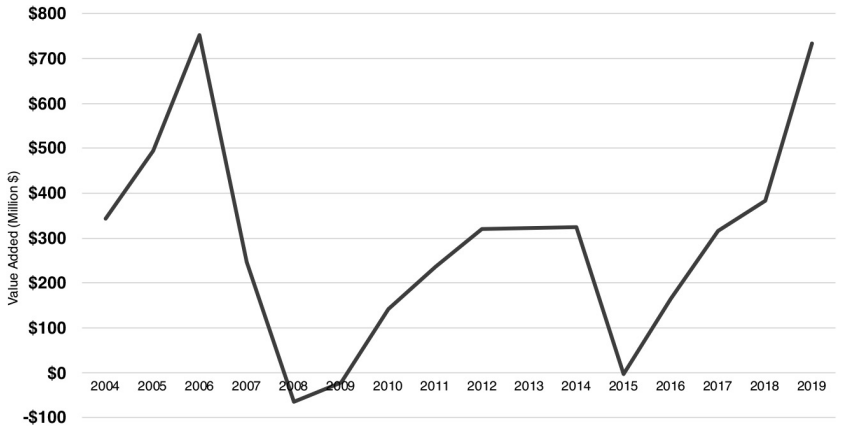
Figure 4.3. Shares of Choice and Higher Grade and Branded Boxed Beef Sales (Loads), Weekly February 28, 2003–March 12, 2021.



Source: USDA–AMS.

To provide an estimate of the value added to wholesale beef as a result of the higher quality grades being realized, we calculated the net gross dollars added by Prime, Branded, and Choice beef. To get this measure we multiplied premiums over Select for Prime, Choice, and Branded beef by their respective loads marketed. From that, we subtracted the discount of Ungraded beef relative to Select times Ungraded loads marketed. This step is necessary as the growing demand for high-quality beef likely increased penalties for lower-quality beef. This created a net gross dollars added (adjusted to 2019 dollars) over the 2004 to 2019 time period. The net gross value is illustrated in *Figure 4.4.* The net value changes across years as volumes, premiums, and discounts change. However, since 2015, consistent with when formula trade reached a plateau at about 60 to 70% of fed cattle trade (*Figure 4.1*), the value added has increased from zero to greater than $700 million in 2019. This means the volume-weighted premiums associated with higher quality beef net discounts for ungraded volume added some $700 million to wholesale beef value in 2019 alone (greater than $25/head of fed cattle slaughtered).

Figure 4.4. Net Gross Real (2019=100) Dollars Added by Prime, Branded, Choice, and Ungraded Boxed Beef Relative to Select, Annual 2004–2019.



Source: Calculated using USDA–AMS and BLS data.

Additional insight follows from combining beef grading shares and prices of boxed beef cutout composites by grade. Specifically, we can easily identify years of obvious demand growth from this information. Considering year-over-year changes, if the price premium for Prime over Select increased and the share of wholesale beef loads grading Prime grew while the share grading Select declined, then we know demand for Prime wholesale beef grew relative to Select. Applying this approach over the 16 years from 2005 to 2020 to Prime, Choice, and Branded wholesale beef relative to Select, we identify 6 years of obvious demand growth for Prime (2010, 2011, 2014, 2016, 2017, 2019); 3 for Choice (2011, 2016, 2017); and 5 for Branded (2010, 2011, 2016, 2017, 2019). The multiple years since 2010 of clear demand growth for higher grading and branded wholesale beef is consistent with the monetary contribution noted in *Figure 4.4.* We see no years of clear demand growth for Ungraded beef. This a very conservative approach which identifies the minimum number of years with demand increases.

Producers will not invest in expensive quality grade enhancing production practices unless incentivized to do so.

Recognizing many formula traded cattle are purchased using grids that pay quality grade premium incentives makes it logical to conclude there likely is at least some causality between grid premiums and markedly improving beef quality.

The previous charts are simply trends; one cannot definitively conclude whether there is causality. That is, one cannot say conclusively that marketing agreements caused beef quality to increase. However, causality can rarely be proven; instead, often the best we can do is identify common trends and interpret them in light of context-specific knowledge. Marketing arrangements are inherently prevalent in branded product supply chains. The coordination of production, distribution, and marketing of branded items is challenging to accomplish in traditional spot markets (see *Tables 4.1* and *4.2*). Producers will not invest in expensive quality grade enhancing production practices unless incentivized to do so. Grids connect the net fed cattle price directly to quality. No other pricing mechanism does this nearly as effectively. Recognizing many formula traded cattle are purchased using grids that pay quality grade premium incentives makes it logical to conclude there likely is at least some causality between grid premiums and markedly improving beef quality.

Beef Trade Implications

International trade in beef products has become a major factor driving industry prosperity. For example, in 2019, beef and variety meat product exports equated to $309.75 per head according to the U.S. Meat Export Federation.[3] The top U.S. beef importers in 2019 are summarized in *Table 4.3.* The ten largest importers represented 90% of beef export volume with Japan and South Korea each representing more than 20%.

[3] *https://www.usmef.org/about-usmef/faq/.*

Table 4.3. U.S. Beef Imports by Country, 2019.

Country	1,000 Pounds, Carcass Weight	Share (5)
Japan*	799,227	26%
South Korea*	683,791	22%
Mexico	424,455	14%
Canada	267,990	9%
Hong Kong	231,942	8%
Taiwan*	197,843	6%
Philippines	45,729	1%
Vietnam	37,783	1%
Indonesia	33,734	1%
China*	32,098	1%
Subtotal	2,754,592	90%
Others	303,087	10%
Total	3,057,679	100%
* Indicate restrictions placed on animal age, requires export verified systems, and/or zero tolerance restrictions on specified residues.		

Source: USDA–ERS.

Meat trade in general, and beef trade in particular, faces a number of trade restrictions (U.S. Trade Representative, 2021).[4] For example, exports to Japan, South Korea, and Taiwan (three of the top ten importers) each require a USDA Quality System Assessment (QSA) verifying the products were derived from cattle less than 30 months of age (USDA, FSIS, 2020). Several countries require beef products be produced in a way that ensures the product is free of harmful residues. Restrictions also apply to where the animal was raised and/or slaughtered. China has zero tolerance for ractopamine in beef products as well as stringent maximum residue limits for zeranol, trenbolone acetate, and melengesterol acetate which are used to enhance feed efficiency and weight gain (USDA FSIS, 2020). Also important to recognize are countries that, because of their stringent import rules, greatly restrict import of U.S. beef. For example, EU member countries preclude meat imports from livestock treated with hormonal growth promotants (USDA FSIS, 2020).

Synthesizing the varying requirements for U.S. beef by importing countries (with no assessment of the legitimacy and/or legality of those restrictions), it is apparent cattle production protocols are essential to gain export market access. Age and source verification requirements are present in some countries. Restrictions on residue levels on products used in cattle feeding are common. Precluding use of feed additives and/or hormonal growth promotants is prevalent. While verification of these production protocols can be accomplished in several ways, they all entail some form of assurance, third party verification, and potentially formal documentation from the producer to the packer in order to ensure the protocols are being adhered to. This provides another incentive for engaging in marketing agreements and contracts: to match up production protocols with packer-customer requirements. In general, adoption of many export requirement protocols by producers increases production costs. Establishing and maintaining export relationships is a costly venture. Beef packers will not take on the added costs without an agreement in place to consistently source cattle that meet the specifications of exporting countries. Likewise, cattle feeders will not take on costs of protocols to meet the standards absent associated premiums to offset added costs.

Marketing Agreements and Market Transparency

One of the major concerns surrounding marketing agreements and formula fed cattle purchases are how they impact price reporting and market transparency. To understand the concern and ultimately determine ways to address it, the nature of the concern must first be delineated, as it is multidimensional.

First, marketing agreement purchases do not contribute directly to the current week's cash market price discovery, though they contribute indirectly through an-

[4] *https://ustr.gov/sites/default/files/files/reports/2021/2021NTE.pdf.*

ticipated volumes and impacts on market "currentness." This is because marketing agreements tend to be formula pricing with the base price in the formula established by reported negotiated prices from 1 to 2 weeks previous. As such, a voiced concern is that in thinly traded spot markets, there may be insufficient negotiated trade to establish reliable and representative cash market information. Furthermore, in some important cattle producing market regions (*e.g.,* Texas-Oklahoma-New Mexico), during certain weeks no negotiated cash price information is reported by USDA. The essence of this concern is that formula trade causes declining spot trade volume thus reducing market transparency. As long as formula prices are based on prior negotiated prices, they do not represent current prices. Switching to use of an alternative base price such as live cattle futures or some other concurrent price that matches the delivery date of formula purchased cattle could alleviate the time matching concern. However, it does not address the concern about the price not directly contributing to today's price discovery.

A second dimension of the concern over formula trade, not unrelated to the thin market concern, is data confidentiality. USDA–AMS uses a set of confidentiality guidelines to determine whether particular market information is publicly reportable. If guidelines preclude reporting, the information may be either not reported or combined with other data and reported in more aggregated form to preserve confidentiality. The confidentiality guidelines USDA–AMS employs are at times binding and impact reporting, especially in market regions where there are only a few major packers and markets are thinly traded (Schroeder, *et al.,* 2019). There are strategies to consider in reducing confidentiality constraints including:

(1) Modifying the confidentiality guidelines used by USDA–AMS to lessen reporting constraints,

- Would need careful research to determine feasibility and possible impacts.

(2) Aggregating information over time; for example, combining multiple days/weeks of data in USDA–AMS reports,

- Not likely to reduce the problem appreciably because in some cases it is endemic with the regional market packer structure and market thinness.
- Makes reported information dated and as such reduces value in information content.

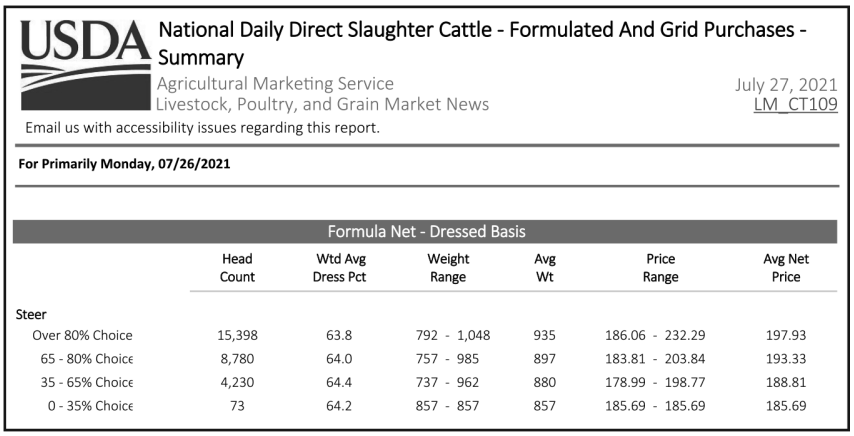
(3) Aggregating information across purchase methods (*e.g.,* combining negotiated cash, negotiated grid, and formula trade into a single category rather than separate categories),

- USDA aggregates now across these pricing methods as well as adding in forward contract trade in the weekly national comprehensive report. This is always reportable and provides a national fed cattle composite net price/value.
- Removing the forward contract price data from the reported composite prices has been recommended in the past to make this price reflect more current prices, but to date that has not been done by USDA (Schroeder and Tonsor, 2017).
- Aggregated national price reports do not reveal price variation present across market regions at times (Schroeder, *et al.,* 2018 and Schroeder, *et al.,* 2019).

(4) Aggregating across larger market regions when reporting USDA–AMS data,

- Has been explored and could work but can reduce the quality of the information in combined regions. For example, Texas-Oklahoma-New Mexico negotiated trade could be combined with Kansas and be reportable more often, but since Kansas is already generally reportable, this would slightly dilute the Kansas report with prices from outside the region and it would not add information value to the existing Kansas report (Schroeder, *et al.,* 2019).

Figure 4.5. Snapshot of Part of USDA–AMS Daily Market Formula Cattle Purchase Report.



USDA National Daily Direct Slaughter Cattle - Formulated And Grid Purchases - Summary

Agricultural Marketing Service
Livestock, Poultry, and Grain Market News

July 27, 2021
LM_CT109

Email us with accessibility issues regarding this report.

For Primarily Monday, 07/26/2021

Formula Net - Dressed Basis

	Head Count	Wtd Avg Dress Pct	Weight Range	Avg Wt	Price Range	Avg Net Price
Steer						
Over 80% Choice	15,398	63.8	792 - 1,048	935	186.06 - 232.29	197.93
65 - 80% Choice	8,780	64.0	757 - 985	897	183.81 - 203.84	193.33
35 - 65% Choice	4,230	64.4	737 - 962	880	178.99 - 198.77	188.81
0 - 35% Choice	73	64.2	857 - 857	857	185.69 - 185.69	185.69

Source: USDA–AMS, *https://www.ams.usda.gov/mnreports/ams_2659.pdf*.

(5) Reporting price summary information in a new way using statistical modeling such as a hedonic model (discussed in more detail later),

- Has been explored in preliminary work with USDA–AMS transaction data and may have promise, but needs more assessment (Schroeder and Tonsor, 2017).

Finally, a third concern relative to market transparency is related to the information that is and is not reported in formula trade market reports by USDA. Since formula trade is a "catch-all" category of transactions that are not negotiated cash, negotiated grid, or forward contract, there is considerable heterogeneity across transactions. For example, non-hormone-treated cattle (NHTC), grass-fed, organic, specific export-certified, grid cattle, and non-grid cattle purchased under marketing agreements are all included in formula trade market information reporting under LMR by USDA. As such, the reported price range in the formula trade category, representing by far the largest volume of cattle of the four categories, typically exceeds $30/cwt dressed weight (see example of partial recent daily market report in *Figure 4.5*). Such a large price range makes it difficult to interpret the information reported. The weighted-average price represents a broad array of types of cattle and transactions as the price range suggests. As such, there is no way to know why the range is so wide or what exactly the mixture of volumes of various types of cattle are that comprise the weighted average without having more data and completing careful analysis of the data.

Resolving the issue of excessive heterogeneity in formula trade is an issue that USDA may be able to partly address through modifications to LMR and/or how it is implemented. LMR began in 2001, when fed cattle trade was still mostly negotiated cash and has had only modest changes since inception. Over the same time, formula trade has become the dominant purchase method. A few options exist for providing more transparency in formula trade cattle. One proposal suggests having USDA publish a data library of marketing agreements similar to what has been done for years in the swine market. We will let others opine on the value of publishing contracts, but we suspect the value for weekly price discovery and market transparency is relatively low. A more obvious way to increase transparency is to detail more what the large price range represents in formula trade reports. A few possible ideas come to mind each of which would need to be tested using LMR transactions data collected under LMR that is currently not published:

(1) Split formula trade market information into more refined categories for (i) grid, (ii) non-grid, and (iii) specialty (non-hormone treated, naturally raised, *etc.*) for price reporting. Currently, this level of transaction detail is not collected by USDA under LMR so it would require a change in data collection

protocols.[5] Such further refined reporting though could be subject to confidentiality challenges which can only be determined by collecting and analyzing the data.

(2) Combined with the above recommendation, we have also recommended USDA report percentiles of prices in addition to simple high and low prices in formula trade. For example, in *Figure 4.5* rather than reporting the high and low, USDA could report the 15th and 85th percentile prices. These are much tighter ranges than the absolute high and low and will exclude extreme prices that are likely not relevant to many producers (Schroeder and Tonsor, 2017).

(3) Develop some form of hedonic modeling to refine price/value reporting. We have proposed this concept to USDA in past exploratory analysis of LMR transaction sample data, though only through preliminary testing (Schroeder and Tonsor, 2017).[6] The idea with hedonic modeling of LMR transaction data is that it might be capable of increasing pricing transparency while also maintaining confidentiality of actual reported prices if structured accordingly. This approach necessarily entails economic and statistical modeling of reported data to arrive at a reportable price and not just publishing reported prices themselves. However, what we are proposing is not as different as it might first seem since weighted-average prices regularly reported by USDA–AMS also require a statistical price summary method and are not prices themselves. One of the flexible advantages of using hedonic modeling to facilitate market information reporting is subsets of trade can be aggregated over time or space if necessary to ensure confidentiality while not withholding all the information. For example, if only a small number of NHTC traded this week, they could be included in the hedonic model with the previous week's NHTC transactions so an NHTC price differential could still be reported.

(4) Combine currently reported separate categories with a goal towards more frequent reporting with details of most importance to the industry. Past research has considered alternative aggregation across market regions regarding negotiated trade (Schroeder, *et al.,* 2019). Here possible enhancements in formula reporting may include merging steer and heifer categories (or live and dressed; or splitting % Choice categories into two groups rather than four) with a goal of enabling other—perhaps more desired—breakouts on reports such as specialty (*e.g.,* NHTC) *vs.* non-specialty distinctions.

Inherent in these possible suggestions, as is the case throughout this topic of discussion, are the trade-offs between what is reported and not reported that are directly influenced by private decisions regarding market channels used to transfer ownership of fed cattle.

Conclusion and Recommendations

Fed cattle marketing agreements were launched some 30 years ago and focused on ensuring market access, enabling greater capacity utilization, and reducing transaction costs. Since then, marketing agreements have evolved to become instrumental in improving overall supply chain coordination. In addition to the original benefits, cattle producers now also utilize marketing agreements to secure higher prices associated with producing higher quality cattle, producing cattle to match downstream customer preferences, establishing stronger ties and relationships with cattle and beef customers, and building downstream alliances. Together, these provide important economic benefits to the cattle producer that collectively improve overall beef industry value and better serve end consumers. Any limits imposed on cattle feeders' ability to utilize marketing agreements would directly reduce the benefits such agreements have provided producers, packers, customers, and, ultimately, consumers.

Development of marketing agreements have also reduced weekly visible price discovery information. The increased popularity of marketing agreements, combined with the ways marketing information is reported by USDA, makes the associated price information challenging to interpret. Some suggest this reduces market transparency. Indeed, difficult to discern marketing agreement price information is not entirely transparent. However, neither is cash negotiated trade where only limited details about the cattle (sex, market region, and visually estimated quality grade)

[5] Any considered adjustment in the level of transaction detail collected by USDA would warrant careful assessment and would apply to all forms of reportable transactions, not just formula trade.

[6] Hedonic modeling is routinely used by other Federal agencies in price reporting (*e.g.,* Bureau of Labor Statistics).

are known. We have suggested several ways to improve information and transparency for marketing agreement transactions. The ideas we put forth include:

- Consideration of several possible ways to adjust USDA–AMS market reporting confidentiality constraints.
- Modifying LMR information collection and reporting, particularly for formula trade cattle, by USDA to better illuminate reported price information.
- Utilization of new methods of cattle price reporting using statistical models well suited for summarizing such diverse transactions. However, this would require more research to effectively design such statistical models and more detailed data collection by USDA under LMR.

As we noted in the prologue, in an industry as large and diverse as the U.S. cattle and beef sector, there are a wide range of situations and hence opinions on many topics. Our goal in this chapter was to guide and inform discussions to increase industry efficiency, effectiveness, and global competitiveness that elevates aggregate economic well-being. A myriad of economic incentives and market forces have led the fed cattle and beef sectors to the current situation. As such, any efforts to redirect or alter ongoing changes must appreciate the complexity, inter-relatedness, and tradeoffs associated with many of the issues. Further, along with any drawbacks of the current situation, it is important to not lose sight of the efficiency and consistency of the fed cattle sector in producing high-quality beef that meets demands of many types of consumers around the world. This chapter was composed with this goal and we hope it proves helpful accordingly.

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Chapter 5

Another Look at Alternative Marketing Arrangement Use by the Cattle and Beef Industry

STEPHEN R. KOONTZ

Introduction

Marketing arrangements that are alternatives to the negotiated cash trade are important to the cattle and beef industry. These Alternative Marketing Arrangements (AMAs) improve efficiency in the system, improve coordination, often communicate information in addition to price, and are important for risk management purposes. These arrangements also impart a cost on the remaining cash market, but the cost evidence is a simpler conversation and has impacts that are more limited when compared to the benefits of AMAs.

This chapter offers a research-based discussion of benefits and costs from the use of AMAs in the cattle and beef industry. AMAs are primarily and specifically for-

mulas and forward contracts. The discussion offered here is mainly developed and synthesized from research conducted prior to 2007 through participation in the USDA Grain Inspection, Packers and Stockyards Administration (GIPSA) RTI Livestock and Meat Marketing Study (LMMS). This research is over fifteen years old, but the economic fundamentals remain applicable, and the results are relevant. Price levels and quantities have changed, but the principles of supply—as determined by the cost of services at issue and demand beginning with the consumer and transferred to the farm- and ranch-level by provision of marketing services—have not. The discussion will offer a summary of the LMMS findings and attempt to consider how those findings might change with the subsequent changed market environments, underlying magnitudes, and considering inflation. The discussion will also place the results of the LMMS in the context of considerable other research on the market organization and performance of fed cattle and beef markets.

Evidence from three of the four LMMS sections will be presented in turn. Dollar impacts and magnitudes are quoted from the LMMS research, with a base inflation year of 2004. Between 2004 and 2021, the Producer Price Index (PPI) showed an inflation rate of about 40%. While the Consumer Price Index (CPI) measured inflation is higher, the PPI rate better measures impact within the raw material portion of the food system. Thus, extending this prior work to now involves impacts that are at least 30 to 40% larger, as long as there is not some compensating or exacerbating change in industry structure.

The main purpose of this chapter is to offer a research perspective on the "30/14" and "50/14" proposals that have been circulated and supported by various organizations of cattlemen and state producer associations.

The main purpose of this chapter is to offer a research perspective on the "30/14" and "50/14" proposals that have been circulated and supported by various organizations of cattlemen and state producer associations. "30/14" refers to the requirement that each beef packing facility must procure 30% of fed cattle needs through the negotiated cash market for delivery within a 14 day period. "50/14" is similar with a 50% negotiated cash trade requirement. A number of similar proposals have been introduced—for example, S. 543 (117th Congress), the *Cattle Market Transparency Act of 2021,* which was introduced by Senator Deb Fischer (R–NE), would require USDA to, among other things, establish regional mandatory minimums for negotiated trade.

Currently, just less than 70% of cattle marketings are through formula methods. Formula methods imply that the price for the transaction is discovered through some other transaction. Most commonly, a USDA Agricultural Marketing Service (AMS) reported regional price is used. Approximately 10% of fed cattle marketings are forward contracted. Forward contracts are transactions for cattle to be delivered 30 or more days in the future. This leaves about 20% that is transferred through the negotiated cash market, with a small portion (2%) using a negotiated grid pricing structure. Variations in these amounts differ greatly across the five USDA–AMS Livestock Mandatory Price Reporting regions. All of the policy proposals would involve substantial changes to how cattlemen and those in the cattle industry do business with packers. These proposals, if adopted, are mandates that require changing entire business models and practices.

Mandates to negotiated cash trade are limitations on AMA use. LMMS was a research project which examined the benefits and costs to AMA use, mandated and funded by Congress. It was a project to address a similar policy mandate in 2002 within a proposed amendment to the farm bill: "The Johnson Amendment." This amendment sought to prohibit or limit AMA use—the purpose of some of the legislative proposals currently under consideration. Thus, there is scientific research which addresses mandated-cash-trade questions.[1] There are six total volumes of work from four teams comprised of 30 researchers totaling almost 3 years of effort, an interim report, peer reviews, and comments of the effort are also available. The LMMS was not the first in-depth look at "captive supplies", or AMAs prior to the LMMS effort. LMMS was, however, the most comprehensive benefit/cost analysis supported by multiple efforts, whereas the 1996 GIPSA Concentration Study looked more specifically at market power (Ward, Koontz, and Schroeder (1996), Azzam and Schroeter (1996), Kambhampaty, Driscoll, Purcell, and Peterson (1996), and Williams, *et al.* (1996)), as did the "Panhandle Study" (Schroeter and Azzam (1999)). An assessment

[1] The original research project publications can be found online at *https://www.gipsa.usda.gov/psp/publication/live_meat_market.aspx* and the specific reports used in this chapter are Muth, *et al.* (2005) and Muth, *et al.* (2007).

of the policy proposals is offered in the context of having participated in both the LMMS and the Concentration Study.

> *The short-term impact, for a policy most like that being considered, is a $2.5 billion negative impact in the first year and a cumulative negative impact of $16 billion over 10 years, inflated to 2021 dollars. This cost is leveled mainly on cattle producers. The 50/14 proposal would have these negative impacts and the 30/14 would have similar negative impacts albeit approximately halved.*

The bottom-line impact of any intervention into the cattle market is the fact that there are modest benefits and considerable costs due to lost efficiency and product quality from mandates. Similarly, but context reversed, this is because AMA use has considerable benefits and modest costs due to solid economic foundations. This was the conclusion across the fed cattle and beef, hog and pork, lamb and lamb meat, and downstream meat distribution industries in the LMMS. For the cattle and beef industry, the costs are ultimately incurred by cow-calf producers and beef consumers. The short-term impact for a policy most like that being considered is a $2.5 billion negative impact in the first year and a cumulative negative impact of $16 billion over 10 years, inflated to 2021 dollars. This cost is leveled mainly on cattle producers. The 50/14 proposal would have these negative impacts and the 30/14 would have similar negative impacts albeit approximately halved.

It is also important to recognize the regional distribution of impacts across the United States. Current policy proposals will have an impact on the upper Midwestern cattle feeding and packing industry, but there will be a substantial impact in the Southern Plains and on producers that supply calves into that system. The negotiated cash trade is only a small portion of the volume of animal marketings in the Southern Plains.

Returning to details of the synthesis, the main cost to the cattle and beef industry of AMA use is the potential for beef packers to exercise market power. The main benefit to the cattle and beef industry of AMA use is that feeding and processing facilities can operate more efficiently, manage risks, and provide higher quality beef products to consumers. The market power *versus* efficiency question is of interest to producer groups, industry groups, and policy makers, and is often the bottom line in many discussions.[2]

A second cost of AMA use to the cattle and beef industry is the potential detrimental impact on the quality or effectiveness of price discovery. The LMMS did not address this issue, whereas some ongoing research work does. As discussed in Chapter 2, improving the quality of price discovery does not fundamentally change supply and demand, and will therefore not change the costs and benefits as measured in the LMMS. Substantial AMA use and limited use of the negotiated cash market can result in prices that are biased too high or too low or are inefficient, with more underlying volatility than need be. However, there is no empirical evidence supporting this concern.

Four portions of the 2007 LMMS Final Report provide direct research results that can respond to the proposed policies. First, the LMMS measures the effect of market power stemming from AMA use on fed cattle transaction prices. Fed cattle prices change with a variety of market factors, quality factors associated with the cattle in the transaction, and the extent of AMA use by the packing industry at the time of the transaction. This "cost" associated with market power and AMAs was analyzed in the report.

Second, individuals associated with businesses in the cattle feeding industry and in the beef packing industry were interviewed to assess the reasons for AMA use and to attempt to place a value on these alternatives to those businesses. AMA use was always part of a cost-reducing, efficiency-increasing, and product quality-increasing exercise with all the businesses interviewed. AMA use allowed for reductions in personnel, increases in capacity utilization, and improvements to cattle and beef product quality. These changes were all communicated as important.

Third, packer plant-level profit and loss (P&L) statements were analyzed in the LMMS. The focus was to determine the impacts of AMA use on the reported costs of slaughtering and processing fed cattle. The study examined supply chain management questions associated with AMA use. Specifically, did plants with higher levels of AMA use have lower cost of slaughter and processing? More efficient slaughter and processing results in higher prices to producers selling cattle and lower prices

[2] Examples of the research perspective on this question include: Azzam (1996), Azzam (1997), Azzam and Schroeter (1995), Lopez, Azzam, and Liron-Espana (2002 and 2003), Ward (2002), and Ji and Chung (2016).

to consumers buying beef and is a benefit to the industry. This efficiency benefit was measured in the study.

Fourth, these three results were combined in an economic model representing the cattle and beef markets so the net impact could be estimated. The net impacts were measured across the different segments of the industry—from the consumer to the producer—and over different time horizons, from the current year out to 10 years in the future. A summary of this overall assessment is offered at the end of the chapter.

A further section will communicate the importance of economies of size to the beef packing industry. These economies are orders of magnitude larger than established measures of market power. Also, before the overall market impacts are presented, a market power discussion of AMA use will be offered. AMAs are often discussed with respect to impacting underlying market fundamentals. This is an improper assessment; an alternative assessment will be offered. This additional sixth section will offer a detailed example of AMA use across hypothetical markets for fed cattle. The example incorporates the structure of formulas and details the decision-making processes, while also illustrating how formula marketing volumes do not impact overall supply and demand nor does formula marketing empower downstream firms (packers) with a tool to exercise market power.

Finally, the chapter will conclude by returning to the overall assessment and offer ideas for future research. The policy interventions being considered are substantial and would likely have far reaching impacts on the cattle and beef industries. The existing research remains clear but may also be dated. If there is an interest in updating this research—or making the research on a persistent issue more ongoing—there are some suggestions for helping to better understand what we do not know from existing scientific work.

Impact of AMAs on Cattle Prices

This is the first section of this chapter to summarize findings from the LMMS.[3] The LMMS project used packer data on fed cattle transaction prices between October 2003 and March 2005 to examine specifically if AMA volume impacted fed cattle prices. These databases were maintained by packers for accounting purposes for the payment for cattle and are reported in aggregate terms by the USDA–AMS under Mandatory Price Reporting. USDA GIPSA has the authority to compel packers to provide transactions and financial data for study.

The transaction databases contain a wealth of detail about the cattle procured including animal breed, number of head, percent of animals in various USDA quality and yield grades, percent of out-weight carcasses (too light or too heavy), cattle destined for branded or certified programs, and the method of pricing and marketing. Pricing methods include liveweight, carcass weight, and carcass weight with grid premiums and discounts. Marketing methods include individual negotiated (cash market), forward contracted, packer-owned, formula, and auction barn or dealer purchased. This price database is not a sample, but rather the population of transactions as maintained by packers. As a result, impacts found here are not merely generalizations based on samples but are, in fact, the actual impacts on the market in the study period.

Statistical analyses were used in which fed cattle transaction prices were explained by market conditions, animal quality, and AMA use. Market condition variables included the USDA reported boxed beef cutout value, the nearby CME live cattle futures prices, the prior week's AMS reported cash market price for the packer's region, and the volume of animals on the showlist. Animal or transaction quality is measured by the variables listed earlier. Another important variable in the analysis was showlist. Showlist size is not observed in the data directly nor reported by the USDA; it is the inventory of cattle for sale at any point in time. Cattle slaughtered on any 1 day must have been for sale—or on the showlist—for at least the prior 2–3 weeks. So, the showlist on a given day is the sum of cash market animals slaughtered over the next 14 days. Similarly, 21 days into the future were used, but the results were the same. AMAs were measured as a percent of plant weekly purchases or capacity, or the percentage of cattle slaughtered in each week that were AMA cattle. This variable provides a measure of market power.

What are the results? First, economic fundamentals and animal quality are significant in explaining transaction prices. Higher boxed beef cutout values, futures prices, and prior week cash prices all result in higher transaction prices. Further, higher quality cattle earn premiums and lower quality cattle receive discounts relative to average quality animals. Larger numbers of animals in a transaction result in a premium. The model also shows that showlist size is important—outside of the

[3] The findings are reported in Muth, *et al.* (2007), Muth, *et al.* (2008), and Liu, *et al.* (2009).

showlist variable itself. When cattle prices are strong relative to market conditions then they tend to stay strong and when prices are weak then they tend to stay that way. All these results show that many things impact cattle prices and that there is considerable momentum in prices. The impact of AMA volume on price cannot be examined in isolation. The impact is residual, as these other economic factors are the most important determinates of price.

The average fed cattle price in the sample period was $1.38 per pound of carcass weight. All prices, carcass, grid and liveweight, were converted to in-the-beef (or dressed weight). Once all the above things were accounted for, then the impact of AMAs can be measured. It was found that when AMA volumes are higher, relative to plant capacity, fed cattle prices are lower, but the impact is small. On average, a 1% increase in AMA cattle is associated with $0.04 per hundredweight decrease in transaction price. If all AMAs were eliminated (for all plants the average utilization was 17%), the associated price increase would be $0.68 per hundredweight of carcass. This would be $6.12 for a 900 pound carcass. The impact was small but statistically significant. Further, it is important to recognize that this measure is from all the plants in the U.S. The result is a weighted average across all plants. The national average result is small, and this is because all the regional or plant specific impacts were small as well.

This conclusion is also in agreement with a substantial majority of research on marker power in the cattle and beef industries. There are examples where market power is a large percentage of fed cattle price,[4] but far more scientific work suggests the impact is small.[5] Older research results from the Structure-Conduct-Performance paradigm (Bain 1968) tend to be larger than the more contemporary results from the New Empirical Industrial Organization paradigm (Bresnahan 1989). The results from the theoretical studies also suggest large impacts which are at odds with the empirical work.[6] There are also a variety of works that examine market power over time or over different market conditions, or for changes in the market power exercising conduct,[7] and research just on the impact of captive supplies.[8]

Market power is a well-studied question, but there is no definitive study as there are a variety of approaches and assumptions needed to produce estimates. The main conclusion from a reading of this empirical research is that market power, while persistent, is not the primary determinate of fed cattle price. This is specifically the case when the market power assessment is viewed in the context of economies of size.

However, extending these results to the current time period is the most questionable part of this process: taking results from the early 2000s and interpreting in light of market conditions in the early 2020s. AMA cattle are 60 to 70% of plant capacity and supplies are currently in excess of plant capacity if plants only operate 5 days per week. Market power measures may be higher in the 2016 to 2021 period than most of the research that has been done prior to 2015. This is a research question which will be answered by an analysis of the price history record. Regardless, it is doubtful market power measures are larger than economies of size, which will be discussed in several remaining sections.

Impact of AMAs on Cattle Feeding and Packing Operations

This is the second section of this chapter to summarize findings from the LMMS. Part of the LMMS project involved interviewing cattle feedlots and packers in person and asking a series of questions regarding how restricting packer procurement would impact business. The questions asked included:

- What kind of immediate adjustments would your company have to make if packer procurement relationships were restricted?
- What effects would restrictions on packer procurement relationships have on how your company operates in the long run?
- If this method affects costs, what would you estimate is the percentage change in costs compared to using the negotiated cash market?

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[4] These works include Marion and Geithman (1995), Quail, Marion, Geithman, and Marquardt (1986), Hall, Schmitz, Cothern (1979), Azzam and Pagoulatos (1990), and Menkhaus, St. Clair, and Ahmaddaud (1981).

[5] See, for example, the works of: Azzam and Schroeter (1991), Koontz, Garcia, and Hudson (1993), Koontz and Garcia (1997), Elan (1992), Schroeter and Azzam (1990, 1999, 2003, and 2004), Ward (1981, 1982, and 1992), and Muth and Wohlgenant (1999 and 1999).

[6] See Xia and Sexton (2004), Zheng and Sexton (2000), and Zheng and Brorsen (2010).

[7] See Schroeter (1988), Crespi and Sexton (2005), Crespi, Xia, and Jones (2010), Boyer and Brorsen (2013), Ji, Chung, and Lee (2017), Brorsen, Fain, and Maples (2018).

[8] See Schroeder, Jones, Mintert, and Barkley (1993), Ward, Koontz, and Schroeder (1998), Azzam (1998), and Love and Burton (1999).

- If this method affects quality, what would you estimate is the percentage change in value compared to using the negotiated cash market?

The cattle feeder responses to the question of immediate adjustments were mixed. Some thought they would go out of business and that the adjustments would have a dramatic effect on the structure and stability of the industry. Others thought the adjustments would have no impact on their business or that effects would depend on how narrowly packer procurement relationships were defined. Still others had no opinion.

One implication of restricting AMAs noted by several respondents was the impact on risk-bearing ability and capacity utilization. Outside investor capital reduced the equity that the cattle feeding business must provide to feed cattle, and known marketing arrangements allowed cattle feeders to secure both outside investment and better terms from lenders. Without AMAs, the cattle feeding business would feed fewer cattle and would have to borrow more against the cattle. The individual feeders would have underutilized capacity or would have to find new investors to replace the capital that investors who sought specific marketing methods once provided. There is investment capital that will feed cattle when the cattle were forward contracted or marketed under formula. This investment capital has much less interest in feeding cattle if animals must be marketed through negotiated cash trade.

To attract capital that is not in cattle feeding would require a higher rate of return than cattle feeding currently offers. Otherwise, that capital would already have been invested in cattle feeding. Given that the supply and demand of beef is relatively fixed in the short run, fed cattle prices are not expected to change substantially. Thus, higher rates of return would have to come from downward pressure on feeder cattle price. Likewise, if feedlots have more debt and/or more risk, the higher cost of borrowing will result in lower bids for feeder cattle.

Packers indicated that in the short run they simply would adjust to the new restriction and the extent of adjustment would depend on how the restrictions were defined and that over time, any costs implied by restrictions would be internalized and impact fed cattle bids. In the short run, feedlots and packers would adjust to restrictions on packer procurement relationships. Packers face the same beef demand and cattle supply, but they would buy more cattle through other methods. Individual feedlots that have AMA cattle would face increased risk and higher financing costs because they must own or find owners for the cattle. Packers expect they would have to reduce capacity utilization if procurement relationships were limited. In the short run, because cattle supplies are fixed, someone would own and feed the cattle, but there would be a higher rate of return or higher finance costs to replace the capital that is removed, thus leading to downward pressure on fed cattle and feeder cattle prices.

Feedlots and packers identified two primary long-run effects of restricting packer procurement relationships of cattle. The first effect, consistent with short-run impacts, would be increased risk and reduced capacity utilization due to removing capital from the feeding sector. The second effect would be reduced product quality by moving back to a commodity market. Feedlots and packers expressed concern about the difficulty of meeting the needs for customized product in branded programs. New strategies would have to be developed to meet demand in this segment of the market. Otherwise, feedlots and packers would miss out on these higher-value consumer markets.

Several respondents had the expectation that removing or restricting capital to the sector will lead to reduced capacity, particularly during downturns in the market. Greater quality concerns, more risk, and less capital will lead to a smaller beef industry. Feedlots thought their costs would increase if packer procurement relationships were restricted. Cost savings associated with AMA cattle come in the form of operational efficiency and lower average overhead cost through improved throughput.

Operational efficiency from packer procurement relationships results in more consistent operations: the number of cattle in the feedlot is more consistent from month to month and labor is used more efficiently because of this predictability. For example, a labor efficiency of one person per 1,500 cattle may be achieved using packer procurement relationships rather than an industry average of one per 1,000 cattle. Feedlots with AMA cattle have more consistent cattle and feeding programs and the consistency improves efficiency; a feedlot might need fewer feed trucks and could have larger feed batch runs, because a high percentage of the cattle would be on the same program (instead of having many different types of cattle and rations). Some feedlots reported close to a 20 percentage point increase in capacity utilization due to packer procurement relationships, which spreads overhead costs over more cattle.

Some feedlots reported close to a 20 percentage point increase in capacity utilization due to packer procurement relationships, which spreads overhead costs over more cattle.

Packers' concerns were related to beef quality and loss of customers for higher quality products.

Cost savings were estimated in the 17% to 22% range across those interviewed. With $0.30 per day yardage cost (not including feed) and 150 days on feed, total feedlot cost per head is $45.00; thus, cost savings would be $7.65 to $9.90 per head. Labor cost savings estimates account for much of this gain and were reported to be in the $1.25 to $10.00 per head range. Quality premium loss estimates are over and above the efficiency gains and ranged from $15.00 to $17.00 per head.

Packers estimated their change in costs from restricting packer procurement relationships would be less than those reported by feedlots. They noted some lost efficiencies and the need to add more cattle buyers to return to an all-cash procurement system (for example, an additional buyer costs $0.40 per head). Packers' concerns were related to beef quality and loss of customers for higher quality products.

Feedlots and packers expressed concern about the impact on quality if packer procurement relationships were restricted. They expected to revert to a commodity market with few incentives for higher quality cattle. Feedlots reported this loss to be worth $1.00/cwt or higher. The interviews and economic model results (in the last section) agreed that the changes in quality and prices are expected to be small because of restricting AMAs. They also agree that everyone from consumers to cow-calf producers would be worse off because of the restrictions. That is, quality would be reduced, costs would increase for feedlots and packers, and cattle supplies would decline.

The costs and benefits as discussed in this section are in 2004 dollars. These can be reasonably inflated to 2021 dollars; however, the development of specific attribute beef products is far more prevalent today. For certain, the magnitudes of AMA benefits are not less. Further, many of the businesses interviewed are more entrenched in current business models that make substantial use of AMAs—these business models were more reasonably new during the LMMS project.

Impact of AMAs on Packer Plant-Level P&Ls

This is the third section of this chapter to summarize findings from the LMMS. Monthly P&L statements from October 2003 to March 2005 were examined for all the plants operated by the four largest packers. These plants accounted for 83% of USDA Federally Inspected Fed Steer and Heifer slaughter numbers. This was one of the unique portions of the LMMS as packer P&L data are almost never examined in published research.[9]

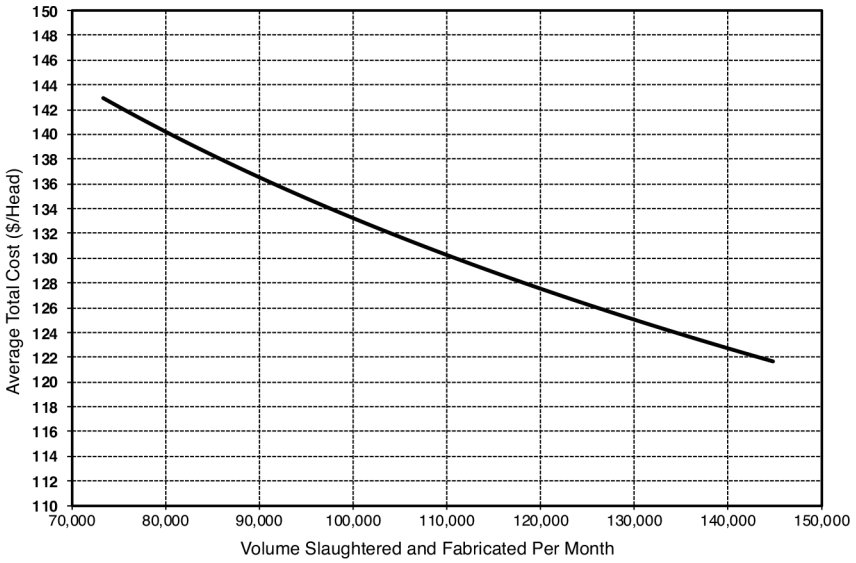
The P&L data were used to examine four questions. First, what is the average total cost (ATC) of slaughter and processing? Statistical models were used to explain ATC as a function of volume and other things. The project was interested in the shape of the curve—how steep is it, is the bottom flat, and does it increase at higher volumes? Second, do plants with higher AMA volumes have lower costs all else constant? Third, do plants with higher AMA volumes have higher throughput than those with less? Fourth, do plants with higher AMA volumes have more predictable volumes?

The results indicate that ATC was a function of volume, and modestly, other economic factors. Each plant is somewhat different in technology and engineering and therefore all have modestly different costs. Larger plants had lower ATC than smaller plants and the more cattle pushed through a plant, the lower the costs were per head. The ATC curve for a representative plant is presented in *Figure 5.1.* Packer slaughter and processing ATC decreased sharply over the entire range of processing volumes. Plants that operated at the low end of ATC are 5% to 7% more efficient than those that operated in the middle and 12 to 15% more efficient that those on the high end. Large plants have significant cost advantages over small plants. This is likely the main reason for increasing concentration in the beef packing industry; big plants are less expensive to operate per head than are small plants. However, large plants require large volumes to realize these efficiencies. Consequently, securing supplies is crucial. Further, these economies are much greater than measures of market power.

In combination, packing industry slaughter and processing costs are 4.7% lower because of the use of AMAs.

[9] This work is reported in Muth, *et al.* (2007) and Koontz and Lawrence (2010).

Figure 5.1. Average Total Costs of Slaughter and Fabrication for a Representative Beef Packing Plant from Firm-Level P&L Financial Statements and Measured in $2004.



Source: Muth, *et al.* (2007) and Koontz and Lawrence (2010.

The project also found that plants with higher AMA volumes had lower costs, after accounting for other factors like volume. If AMA usage was eliminated, then costs would increase by 0.9%. The average cost of slaughter and processing for this period was $138.61 per head. Thus, the industry was saving $1.22 per head through direct use of AMAs. But the direct impact was not the only impact nor the most important. We also found that plants with higher AMA volumes had higher average monthly slaughter and processing volumes. In the absence of AMA usage, average monthly volume would be 8% lower and increase costs by 2.6%. Finally, we found that plants with higher AMA volumes had more predictable average monthly volumes. Without AMAs, average monthly volumes would be 70% more variable and cause a 1.2% increase in cost. In combination, packing industry slaughter and processing costs are 4.7% lower because of the use of AMAs. This was approximately a $6.50 per head cost savings. During this period, the four largest packing firms had an average loss of $2.40 per head. AMAs were important to the packing industry, and to the cattle industry, from the standpoint of efficiency. The dollar impacts may have been small because of the short period for which P&L data were available. Over a longer period than 18 months, cattle supplies and costs would be more variable, and more variation in cost might be associated with AMA use.

These costs and values are in 2004 dollars and should inflate to 2021 dollars with reasonable transparency. It is also likely impacts are greater now than in the early 2000s as AMA use is more common and more integrated into supply chains and plant management. Finally, the overall results and magnitudes reveal how out of balance the supplies of fed cattle were relative to packing capacity. Packing firms are under severe profit pressure and there are economic incentives to not invest in plant and packing infrastructure nor to maintain some plant operations.

The Importance of Economies of Size

This section discusses work separate from the LMMS, continued after the LMMS was completed in the process of communicating and understanding the economic issues underlying growth and innovation in the beef packing industry. This work was reinforced by events experienced prior to the pandemic and during the closure of the economy during the COVID–19 outbreak.

In today's dollars, a large efficient commercial slaughter and fabrication beef facility can run at a cost that is reasonably and approximately $180 to $200 per head, if the plant is of substantial size and runs multiple shifts per day over the entire week. These are also pre-COVID costs. Importantly, if the plant is operating at an

efficient rate with high and steady throughput, then the plant can obtain its potential operating capacity. Commercial plants operate two shifts per day, for 6 days a week, and typically process at least 300 head of fed cattle per hour. These plants will process 25,000 to 35,000 head per week. Reducing the operating rate relative to potential capacity increases the cost per animal incurred during operations. Most of a packer's expenses are for the physical facility, equipment, plant management, portions of the meat sales force, and company management.

Labor, energy, and materials costs are also important, but these variable costs are substantially less than fixed costs. The fixed costs do not vary in the short run, if a plant or a variety of plants owned by the firm do not operate at potential capacity. Reducing operations volumes by 20% then increases non-animal costs per animal by 7% to 10% relative to the lowest potential costs. Reducing operations volumes by 40% then increases costs per animal by 15% to 20%, again relative to the lowest potential costs. Reducing the operating rate of packing plants increases the costs of operating and increases costs at an ever-increasing rate. The most expensive-to-operate commercial plants when operated at reduced capacity incur costs of about $300 to $350 per head, compared to very small packing operations that serve the freezer beef market with best-case costs of $600 to $800 per animal pre-COVID.

For a given facility, costs are lowest when running the plant at closest-to-potential capacity. Across the spectrum of possible plants, the larger plants have lower costs per unit processed. It is possible that plants can be so large as to have capacity larger than the regional supplies of animals and that transportation costs from bringing in animals from other regions may make the facility uneconomical. However, this does not appear to be common, nor is it discussed by packing industry members.

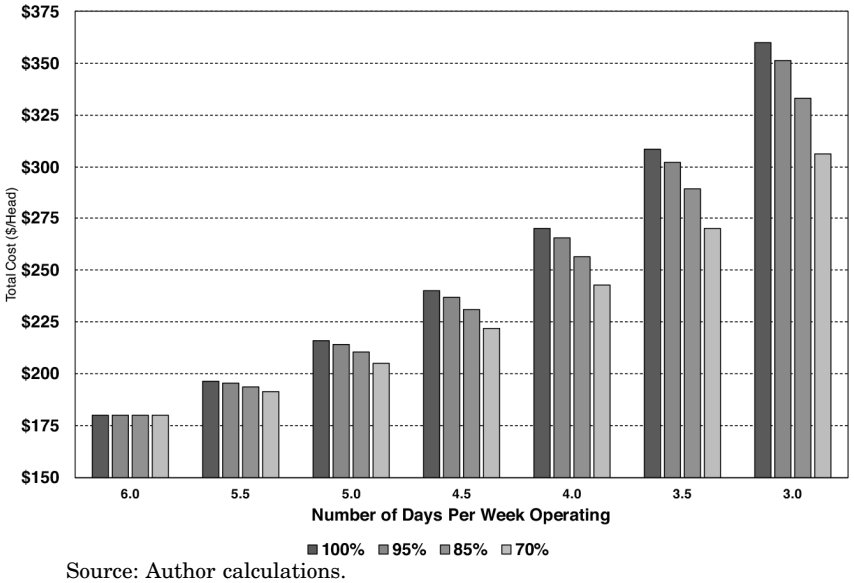
It is difficult to estimate costs for the plants whose operations were so dramatically impacted during the spring of 2020. In all the meat packing plant operations data that have been reported, it is unprecedented for plant volumes to decline so steadily to such low levels. In any other situation, plants would simply cease operations. The managing firms would have temporarily closed the plants rather than operate at such low levels. However, the 2020 situation is unlike any other. Economics are not driving meat packing plant operations—rather, the pandemic is the driving factor.

The following estimate is based on economic logic and not accounting data: if a plant is slaughtering and fabricating 312.5 animals per hour, operating two shifts per day, and running 6 days per week, the total weekly volume is 30,000 head. Suppose operating costs are $180 per head at this volume and level of throughput. This is the top line in *Table 5.1.* The remainder of the table calculates the increased cost per head of reduced operations. Suppose the plant operates 5 days per week; then the cost per head jumps to more than $200 per head. One less day of operations results in a 20% increase in costs per head. If the plant operates 4 days per week, then the cost per head is $270 per head, a 50% increase in costs. Reducing plant operations by 1 or 2 days per week is not uncommon with reduced cattle supplies but are reasonable variations in plant operations. The variation in actual costs may be less as less energy, materials, and labor are required. Labor is often guaranteed a weekly number of hours, and plants are not simply turned off but have operations scheduled for multiple weeks.

Table 5.1. Calculated Cost Per Head for a Hypothetical Large Plant Operating at Various Below-Capacity Volumes. (Throughput is 312.5 head per hour, shifts are 8 hours, there are two shifts per day and operating ½ day is one shift.).

Days Per Week	Percent Capacity	Volume Per Week	Reduced Volume	Cost Per Head	Cost Increase
6	100%	30,000	0%	$180	0%
5.5	91.67%	27,500	−8.33%	$196	9.09%
5	83.33%	25,000	−16.67%	$216	20%
4.5	75%	22,500	−25%	$240	33.33%
4	66.67%	20,000	−33.33%	$270	50%
3.5	58.33%	17,500	−41.67%	$309	71.43%
3	50%	15,000	−50%	$360	100%
2.5	41.67%	12,500	−58.33%	$432	140%
2	33.33%	10,000	−66.67%	$540	200%
1.5	25%	7,500	−75%	$720	300%
1	16.67%	5,000	−83.33%	$1,080	500%

Figure 5.2. Total Slaughter & Fabrication Cost Per Head for Efficient Beef Plants Across Numbers of Operating Days (with Two Shifts per Day) Per Week and Varying the Percent of Total Costs that Are Fixed Versus Variable (100%–95%–85%–70%) and a Base Cost of $180 Per Head.



Source: Author calculations.

Figure 5.2 illustrates the total cost per head of slaughter and fabrication under alternative scenarios whereby the base cost is not entirely fixed costs. Scenarios are shown where variable costs are 5%, 15%, and 30% of the base $180 per head cost. Costs per head do not increase as dramatically when more of the base cost is variable, as that portion of the cost decreases as fewer animals are processed and fewer shifts are run. By far the largest portion of base packing costs are fixed and reducing the volume of processing necessitates allocation of a higher portion of fixed costs to the individual animals processed.

The prior discussion is a synthesis of interview information and economic logic. It is a simple example, but the conclusions are supported by all prior research on packer costs.[10] Economies of size are a prevalent finding for the beef processing industry.

Packer plant-level profit and loss (P&L) statements were analyzed in the LMMS. The focus was to determine the impacts of AMA use on the reported costs of slaughtering and processing fed cattle. The study examined supply chain management questions associated with AMA use. Specifically, did plants with higher levels of AMA use have lower cost of slaughter and processing? More efficient slaughter and processing results in higher prices to producers selling cattle and lower prices to consumers buying beef and is overall a benefit to the industry. This efficiency benefit was measured in the study. As a backdrop to the AMA-related findings, there was also the more general interest in understanding packing costs as related to volumes. The P&L data research agreed with much prior research that there are substantial economies of size within individual plants and across plants of different sizes. The greater volumes individual plants processed lower the costs of processing, and across plants of different size, lower the costs of the large plant relative to modestly smaller plants.

A More Precise Example of "Captive Supplies" and the Cost of AMAs

AMAs prior to the LMMS were referred to as "captive supplies." This was a label heading chosen in a USDA GIPSA report where this activity was first reported. Captive supplies may be an inappropriate description in that the inventory of fed

[10] Including: Ward (1987, 1988, 1990, 1993), Ball and Chambers (1982), Logan and King (1965), Logan (1963), Matthews, Hahn, Nelson, Duewer, and Gustafson (1999), MacDonald, Ollinger, Nelson, and Handy (2000), Morrison-Paul (2001), and MacDonald (2003).

cattle are not captive or under the control of the packer. The animals are committed to the packer in a formula relationship. Feedlots control the marketing of formula animals because most formulas have a premium/discount structure for meat quality. Feedlots determine the week the animals will be slaughtered, and the packer determines the day of the week. There is additional communication in that packers are informed about the placement of animals in anticipation of being marketed on the formula and the performance of animals in the feeding process. There are informal arrangements as to the total volume and variability in the timing of marketings. Feeding performance as related to weather mainly also impacts this timing. Some of these issues have been discussed earlier in the chapter.

> *AMAs [previously] were referred to as "captive supplies." Captive supplies may be an inappropriate description in that the inventory of fed cattle are not captive or under the control of the packer.*

Further, the prices for both negotiated cash and formula are quality adjusted equivalent. Both sides of formula arrangements do not negotiate the base price, but both sides want to trade fed cattle, and communicate that the interest is in having that happen at the market price. This has been communicated in interviews with cattle feeders and packing entities. The interest is in trading cattle, "at the market." There are not separate markets for formula and cash cattle; the base price is similar if not equivalent. USDA–AMS regional reported prices are commonly used for the region where the formula arrangement is in place. Commonly, the TX–OK–NM price, Kansas price, or Nebraska price as reported for the prior week is used. This price is the base of many formulas, and grid premiums and discounts are negotiated but infrequently. The premiums and discounts may be determined by the product end market—USDA Quality Grade or Yield Grade. The base price has changed over time—early formula arrangements used a plant-average price. Packers were willing to trade cattle through the formula at the value at which the packer was securing all other fed cattle purchases for the plant to which the cattle were sold.

Opponents of AMAs and some academics often use the following argument illustrating the negative impact AMAs have on the negotiated cash market: supplies of captive cattle allow the packer to not bid in the cash market and thereby reduce demand in the cash market and depress price in the cash market. This is the argument used with policymakers and in legal settings to mandate negotiated cash trade. It is one of the arguments in *Picket* v. *Tyson Fresh Meats* from 2004. However, it remains an incomplete argument as it ignores the supply side of the market. If the packer does not have to bid on the cattle, then it also is true that the cattle feeders do not have to offer the cattle for sale. AMAs do not change the market fundamentals—they do not change the total supply nor total demand. AMAs only change the channel in which animals are marketed.

The markets for negotiated cash and formula animals are also not separate markets where packers can choose to buy more or less in the formula or cash market. Separating markets is a strategy for exercising market power. Formula cattle are not "captive." The cattle feeding organization decides the week the cattle will be marketed, communicates that to the packer—and it is usually not a surprise as communication between the seller and buyer is ongoing—and the packer decides the day of the week cattle will be delivered. The marketing decision belongs to the cattle feeders, and almost all formula cattle are grid marketed and thus receive premiums and discounts. Marketing cattle early will result in more discounts and fewer premiums to the cattle owner on those animals.

Table 5.2. An Illustration of How Variation in AMA Volumes Do Not Impact Cattle Market Fundamentals.

	Scenario 1: Low AMA Volume	Scenario 2: High AMA Volume	Scenario 3: Excess Fed Cattle Demand	Scenario 4: Excess Fed Cattle Supply
Feedlot Availability:	100,000	100,000	90,000	*110,000*
Formula	40,000	80,000	80,000	90,000
Cash	60,000	20,000	10,000	20,000
Packer Needs:	100,000	100,000	*100,000*	100,000
Formula	40,000	80,000	80,000	90,000
Cash	60,000	20,000	20,000	10,000

Table 5.2 attempts to illustrate how to think about AMA cattle in a manner that accounts for both demand and supply impacts on the market. The top three rows, after the row headings, are the feedlot availability of animals from an illustrative region. Round numbers are used for simplicity. In the first column, the cattle feed-

ing sector in this region has 100,000 head of fed cattle available in each week. Cattle feeders will market 40,000 head through formulas and 60,000 head through negotiated cash trade. The last three rows are the packing sector's needs for a given week in this example region. Also, in the first column, the packers need 100,000 head and will procure 40,000 head through formula and 60,000 head through cash. This is because the methods are agreed upon and used by both the cattle feeding businesses and packing businesses. Whatever the packers' formula purchases are, they must match the formula sales from feedlots. Formulas cannot be used to depress demand as formula cattle are pulled from feedlot availability.

The first column illustrates a low-AMA scenario, and the second column illustrates a high-AMA scenario. In the high-AMA scenario, packers procure 80,000 head per week through formula and the cattle feeders will market exactly that amount through formula. The remaining purchases are 20,000 head through cash trade. In these two scenarios, the market is in balance as the availability of cattle from feedlots is the same as the packer needs. This illustrates that AMAs do not change market fundamentals. High *versus* low AMA use does not create a disadvantage or advantage for either buyers or sellers.

The issue emerges when supply and demand are out of balance. This is when cattle availability is high or low relative to packer needs. These two examples are illustrated in the third and fourth columns. In the third column, the packer has incentives to purchase 100,000 head that week but there are only 90,000 head available, with 80,000 head already accounted for via formula. Competitive pressure across packing firms would cause them to bid aggressively to secure a larger portion of 10,000 head that is available to satisfy a demand for 20,000 head. This is close to the actual fed cattle and beef market scenarios in many years prior to 2016. Formula use was high and the demand for the remaining cash cattle was aggressive. This period was characterized by excess capacity in the packing industry along with increasing returns to size. Packers bid aggressively for fed cattle and this impact spilled over into the valuation of formula cattle. High or low use of AMAs does not create this market scenario, and there is essentially one price across both formula and cash cattle.

The same argument holds for the excess supply scenario. This is the fourth column of *Table 5.2,* and it is a reasonable facsimile of the fed cattle and beef market since late 2016 and early 2017. The packer has incentives to purchase 100,000 head that week but there are 110,000 head available. There is little competitive pressure across packing firms and cattle can be secured with relative ease. Further, it is likely there would be additional formula cattle, which are valued no different than cash. In the end, more cattle are available than are needed and the cause of the issue is this supply/demand imbalance and not the use of formulas. In this market environment, there are more animals available than needed. Cattle prices must be lowered, and beef prices also increased to encourage the processing of the excess supplies. Again, negotiated cash trade feedlots may go weeks without a bid in this environment. The problem is not how the available supply is split across marketing methods.

This section, in part, helps address the question of AMA use and market power, and reveals why the impact of AMA use on fed cattle prices are small. AMAs do impart a cost on fed cattle markets, but it is not market power related. The cost is related to the provision of information. The marketing of fed cattle through AMAs makes use of the price information discovered by those that negotiate in the cash market. Formulas are almost always based on a USDA–AMS price reported in one or more of the five major regional markets. Likewise, forward contracts make use of basis information—basis of cash relative to futures prices—where the underlying cash price is a USDA reported price. Finally, almost all cattle feeding operations benchmark transactions against some reported USDA–AMS reported price. Price discovery and the information provided through that process is a public good. The many marketing methods that do not use the cash market make use of information provided by that process. Price discovery is work, and users of AMAs avoid that work. Users of AMAs make use of cash price information, save the cost of negotiating and the cost associated with the risk of the negotiation failing, and contribute little. This is the tragedy of the commons and is a market failure. Public goods are underprovided in a market economy—this is the case with negotiated fed cattle cash price information—and it is made worse by AMAs.

The issue is not that the market failure exists. Under provision of public goods is more or less a tautology. The examples of portions of our economy and society that benefit from the benevolence of others—without payment—are substantial and numerous. The issue is: Are the remaining and resulting cash market transactions not accurate? Are the transactions that take place in the resulting thinned cash market biased or inefficient? Are the resulting transactions systematically incorrect?

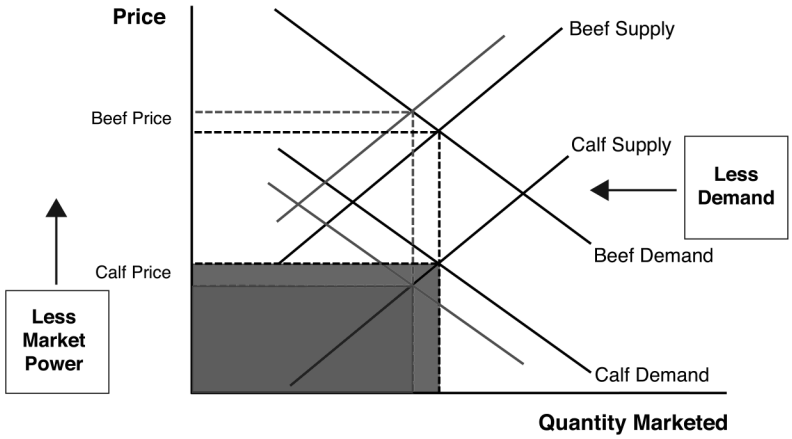
There is no research evidence of this. This is a result that cannot be found in the scientific literature. There are changes to marketing institutions that can improve market function—and limit market power—but are more sophisticated than volume mandates.

The end conclusion from this section is that AMAs do not create market power as they do not change the supply and demand fundamentals, nor do they change control of the transaction process. AMAs do impact the provision of information, but there is no evidence that the resulting prices are somehow wrong. Market participants need to work to improve market function, but there remains balance between innovation, knowledge, and mandates. Changing one thing will not improve market prices for cattle producers, nor change the supply and demand picture, but it has the potential to disrupt efficient operations and make things worse for producers.

Market-Wide Impacts of AMAs

This is the fourth and final section of this chapter to summarize findings from the LMMS. Market-wide impacts of AMAs were estimated using an economic model that can simulate the variety of market interactions in the cattle and beef industry. The demand side of the model starts with the consumer demand for beef and then demand is derived for the upstream products of boxed beef, fed cattle, and feeder cattle. The supply side of the model starts with feeder cattle supplied by producers and then downstream supplies are derived for fed animals, boxed beef, and retail product. United States imports of fed cattle and beef exports are also included in the model. All the models are dynamic, but most of the action occurs on the supply side. Price incentives at the retail level take time to filter down to the cow-calf producer and the producer's response is different for an incentive that lasts 1 year when compared to multiple years.

Figure 5.3. Simplified Beef and Cattle Market Channel Equilibrium.



Source: Muth, *et al.* (2007), Section 6, Figures 6–1 through 6–4.

Figure 5.3 illustrates a simplified version of this model. There are no dynamics in the graphic and the industry segments are simplified to beef at retail and cattle at the producer level. Consumers pay the retail price and buy the equilibrium quantity. Consumer expenditure is the total revenue for the beef industry, calculated by price multiplied by quantity, and is represented by the size of the largest box with dashed black lines. Marketers provide services and these services have costs. The marketing margin is the top portion of the large box. Marketers receive consumer expenditures and pay producers the cattle price multiplied by the quantity. Revenue to cattle producers is the dark shaded bottom portion of the large box. In percentage terms, this is the producer's share of the consumer dollar.

Increasing marketing costs requires the businesses that provide services between the producer and the consumer to capture a larger portion of consumer expenditures to maintain equivalent returns. Marketing costs will increase if AMAs are limited based on the interviews and the P&L analysis in the LMMS. Packers with AMA cattle have lower costs. If AMAs are limited, then marketers must pass on these cost increases—some to consumers who buy beef and the rest to producers that sell cattle. Beef prices will increase, and cattle prices will decrease. These changes are

represented by the red lines in *Figure 5.3.* The derived supply of beef and the derived demand for cattle both will shift left. However, consumers do not take higher prices without reacting—they buy less beef. Consumer expenditures are the large box with dashed red lines. Likewise, cattle producers will supply less when prices are lower or there are fewer cattle producers. It is less profitable to produce cattle so fewer cattle are produced. The overall impact is that the marketing margin portion of consumer expenditures and industry revenue must increase, and the remaining payment to cattle producers is smaller, and is represented by the red shaded box.

The magnitude of the changes depends on the relative size of all the supply and demand elasticities. Thus, all must be estimated, and these estimations are presented in the LMMS Final Report. The reported and used elasticities are very similar to much other research. Once the elasticities are measured, the market model can be used to measure the changes in all the different prices, the change in the quantity (including imports and exports), and the changes in revenues for the different industry segments. Further, there were two additional things that were considered and incorporated into the simulation.

First, if there is market power and it is due to the use of AMAs, the cattle price may be too low initially. We know there is market power from the analysis of fed cattle transaction prices. It is not in *Figure 5.3,* but the market power will cause the cattle price to be too low and that piece of marketing margins can be given to the producer. (The idea is expressed by the text in the box.) Second, the original demand may change. Beef demand has seen improvement since 1998 and if some of this is due to improved quality and consistency facilitated by AMAs so that limiting them would adversely impact demand. This point is backed up in the LMMS in the interview results, survey results, analysis of gross margins in the P&L data, and market modeling done to estimate the elasticities. (Again, the idea is in the other text box.)

Table 5.3. Percent Changes in Prices and Quantities Given a 25% Reduction of AMAs in the Cattle and Beef Industry.

Variable of Interest	Short Run (1 Year)	Long Run (10 Years)
Retail Beef Price	0.46%	0.17%
Retail Beef Quantity	−0.43%	−0.24%
Wholesale Beef Price	0.70%	0.66%
Wholesale Beef Quantity	−0.82%	−0.83%
Slaughter Cattle Price	−1.43%	−0.81%
Slaughter Cattle Quantity	−0.25%	−0.38%
Feeder Cattle Price	−0.10%	−0.08%
Feeder Cattle Quantity	−0.94%	−0.34%

Table 5.4. Billions of Dollars of Changes in Producer and Consumer Surplus Given a 25% Reduction of AMAs in the Cattle and Beef Industry Measured in $2004.

Industry Segment of Interest	Short Run (1 Year)	Cumulative Long Run (10 Years)	Percent Change in Total Surplus
Consumer Surplus			
Retail Beef Consumer	−$0.371	−$2.539	−0.83%
Producer Surplus			
Retail Beef Producer	−$0.098	−$1.504	−0.36%
Wholesale Beef Producer	−$0.143	−$1.654	−0.86%
Slaughter Cattle Producer	−$0.558	−$3.886	−1.35%
Feeder Cattle Producer	−$1.069	−$5.141	−2.67%
Total of All Producers	−$1.867	−$12.184	−1.14%

So, what is found when everything is combined, and all the market interactions are considered? Even if all market power is due to AMAs and if there is no link between AMAs and improved beef quality—both of which are unlikely—limiting the use of AMAs does economic harm to producers and consumers. The impacts are presented in *Tables 5.3* and *5.4.* This is the best-case scenario for producers, as all other cases have larger negative impacts. The specific policy considered in the

LMMS was a 25% reduction in the use of AMAs. For the cattle and beef industry, this means formula cattle. Changes in prices and quantities are presented in *Table 5.3* for some of the different segments of the cattle and beef industry. Impacts on non-U.S. producers and consumers are not presented. Changes in the well-being of the beef industry and its different industry segments and in the well-being of the consumer are measured through the economic concepts of producer and consumer surpluses. One-year impacts and cumulative 10 year impacts are presented in *Table 5.4.*

Changes in producer and consumer surpluses can be a difficult concept. These are not changes to revenues or expenditures. There is more to it than revenue (costs also change), but it is also important not to get tangled up in the subtleties of the question: Are consumer surplus and producer surplus the appropriate measure? The important thing is that the surplus changes are measures of changes in economic well-being. The measures are well-accepted and are bottom-line dollar impacts. If you want to know what the economic impact of a policy will be on producers, then you are asking about producer surplus. Likewise, the economic impact of a policy on consumers is consumer surplus.

Let us outline producer surplus a little more first. In *Figure 5.3,* if marketing costs increase, then producers will receive lower prices and will produce fewer cattle. The portion of the gray box outside of the red box is the loss in revenue to producers—there is a vertical piece and a horizontal piece. The economic harm to the producer is not the entire change in revenue, however. The vertical portion of the gray box is a loss of revenue due to actions by producers (their response to lower market prices), so it is not counted. It can be viewed as producers responding rationally to economic incentives, and as the highest cost producers being pushed out of the business. The resources in the vertical portion move to other industries, lost to the beef industry, but not to the economy. So, the loss in producer surplus is the horizontal portion of the gray box. This can be viewed as lost profitability to the beef industry and lost wealth to the economy. This portion is due to the price decrease and is outside of the producer's control.

Let us turn to the consumer next. In *Figure 5.3,* if marketing costs increase then consumers pay higher prices and purchase less beef. The price increase is larger than the quantity decrease because beef demand is inelastic, so consumer's expenditures on beef increase. However, the economic harm to the consumer is not the change in expenditure. Like the producer, the vertical portion of the change in expenditure is the consumer rationally responding to higher prices—they buy less beef. The vertical portion is shifted to consumption of other food products. However, the change the consumer can do nothing about is the change in price. This is the loss of surplus for the consumer.

Let us look at the magnitude of the impacts on prices, quantities, and surpluses from limiting AMAs. Consumers of beef and producers of cattle are impacted the most. Consumers face higher beef prices and eat less beef. If a policy change drives up beef prices, consumers eat more chicken or pork. A policy that reduces AMA use will cost consumers close to $370 million in the short run and $2.5 billion in the long run in 2004 dollars. The impact is 0.8% of the size of total surplus the consumers get from beef.

The downstream industry segments face changing prices and quantities, but most of the impact is due to fewer cattle. Retailers and wholesalers (packers are part of the wholesale segment) see higher prices but sell smaller quantities. The cost of limiting AMAs is about $200 million in the short run and $3 billion in the long run. These impacts are just over 1% of the total producer surplus for retail and wholesale industries and are, again, in 2004 dollars.

Producers of slaughter cattle and feeder cattle (and cow-calf producers) are impacted the most. The simple fact is that the industry segment furthest upstream is the residual claimant on the consumer's dollar. Producers of cattle benefited the most from improving demand in the early-2000s and producers will be the most harmed from any policy that increases costs in the marketing system. Slaughter cattle and feeder cattle prices would decrease, and the numbers of animals produced are also less. The policy costs slaughter cattle producers $558 million in the short run and $3.9 billion in the long run. The policy costs feeder cattle producers $1 billion in the short run and $5 billion in the long run. These impacts are 1.4% and 2.67% of the total producer surplus for the slaughter cattle and feeder cattle industries.

The total cost to all producers and marketers in the cattle and beef industry was about $1.9 billion in the short run and $12 billion over 10 years, in 2004 dollars. This is 6% of the total producer surplus that all industry segments capture. These losses are significant percentages of the surplus that each industry captures, and the impact is mainly leveled on feeder cattle producers. The bottom line is that the

market power was a lot smaller than the efficiency savings from the use of AMAs. Limiting AMAs loses producers a lot of efficiency downstream and gains producers little.

These costs and values are in 2004 dollars and should inflate to 2021 dollars with reasonable transparency. It is also likely impacts are greater now than in the early 2000s, as AMA use is more common and more integrated into supply chains and plant management. Baseline costs are higher now and mitigation of those costs through coordination is also likely higher. Further, demand improvements as communicated by premiums and improved beef product quality are greater now and losses to the sector if these improvements are lost due to lost coordination would be greater. Simple inflation of the impacts would likely underestimate true impacts but provide information about minimum impacts.

Regional Distribution of Impacts

While the market-wide impacts are clear, it is important to also discuss potential differences in the impact across regions of the country as represented by the USDA–AMS price reporting regions. Regional differences were not considered with the LMMS. Thus, this section is not a synthesis of that report but is based on an understanding of current market conditions. Nevertheless, the regional distribution of impacts is clearly levered on specific regions and businesses.

Nationally, AMA use is about 80% of fed cattle trade. The remaining 20% of national fed cattle marketings are through negotiated cash trade. However, in the Southern Plains and specifically in the Texas-Oklahoma-New Mexico region, just over 90% of cattle marketings are through formula methods, approximately 5% are forward contracted, and about 5% are marketed through negotiated cash trade. In the upper Midwest, 10% to 30% of cattle marketings are through formula methods, 10% to 30% are forward contracted, and about 40% to 60% are marketed through negotiated cash trade. Based on the national marketing method amounts, negotiated cash trade volumes will have to increase from 20% of the total to 30% or 50% if either of the minimum cash participation mandates is legislated. In the furthest southern plains, the negotiated cash trade will have to increase from 5% of the total to 30% or to 50%. This is between a tripling and a five-fold increase in the average use of negotiated cash trade marketing methods for the southern cattle feeding and packing industry. The costs of all mandate proposals are overwhelmingly leveled on the southern United States and producers that supply that system.

It is important to consider the lower bound usage of negotiated cash trade. Week to week variation is cash market use is substantial. Mandates are not focused on averages but require minimums, so all regions will be impacted. Clearly, the two regions that will be most impacted are Texas-Oklahoma-New Mexico and Colorado. The two regions of Nebraska and Iowa are least impacted, with Kansas falling in the middle. It is also important to not dilute the impacts through averaging. A region that is historically 1 in 4 weeks below the mandate threshold is not necessarily impacted by 25% of any total. Disruptions in supply chains in a single week or month do have the potential to persist for weeks or months.

Thus, it is reasonable that the "50/14" proposal is most like the 25% AMA reduction considered in the LMMS. The "30/14" proposal would be approximately half the impact of the 25% AMA reduction but could potentially be larger. Further, there are packing companies with well-known business models that emphasize product development, product uniqueness, and an integrated relationship with downstream businesses. These business models rely on coordination above what can be secured through procuring fed cattle in the negotiated cash market. This innovation is at risk without the additional coordination.

Summary and Conclusion

Limiting the use of AMAs by the cattle feeding and beef packing industries will decrease efficiency, increase processing and marketing costs, and has the potential to reduce beef product quality. In today's dollars, the impact is at least $10 per head for the packer and at least $25 per head for the cattle feeding industry. The dollar amounts in this summary are converting the LMMS impacts to today's dollars and placing them in context based on continued communication with the cattle feeding and beef packing industries. In today's dollars, the total direct impact to the marketing system ranges reasonably from at least $35 per head to more reasonably $65 per head. The larger amount is based on recent communications. The costs at the industry level would potentially be over $2.5 billion per year in today's dollars, with the industry making economic adjustments and reducing in size, so that over a 10 year horizon the cumulative costs would be over $16 billion. Much of the impact would be borne at the cow-calf producer level by farms and ranches. Further, the

impact is distributed substantially on the industry that does business or supplies those in the Southern Plains of the United States.

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A further look at AMAs and captive supplies does not change what we know about these marketing methods. The stack of benefits and strong economic justifications remain while the costs and concerns remain small. Policy directions are clear but not comfortable. Mandates create winners and losers but also will leave a marketing system worse off.

So, what are the research needs to support policy actions? What are the needs to assure producers their interests are not being trampled? One of the main research needs is support for a long-term research program into the market organization and performance of cattle and beef markets. (There is also a supporting need for research into the market organization and performance of hog and pork markets and sheep and lamb markets. The cattle and beef markets are less problematic from a structural standpoint.) There is not long-term support for this type of research like there is for issues related to crop production, farming, crop usage, product development, and trade.

There is a need for updating the 2007 RTI GIPSA LMMS. The economic fundamentals have not changed, but the price levels, total dollar magnitudes, and the percentage of animals moving through the marketing system via AMAs have. The beef packing industry is a substantially concentrated industry—although the levels of concentration have not changed markedly since the 1990s—and because of this, there is a need for long-term monitoring. Any industry restructuring or growth and change continues to emphasize economies of size rather than some other form of innovation. There is a reasonable need for continued research on the question of power *versus* these economies.

Prior research has been coordinated and delivered to the USDA Packers and Stockyards Administration (P&S). This is the coordinating administrative branch. P&S also can compel provision of data from the packing industry for analysis, but the period of the P&S authority is limited to 18 months. There is a need for longer examination of price discovery. All livestock industries participate to some degree in mandatory price reporting to USDA–AMS and AMS has data from 2002 until the present. Price discovery questions eliciting the call for policy action can be examined in this data; additionally, questions about bidding, the number of market participants, and the impact on farm gate prices could be answered if this data were available. Future studies will need Congressional funding and authority to examine USDA–AMS LMR price data. Future funding also needs to be made more persistent.

> *Mandates create winners and losers but also will leave a marketing system worse off.*

Finally, there is a need for a more formal examination of the meat supply chain. *Figure 5.3* is an accurate representation of the market channel from an equilibrium perspective. While the supply models are appropriate for driving market dynamics, there is a need to specifically study the supply chains. The market channel model does not well-integrate economies of size within the plant nor coordination of multiple plant firms with economies of size. The market channel model also does not well-account for product differentiation and the underlying changing product quality, branding, and credence characteristics that are emerging and becoming more prevalent. There is a need to understand, recognize, and measure coordination in the supply chain so that costs of policies that will disrupt the supply chain can be better understood.

There are substantially less expensive methods for improving the quality of price discovery in fed cattle markets than by legislating mandates, but these mandates do offer an unprecedented experiment. The existing research is clear but are also conclusions drawn for a world that has not happened. Measurements from the real world must be made and extended to the policy proposed through economic concepts. That is the nature of and the common approach to this type of question. However, the mandate proposals, if enacted, will allow researchers to test if our economic thinking is correct. Actual cost and benefits of the policy can and will be measured.

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Chapter 6

Market Reporting and Transparency

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Introduction

The reliable reporting of trusted market data is critical for cattle market participants. Market price levels, especially as they relate to other markets, are the key driver of resource allocation and price discovery. This process can be hindered if available market information is limited or irregular. Without regular price reporting in which participants are confident, the dynamic process of cattle buyers and sellers discovering the market-clearing price would be subject to inefficiency. Market reporting alone is not price discovery; however, it certainly contributes to the price discovery process.

Regular and reliable reporting of live cattle transactions provide a more transparent view of supply and demand conditions than would be possible without it. Publicly reporting market transactions increases the information available to all participants. Live cattle market reporting is generally a public good in that everyone can consume it and any one participant's use of it does not exclude others from using it. A primary motivation for government involvement in collecting and disseminating this information is that the private sector would be unlikely to provide these data at a socially optimal level.

Market information available to everyone can improve market efficiency and help markets more quickly reach the market clearing price (C–FARE, 2013). Market participants generally look to public sources of data for information because they have confidence the data are reliable, complete, and free of any manipulation. Seminal research in this area has shown that when market participants possess incomplete information, price dispersion can occur (Stigler, 1961). Reductions in public cash market information has also been found to increase price variance and decrease production efficiency (Anderson, *et al.,* 1998). So, if price data are perceived as credible and accurate, it can speed up market convergence, which is the process by which prices gravitate to a market level.

Publicly reported market information can also reduce uncertainty. The C–FARE 2013 publication noted that many agricultural producers and processors are risk averse. For a risk averse participant, increased uncertainty tends to lead to lower output than the competitive level (Newberry and Stiglitz, 1981). Boyer and Brorsen (2013) showed that cattle sellers benefit from publicly available data because it reduces price uncertainty. This reduction in uncertainty led to reduced bid shading and more competitive bidding from buyers.

There are many motivations for the collection and public dissemination of market data for agricultural markets, including live cattle markets. In this chapter, we discuss market reporting for live cattle. We begin with the background and evolution of the current market reporting system. This is followed by an overview of the data collected, how it is reported and limitations on reporting due to confidentiality. Next, we pay particular attention to the types of transactions that are reported, which has garnered much attention in recent public debates. We discuss how these transaction types are defined and how they could be used if incentives to choose one over another existed. Finally, we discuss the concept of a contract library and its potential to increase transparency for certain types of cattle transactions.

Background

The desire and need for market reporting of cattle transactions likely go back as far as cattle trading in general. In the United States, these efforts gained structure in the 1940s with the *Agricultural Marketing Act of 1946.* This effort led to voluntary reporting of cattle market prices and was the general structure for price reporting for more than 50 years. The cattle and beef industry, and other livestock industries, continued to evolve over the decades during which voluntary reporting was the standard. Most of the concerns that exist today also existed then. Improvements to market reporting as a method for more transparent markets were often discussed and changes were made. These concerns were again highlighted in the late 1970s with hearings before Congressional subcommittees across multiple years.

In a particular 1979 hearing before the Subcommittee on Livestock and Grains of the Committee on Agriculture in the U.S. House of Representatives, statements from USDA's Agricultural Marketing Service (AMS) administrators addressed mandatory price reporting. Among many other issues, this discussion included thin markets and formula trading (Committee on Agriculture, 1979). At this hearing over

forty years ago, it was "strongly emphasized" that "price reporting service improvements alone will not resolve problems resulting from a thin market." It was also discussed that mandatory price reporting was "premature" at that point and could be avoided through increased voluntary reporting. There was much more that was discussed in this hearing that is still applicable to cattle markets today.

In 1999, the calls for mandatory price reporting led to Congressional action. *The Livestock Mandatory Reporting Act* (LMRA) was passed by Congress in 1999 and the system began in 2001. The act mandated USDA–AMS to implement a new mandatory system of price reporting. The LMRA modified the *Agricultural Marketing Act of 1946* and is up for reauthorization about every 5 years, though there have been challenges with reauthorization. There is no "fall-back" legislation similar to those in farm bills. This recurring sunset provision allows frequent input by market participants but can lead to issues with longer term market reporting needs. Wachenheim and DeVuyst (2001) discussed the advantages and disadvantages of mandatory price reporting and the debate at the time.

Koontz and Ward (2011) provide an excellent literature review and synthesis of market information research discussing the change from voluntary to mandatory reporting. In particular, they note that some of the calls for mandatory price reporting were to expose "sweetheart" deals and that there was no referenced research to support those positions. Perry, *et al.* (2005) also discussed the impact of the mandatory requirement on fed cattle markets and found that, "prices received with formula purchasing arrangements, which were not comprehensively reported under the voluntary system, appear to closely match prices received with negotiated purchases."

Livestock Mandatory Reporting (LMR) is the primary vehicle for cattle market price reporting in the United States. LMR requires packers to submit purchases and sales of livestock and livestock products to AMS. LMR originated from producers seeking greater transparency in livestock markets and this effort has broadly been accomplished. Pertinent to the current public discussion, in addition to the reporting of cash transactions, prices and volumes also began to be gathered under LMR for non-cash market transactions such as forward contracts and marketing agreements. These non-cash transactions were not captured under the voluntary price reporting system as they were considered by the AMS to be private treaties and outside of the purview of reporting the cash market (Koontz and Ward 2011). Through their inclusion, comparison of negotiated prices and non-negotiated prices was possible, which brought another level of increased transparency.

Of course, the cattle industry has continued to evolve since 2001. Changes and enhancements have been proposed and continue to be implemented. Purcell, Schroeder, and Tonsor (2016) provide an excellent discussion of the structural changes in livestock production and packing and the implications for LMR.

While we discuss some potential changes in this chapter, it is clear that LMR has significantly contributed to increased market transparency. Regardless of any issues with current LMR or needed adjustments, the data it provides is far preferred to not having any public price data at all.

LMR for Live Cattle

The amount of LMR cattle data that is reported on a regular basis is substantial. In a presentation to stakeholder groups in 2016 to 2017, AMS stated that LMR covered 92 percent of fed cattle transactions, 33 percent of cow and bull transactions, and covered 38 live cattle plants (Pitcock, 2016). This amounted to 5,000 to 8,000 records per day that fed between 29 and 53 reports on a daily basis. Four reporters carried out these tasks in 2016—two reporters covered negotiated cash and negotiated grid base, one reporter covered formula, forward, and negotiated net purchases, and one reporter covered cows and bulls.

For LMR purposes, the term packer includes only a federally inspected cattle processing plant that slaughtered an average of 125,000 head of cattle per year during the immediately preceding 5 calendar years. Smaller packers are not subject to LMR reporting requirements.[1]

LMR relies on submitted forms from packers to compile, and ultimately release, data to the public. Daily reporting requirements include the LPS–113 form which packers must submit twice per day at 10:00 a.m. and 2:00 p.m. central time (*Figure 6.1*). This form must contain all fed cattle transactions that occurred since the previous reporting period. A similar form, LPS–114, requires twice daily reporting of the volume of fed cattle committed and delivered (*Figure 6.1*).

[1] The Federal regulations covering LMR for fed cattle can be found in 7 CFR § 59 or online at *https://www.govinfo.gov/content/pkg/CFR-2011-title7-vol3/pdf/CFR-2011-title7-vol3-part59.pdf*.

While an example is not included in this book, there are also weekly requirements including LPS–115A and LPS–115B which require packers to report head count totals of Imported and Domestic Formula, Forward Contract, Negotiated Cash, and Negotiated Grid cattle slaughtered in the prior week and packer owned cattle (*Figure 6.1*). Another weekly report includes the premiums and discounts for various standards.

Packers are expected to meet specific deadlines for each report and AMS reporters will review the submitted forms to ensure all expected plants have reported. All lots of fed cattle with ten head or fewer are automatically excluded. If a reporter sees an invalid record or notices a data outlier, they will contact the packer to learn more or correct the data prior to generating reports. Some transactions that appear to be outliers (*e.g.,* price appears too high or too low) may be excluded from reports while the reporters check with the packer to confirm the price is correct.

Two reports summarize excluded transactions each month. One is made for boxed beef cutout and boxed beef cuts (USDA, AMS, 2021a) and another is made for negotiated slaughter cattle purchases (USDA, AMS, 2021b).

Packers are also subject to two audits each year where they must provide documentation to the auditors (Koop, 2016). The audited information includes buy sheets, grading or settlement sheets, scale tickets, kill line-ups, sales invoices, and copies of checks, among other documentation. These audits help to ensure that packers are reporting correctly and are in compliance with requirements.

Confidentiality Guidelines for LMR

Confidentiality guidelines are in place to protect the identity of individuals and individual firms through the Livestock Mandatory Price Reporting Program. At the onset of the LMR program, AMS originally adopted a policy that three entities must report in a given area and that no entity could account for more than 60% of the market volume. However, this resulted in significant exclusions. Starting in 2001, a new confidentiality guideline was established, referred to as the 3/70/20 guideline. It requires that the following conditions be met over the most recent 60 day period: (1) three reporting entities provide data at least 50% of the time, (2) no single entity provides more than 70% of the data for a report, (3) and no single entity is the sole reporting entity for an individual report more than 20% of the time. This change resulted in significant reductions in exclusions (Greene 2019).

Figure 6.1. USDA–AMS Mandatory Livestock Reporting Forms LP–113 and LP–114.

FORM APPROVED. - OMB NO. 0581-0186

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

LIVE CATTLE DAILY REPORT
(Current Established Prices)

1. IDENTIFICATION NUMBER	PURCHASE TYPE CODE	CLASS CODE	CLASSIFICATION CODE
2. COMPANY NAME	1 = NEGOTIATED CASH 2 = FORMULA NET 3 = FORWARD CONTRACT NET 4 = NEGOTIATED GRID NET 5 = FORMULA BASE 6 = FORWARD CONTRACT BASE 7 = NEGOTIATED GRID BASE	1 = MIXED STEER/HEIFER 2 = STEER 3 = HEIFER 4 = DAIRYBRED STR/HFR 5 = MIXED STR/HFR/COW	1 = PRIME 2 = CHOICE 3 = SELECT 4 = STANDARD
3. PLANT STREET ADDRESS			
4. PLANT CITY			
5. PLANT STATE			
6. PLANT ZIP CODE			
7. CONTACT NAME			
8. PHONE NUMBER (include area code)			
9. REPORTING DATE (mm/dd/yyyy)			
10. REPORTING TIME (1 = 10:00 a.m.; 2 = 2:00 p.m.)			

NOTE: According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0186. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

USDA's Nondiscrimination Statement: In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at http://www.ascr.usda.gov/complaint_filing_cust.html and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: Mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW Washington, D.C. 20250-9410; Fax: (202) 690-7442; or email: program.intake@usda.gov. USDA is an equal opportunity provider, employer, and lender.

11. LOT IDENTIFICATION	23a. PREMIUM PAID - WEIGHT ($/cwt.)
12. SOURCE (1 = Domestic; 2 = Imported)	23b. PREMIUM PAID - QUALITY ($/cwt.)
13. PURCHASE TYPE CODE	23c. PREMIUM PAID - YIELD ($/cwt.)
14. CLASS CODE	23d. DISCOUNT PAID - WEIGHT ($/cwt.)
15a. SELLING BASIS (1 = Live; 2 = Dressed)	23e. DISCOUNT PAID - QUALITY ($/cwt.)
15b. SELLING BASIS - Shipment (1 = FOB; 2 = Delivered)	23f. DISCOUNT PAID - YIELD ($/cwt.)
16. HEAD COUNT	23g. PREMIUM PAID - OTHER ($/cwt.)
17. ESTIMATED AVERAGE WEIGHT (pounds)	23h. DISCOUNT PAID - OTHER ($/cwt.)
18. AVERAGE PRICE ($/cwt)	24a. PACKER FINANCING (1 = yes; 2 = no)
19. % CHOICE OR BETTER	24b. DELIVERY LOCATION (1 = producer; 2 = packer)
20. CLASSIFICATION CODE	24c. DELIVERY DATE (1 = producer, 2 = packer)
21. DRESSING PERCENTAGE	24d. DELIVERED (1 = 1-14, 2 = 15-30)
22. ORIGIN (2-Letter State postal abbr.)	

LP-113 (exp. 6/30/2022) *Destroy previous edition*

FORM APPROVED. - OMB NO. 0581-0186

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

LIVE CATTLE DAILY REPORT
(Committed and Delivered Cattle)

1. IDENTIFICATION NUMBER	PURCHASE TYPE CODE	CLASS CODE
2. COMPANY NAME	1 = NEGOTIATED 2 = FORMULA NET 3 = FORWARD CONTRACT NET 4 = NEGOTIATED GRID NET 5 = FORMULA BASE 6 = FORWARD CONTRACT BASE 7 = NEGOTIATED GRID BASE	1 = MIXED STEER/HEIFER 2 = STEER 3 = HEIFER 4 = DAIRYBRED STEER/HEIFER 5 = MIXED STR/HFR/COW
3. PLANT STREET ADDRESS		
4. PLANT CITY		
5. PLANT STATE		
6. PLANT ZIP CODE		
7. CONTACT NAME		
8. PHONE NUMBER (include area code)		
9. REPORTING DATE (mm/dd/yyyy)		
10. REPORTING TIME (1 = 10:00 a.m.; 2 = 2:00 p.m.)		
11. LOT IDENTIFICATION		
12. PURCHASING BASIS (1 = Delivered; 2 = Committed)		
13. SOURCE (1 = Domestic; 2 = Imported)		

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14. PURCHASE TYPE CODE		
15. CLASS CODE	19a. PACKER FINANCING (1 = yes; 2 = no)	
16. SELLING BASIS (1 = Live; 2 = Dressed)	19b. DELIVERY LOCATION (1 = producer; 2 = packer)	
17. HEAD COUNT	19c. DELIVERY DATE (1 = producer; 2 = packer)	
18. ORIGIN (2-Letter State postal abbr.)	19d. DELIVERED (1 = Less than 7; 2 = greater than 7 less than 14)	

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Source: *https://mpr.ams.usda.gov/mpr/manuals/help/lsFormInfo.htm?selItem=lp-113&formName=LS113&product=livestock*.

While the 3/70/20 rule was a significant improvement over 3/60 in terms of the amount of data released, there are still times when confidentiality precludes release. For example, the weekly weighted average live cattle prices in Colorado have been rarely reported since 2018 because there are often not three reporting entities. Unlike the exclusions based on price mentioned above, there is no report of trans-

actions excluded for confidentiality because it would be fairly easy to "back-out" to which packer the excluded transactions belong.

> *It is critical to recall that current LMR transaction types were not designed to enforce volume requirements. In particular, the definitions are useful to understand the market but may have enough overlap to allow switching between formula and negotiated without significantly changing how a transaction occurred.*

The primary driver of confidentiality requirements is legality. *The Livestock Mandatory Reporting Act of 1999* specifically requires the USDA to publish mandatory data on livestock and meat price trends, contracting agreements, and supply and demand conditions "in a manner that protects the identity of reporting entities and preserves the confidentiality of proprietary transactions." We acknowledge these legal reasons and the need to protect the identity of reporting firms.

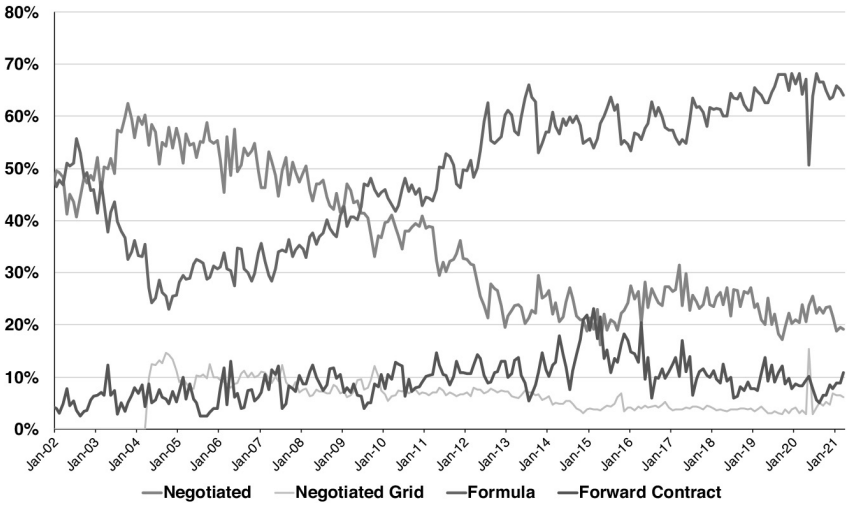
However, given the goal of this chapter is to discuss market reporting and transparency, we focus simply on the economic implications. Any changes to confidentiality requirements will require careful study of unintended consequences. This was true when the confidentiality rules changed from the original 3/60 rule to 3/70/20. Potential unintended economic consequences of this change have been debated in depth. While these concerns might also exist if confidentiality requirements are further relaxed, these concerns may not offset the potential benefit of more complete and transparent information available for price discovery and price determination.

With respect to confidentiality, it is also important to understand that as additional details are required, the likelihood of confidentiality becoming an issue increases. This occurs because total market volume is spread across the various transaction types that are reported. The more specific the type of transaction that is required to be reported, the fewer transactions there will be to fall into that category. The fewer the transactions that fall into a given reporting category, the more likely something like the 3/70/20 rule will be breeched. In order to better understand this issue, a discussion of the various types of live cattle transactions is warranted.

Live Cattle Transaction Types

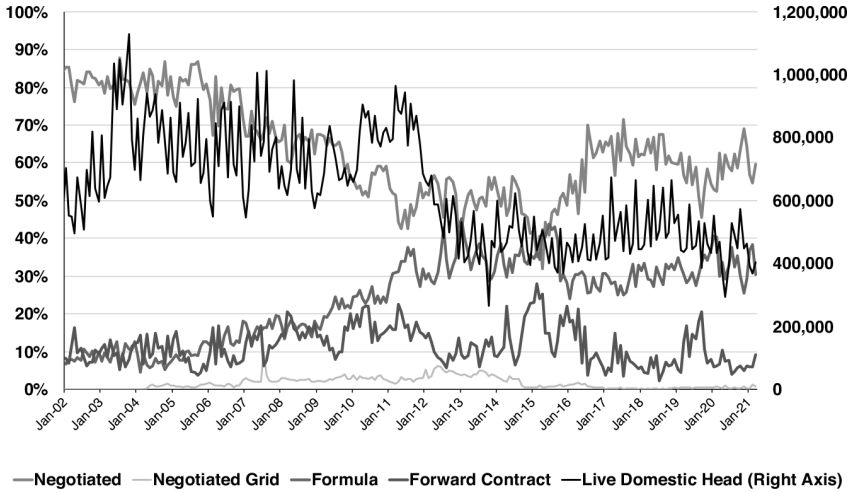
The data by transaction type was an important result of the change from voluntary to mandatory price reporting in 2001. *Figures 6.2, 6.3,* and *6.4* show the percentage of domestic cattle slaughtered by transaction type for total, live basis, and dressed basis, respectively. These transaction types were included in LMR to gain a better understanding of how cattle are traded. Currently, much discussion centers around using these transaction types to regulate volumes. Because the data were not collected, this was a discussion that was not possible in previous decades when producer pushes for change led to action.

Figure 6.2. Total domestic cattle slaughter percentage by transaction type. 2002–2021.



Source: USDA–AMS.

Figure 6.3. Live basis domestic cattle slaughter percentage by transaction type. 2002–2021.

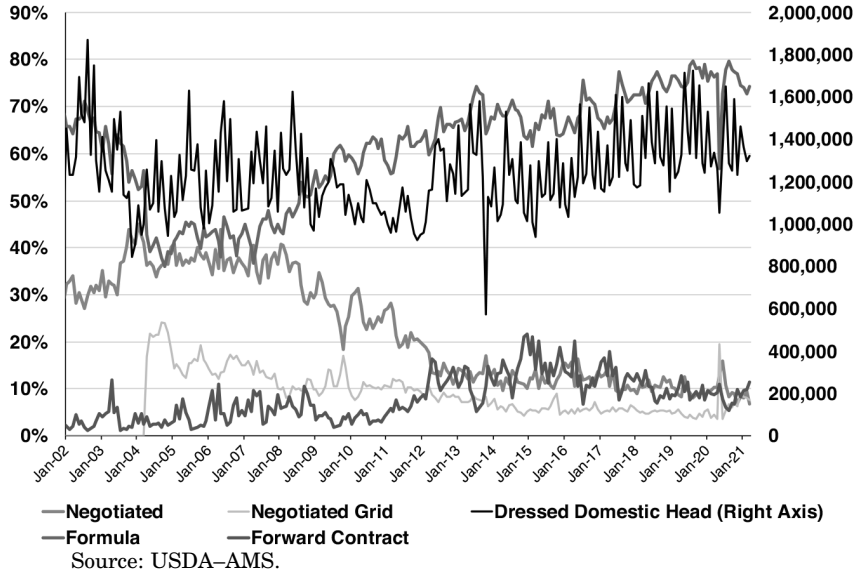


Source: USDA–AMS.

While the addition of these transaction types increased market transparency, it is critical to recall that current LMR transaction types were not designed to enforce volume requirements. In particular, the definitions are useful to understand the market but may have enough overlap to allow switching between formula and negotiated without significantly changing how a transaction occurred. The complete definitions for cattle are:

- *Negotiated purchase* is a cash or "spot" market purchase by a packer of livestock from a producer under which the base price for the livestock is determined by seller-buyer interaction and agreement on a delivery day. Cattle are delivered to the packer within 30 days of the agreement.
- *Negotiated grid purchase* is the negotiation of a base price, from which premiums are added and discounts are subtracted, determined by seller-buyer interaction and agreement on a delivery day. Cattle are usually delivered to the packer not more than 14 days after the date the livestock are committed to the packer.
- *Forward contract* is an agreement for the purchase of livestock, executed in advance of slaughter, under which the base price is established by reference to publicly available prices. For example, forward contracts may be priced on quoted Chicago Mercantile Exchange prices or other comparable public prices.

Figure 6.4. Dressed basis domestic cattle slaughter percentage by transaction type. 2002–2021.



Source: USDA–AMS.

- *Formula marketing arrangement* is the advance commitment of livestock for slaughter by any means other than a negotiated or negotiated grid purchase or a forward contract using a method for calculating price in which the price is determined at a future date.

At the center of the difference between negotiated and formula trades is the seller-buyer interaction to determine price and agree on delivery day. The types of formulas used are not publicly available for fed cattle, though there are calls for a contract library which will be discussed later in this chapter. Anecdotal evidence suggests that many formulas use some adjustment of the previous week's negotiated price for their region as the base price. Strictly from a reporting standpoint, there is not an obvious incentive to classify one transaction type over another. A volume requirement for negotiated trade would create such an incentive for a packer to report more negotiated transactions.

> *The introduction of an incentive or requirement to report more negotiated transactions would lead to changes in the number of cattle that fit the negotiated trade category. However, it is less clear that it would fundamentally change how those cattle exchange hands.*

The introduction of an incentive or requirement to report more negotiated transactions would lead to changes in the number of cattle that fit the negotiated trade category. However, it is less clear that it would fundamentally change how those cattle exchange hands.

If an incentive for more negotiated trade existed, formula traders would need to either formally negotiate more cattle or modify their formula trading practices to fit within the negotiated transaction definition. Due to the significant cost advantages of formula trades, there would be a cost incentive to increase reported negotiated transactions while retaining at least some of the benefits of formula trades, whenever feasible. The key question is, can slight modifications of current formula trading practices allow these trades to be reported as negotiated trades without having to incur the cost of negotiation?

This question is particularly relevant for well-established relationships between parties who use a formula. For example, if a long-standing formula agreement between a feedlot and a packer needs to be broken to meet negotiated requirements, could these two parties easily structure an ongoing negotiated trade arrangement? And could such an arrangement still avoid many of the costs associated with negotiation, especially the potential cost of a failed negotiation? And if such modifica-

tions to meet definitional requirements can be made, how much improvement to the price discovery process has actually occurred?

Generally speaking, if packers are forced to more often classify transactions as negotiated instead of formula, rational participants would be expected to seek legal ways to meet the negotiated definition while minimizing the cost of doing so. Further, the packers and feeders with the best relationships will be best positioned to minimize the cost of swapping from formula to negotiated transactions. Additionally, it is unclear if these converted negotiated transactions would add significantly to the price discovery process.

Generally speaking, if packers are forced to more often classify transactions as negotiated instead of formula, rational participants would be expected to seek legal ways to meet the negotiated definition while minimizing the cost of doing so.

Many other questions remain about how participants would respond to a new incentive or requirement over negotiated trades. How would market reporting shift in the presence of regulation on volume by transaction type? Can AMS reporters and the twice annual auditing process easily determine which category a transaction should be in? Can the transaction types be better defined? Also in question: which cattle that are currently on a formula are likely to be shifted to negotiated? Information does not exist on the structure of current formulas.

The Potential Role of a Contract Library

Another interesting aspect of the market transparency discussion involves details of non-negotiated trades. Non-negotiated trades include formula trades, forward contracts and packer owned cattle. While there have been legitimate reasons for movement away from negotiated trade and to alternative marketing agreements (AMAs), there are also significant concerns about the impact continued reductions in negotiated trades has on price discovery and the value of negotiated price information. Formula transactions now comprise the majority of fed cattle transactions and have become the source of much contention in the cattle sector.

Much of the contention comes from the fact that a limited amount of information is truly known about the nature of these formula pricing agreements and that they are likely to be less reflective of current market conditions than negotiated trades. For the most part, cattle producers are unaware of the basic price formulas, premium and discounts, and other elements of these transactions that are key in arriving at the formula price. As price discovery discussions have taken center-stage, and transparency has become more important, the development of a contract library for cattle has been included in recent proposed legislation. A contract library would provide increased transparency as it would create a catalog of the types of contracts offered by packers to producers of fed cattle. This section will focus on outlining what would likely be included in a cattle contract library, as well as the potential benefits and limitations, if one were to be developed.

The concept of a contract library is by no means new, as one was created for swine through the amended Packers and Stockyards Act. The existing Swine Contract Library (SCL) likely provides some perspective on what a beef cattle contract library might look like, and what information would be available, if one were created. Swine packers above a specific size are required to report written and verbal contracts to the USDA Grain Inspection, Packers, and Stockyards Administration (GIPSA). These provisions are then released by GIPSA through publicly available monthly Contract Summary Reports, although confidentiality is maintained. Producers do not know contract provisions being offered by individual firms, but they are able to see base price formulas, premiums and discounts, and other contract terms across a wide range of contracts (USDA–AMS, 2018).

Assuming that a contract library for cattle looked similar to what exists for swine . . . it is hard to argue that there would not be some benefits to cattle producers from the development of such a library and their ability to access it.

Assuming that a contract library for cattle looked similar to what exists for swine, the library would provide a range of pricing agreements that are currently being used and would provide perspective on the variation in net price that is actually received from formula and contract transactions. It is hard to argue that there would not be some benefits to cattle producers from the development of such a library and their ability to access it.

First, a cattle contract library would provide perspective on the markets that existing formula trades are based upon. It is likely that many formula prices are based on the cash prices for a given regional market, CME futures market, or based

on a measure within a nearby plant of the buyer. Following are three examples (A, B, and C) of contracts pulled from the SCL (*Figures 6.5–6.7*). Contract A represents one of the simplest contract arrangements reported in the SCL for the market formula category in the western cornbelt for sows (*Figure 6.5*). Note that Contract A specifies the market report upon which the price is based, LM_HG231, for 300 to 450 lb sows on the day of delivery. The price for this contract is simply this price, plus a $2.50 contract premium. A similar formula contract can easily be imagined for live cattle such that the price is established as a certain amount above the previous week's price.

Figure 6.5. Contract A: Determination of Base Price 401.

All Reports Referenced
LM_HG231, 300–450 pound sow, Day of Delivery
Other Terms
Final Price = Market Price + Contract Premium Premium/Discount Type: Contract Premium, $2.50

Source: Swine Contract Library.

Many existing swine contracts utilize a weighting of multiple prices to arrive at the contract price. For example, some base a percentage of the price on a specific hog market and a percentage of the price based on a pork carcass value with a specified cutout percentage. Contract B is an example of a contract that places 50% emphasis on two prices and includes a carcass merit adjustment (*Figure 6.6*). It is possible that similar arrangements exist in cattle markets. A better understanding of what markets are used as the base for price formulas, and how often those market references show up in contracts, would provide valuable information to market participants.

Figure 6.6. Contract B: Determination of Base Price 1504.

All Reports Referenced
LM_HG203, Negotiated Base Weighted Average, Average—3 days prior to delivery LM_PK602, Pork Carcass Cutout, Average—3 days prior to delivery
Other Terms
Final Price = 50% (Weighted Average + Contract Premium) + 50% (Cutout Percentage * Cutout Value) + Carcass Merit Adjustment. Premium/Discount Type: Sort; See Schedule: 78 Premium/Discount Type: Carcass Merit; See Schedule: 18 Premium/Discount Type: Contract Premium, $1.00 Premium/Discount Type: Cutout Percentage 91%

Source: Swine Contract Library.

Figure 6.7. Contract C: Determination of Base Price 2911.

All Reports Referenced
LM_HG206, Weighted Average, Average—Previous Week
Other Terms
Floor Price: 0.28; Ceiling Price: 0.56 If Market Price (MP) > $50, then Base Price = MP − $0.50 Premium/Discount Type: Contract Premium, $7.25 Premium/Discount Type: Gender Mix, $6.25 > 60% barrows in load

Source: Swine Contract Library.

Second, producers would also benefit from seeing the premiums and discounts used when employing those key markets. Lots of questions have surfaced over the last couple years about how representative the shrinking negotiated volume is of

most cattle transactions. Seeing the adjustments used with base prices would shed some light on these types of questions as can be seen with the $2.50 and $1.00 contract premiums shown in Contracts A and B, respectively. A large number of contracts in the SCL specify contract premiums and knowing the range of these premium levels could be useful as producers attempt to understand the value of the cattle they produce and negotiate with buyers.

Third, while base prices and premiums or discounts are likely to be the focus of most contract library discussions, there is additional value in other contract provisions that would be available. Beyond the variation in values that can potentially be learned from a contract library, seeing the individual elements within existing contracts would likely increase transparency about the various components being used. Pricing agreements can be complex and seeing all the elements of these contracts will provide more perspective on the nature of the agreements. Some of the reported swine contracts include price floors and ceilings, cost elements such as feed prices, transportation cost or delivery arrangements, *etc.* Contract C is a relatively simple contract based on a single market report from the previous week but adds the elements of both a price floor and ceiling in addition to a contract and gender percentage premium (*Figure 6.7*).

Having access to this information would increase their level of marketing knowledge and provide them with additional tools as they develop their own pricing agreements.

Another specific element that would likely be of considerable value to cattle producers would be the bonuses/premiums paid for certain programs such as naturally raised or produced without antibiotics. Some such references appear in the SCL and would presumably appear in a similar library for cattle. It is likely that a cattle contract library would reveal many contract elements that have not been considered by many producers. Having access to this information would increase their level of marketing knowledge and provide them with additional tools as they develop their own pricing agreements.

While there are likely benefits of having a cattle contract library, there are certainly limitations to what one can be expected to provide. A contract library is a database of existing contracts for the purchase of livestock. Contracts listed would not be identified as being offered by a particular entity. Additionally, it would not provide perspective on the volume of cattle that are purchased under any individual contract. Just because a specific contract exists, does not mean that it is available to an individual producer. Some contracts may have been entered into under very different market conditions but remain in existence, or contracts may exist in the library but may be very rarely utilized.

Still, by knowing the potential provisions that exist across contracts, producers may be in a better position to evaluate offers, negotiate terms, and compare pricing opportunities. Access to this information could provide a deeper understanding of formula and contract values. For example, understanding how much variation exists across formula values may well be more important to an individual producer than the average formula price in the market. Seeing what additional contract provisions accompany the more attractive pricing arrangements may explain some of this variation.

The other interesting aspect of Swine Contract Library is the required reporting of contract purchases 6 and 12 months in the future, which is also referenced in recent proposed legislation with respect to the cattle industry. These data are made public by GIPSA on a monthly basis. While it does not include pricing information, it does provide an indication of contracted volume, which may shed some light on volume still needed for purchase. This has been another contentious issue in the beef sector and regular reporting of contracted volumes would increase market transparency.[2]

Like most things with respect to price discovery, a contract library is one piece of a very complex puzzle. A contract library has the potential to provide some valuable information about contracts currently in use by market participants and could likely do so in a way that does not violate confidentiality guidelines, though there would likely be instances that run into confidentiality restrictions. This is a level of transparency that does not currently exist in the cattle sector. However, one must also understand the limitations of a contract library. It is not going to show what individual entities are paying for cattle, how they are arriving at those values, or how many cattle are truly being sold using those contracts. Further, compliance and

[2] As a reference, the most recent such report can be found at *https://www.ams.usda.gov/sites/default/files/media/SCLMRSummary.pdf*.

reporting will create additional costs for market participants, which has the potential to be passed back in the form of lower cattle values.

Summary and Conclusion

There are several points that should be emphasized with respect to market reporting and the importance of transparency in that process. The first point is simply how crucial market reporting is to the price discovery process and how important it is that this system remain in place. Reliable and transparent price reporting may not be a sufficient condition for desirable market qualities, but in most all cases, it is a necessary condition. Other chapters in this volume discuss that most of the present issues surrounding price discovery are not new and similar calls for action to improve price discovery have occurred with varying degrees of intensity over the past 50 years (and even further back). It was producer and producer group concerns, in the name of improving price discovery, that led to producer support for the mandatory price reporting system that is in place today. It is easy to take the market reporting system for granted, but to do so is to risk losing a key element for efficient markets. Required LMR reauthorization keeps this issue on the forefront about every 5 years. LMR provides much of the data to allow for discussions about price discovery to occur.

Second, one must also understand what can realistically be expected from LMR. While a lot of the issues of concern today are not new, the current setting of increased concern of live cattle marketing issues is different from past decades because of the presence of LMR data. In particular, the LMR data on transaction type was not available under the voluntary framework prior to LMR. Many of the current proposals focus on these data and would rely on them for regulation. It is crucial to recognize that while these transaction types are informative, they were not designed to support a regulatory framework. LMR is a reporting tool and cannot be expected to deal with many of the issues that are often mentioned in pricing discussions such as market concentration, margins at different levels of the marketing chain, *etc.*

Third, opportunities likely do exist to improve the information made available through market reporting. One potential step toward increased transparency could be the development of a contract library for cattle, similar to the Swine Contract Library. These trades can take on many different forms and a catalog of these contracts would increase transparency in the industry. Informing the public about markets that formula prices are based upon, how formulas are calculated, premiums and discounts, and other contract provisions would provide a deeper understanding of formula trades than prices alone. Clearly the cost of developing the library should be weighed against the benefits of its existence, but benefits in the form of increased transparency would exist.

Fourth, confidentiality should be reviewed through the filter of the current market environment. Confidentiality requirements have been a concern for LMR since inception and these concerns will only increase as the cattle industry continues to evolve. It has been 20 years since guidelines were last revised and marketing conditions have drastically changed during that time. A basic question that could be asked is simply if all trades are worthy of being reported, even if the potential exists for those prices to be linked back to an individual entity? Clearly, confidentiality concerns are less of an issue in more competitive markets. Reporting more transactions could simply be considered a downside for buyers that are operating with fewer competitors.

Overall, the relaxation of confidentiality requirements, combined with a better understanding of contracts, has the potential to benefit price discovery. In a setting where all proposed prescriptions to improve price discovery likely exhibit increased costs and/or unintended consequences, relaxing confidentiality, and improving descriptions of formula/contract trades might lead to the largest net benefit as compared to other proposals. This is likely especially true for cattle producers who would benefit from better price discovery without absorbing the larger costs associated with other proposed prescriptions.

Finally, it is certain that technological advances will continue to impact all aspects of the cattle industry, including how cattle are marketed. Efforts exist to use online auctions for fed cattle which would allow buyers and sellers to observe the negotiation process and see posted prices. This may in fact illustrate the most important point of all. The cattle marketing system is continually evolving and LMR must find a way to evolve if it is going to continue to provide the reliable and transparent data that is necessary for efficient markets.

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Chapter 7

What Can the Cattle Industry Learn from Other Agricultural Markets That Have Limited Negotiated Trade?

SCOTT BROWN

Introduction

Many agricultural product markets have experienced thin markets and questions have arisen about whether these markets have adequate cash trade for reliable price discovery. Although this has been a more recent issue for cattle markets, the chicken and dairy industries have faced the issue of thin markets for decades while the pork industry dealt with declining levels of cash trade in the 1990s.

The experiences of these other agricultural sectors can provide a useful point of reference for the cattle industry as it grapples with adequate price discovery in fed cattle markets and the reduction in negotiated trade. In some of these markets, there has been a high level of government support to help deal with pricing issues while in other markets there has been little government involvement.

Clearly, each of these agricultural markets are unique. As such, there is no single solution to the issue of declining cash trade and how it is handled in a particular agricultural market. However, studying how these other markets have addressed thin market issues can provide some context for cattle markets.

Thin markets have been defined as having a weak or no cash market and no related derivatives, little public market data, and little understanding by outsiders (Adjemian, 2016a). However, the definition of a thin market is often qualitative in nature (Anderson, 2007). The qualitative nature of the thin market definition makes it difficult to determine an exact threshold where a market becomes too thin. As discussed at length in Chapter 3, robust price discovery does not necessarily require a large number of cash transactions, though more trades reduce potential problems with price discovery.

Dairy Markets

The U.S. market for cheese has often been described as a thin market. For many years, the National Cheese Exchange (NCE) located in Green Bay, WI, served as the primary cash market for cheese produced in the United States. The NCE was closed in 1997 amid expressed concerns of market manipulation and the spot cheese market was moved to the Chicago Mercantile Exchange (CME) where it remains in operation today. In response to the thinness of spot cheese markets, the U.S. Department of Agriculture's National Agricultural Statistics Service (NASS) began a voluntary survey of cheddar cheese prices in May 1997. In October 1998, NASS expanded the survey to include butter, nonfat dry milk, and dry whey.[1]

In late 2000, Public Law 106–532 was passed which created mandatory price reporting for dairy products. USDA's rulemaking process first concluded in June 2008 creating the Dairy Products Mandatory Reporting Program. By 2012, USDA's Agricultural Marketing Service (AMS) also had a mandatory sales reporting system for dairy products with the first report (National Dairy Products Sales Report) being

[1] *https://usda.library.cornell.edu/concern/publications/bn9996777?locale=en#release-items*.

released in March 2012.[2] Dairy product prices remain important for dairy producers because Federal Milk Marketing Orders (FMMOs) use these dairy product prices to determine minimum classified milk prices that processors must pay into the FMMO pools.

The Wisconsin Cheese Exchange was launched in 1918 to trade spot cheese (Hamm, 1995). It was officially renamed the National Cheese Exchange in 1974. The NCE was a weekly exchange that traded carloads of block and barrel cheeses each Friday. Although other exchanges existed to trade cheese, the NCE became the dominant exchange. Other spot prices did exist through the 1970s including the Wisconsin assembling points price which provided spot prices where the first handler could obtain alternative supplies (Lough, 1980). The NCE was described for decades as a thinly traded market. In the late 1970s, trades on the NCE represented less than one percent of all cheese produced (Mueller, 1996). Despite the small quantity of cheese traded on the NCE, the market price reported at the NCE was still the dominant base price used in contracts of all types of cheese.

As concerns about possible manipulation of the NCE grew, pressure for changes to the NCE intensified until it was ultimately closed. One issue raised was the behavior of NCE market participants. First, as reported by Mueller, the nine leading NCE traders accounted for 94 percent of all purchases and 94 percent of all sales over the 1988 to 1993 period (Mueller 1996). In addition, those dominant traders that benefited from lower prices sold 1,806 loads while those dominant traders that benefited from higher prices bought 1,947 loads. These results lead some to suggest these players were attempting to manipulate prices to their advantage. That is, selling loads could drive market prices lower and those participants that sold most of the loads would benefit from lower prices. The converse of those buying loads and benefiting from higher prices is also a possibility.

Beyond the issues of market thinness and market dominance, other issues have been raised surrounding the NCE. Price volatility and how representative the NCE was of overall cheese pricing have been highlighted (Hamm, 1995). Dairy markets had exhibited little price volatility through most of the 1980s as government support programs provided a strong price floor and little opportunity for price volatility. As non-American cheeses grew in importance, it was questioned whether NCE trading of American cheese captured these new market developments. Amidst the growing concerns about the thinness of the NCE the spot cheese market moved to the CME in 1997 and the CME remains the spot cheese market today. Upon moving to the CME, the market began trading daily Monday through Friday.

Even with the changes that came with the move of the spot cheese market to the CME, market thinness has remained a concern of many market participants. According to GAO research, over the 1997 to 2006 period, the average number of daily transactions was 1.2 for cheese barrels and 2.5 for cheese blocks (GAO, 2007). The largest participants also represented a large percentage of trading. Over the 1999 to early 2007 period, the two largest buyers of block cheese represented 74 percent of trading and the four largest buyers of barrel cheese represented 56 percent of trading (GAO, 2007). The largest three sellers of block cheese represented 67 percent of block cheese trading and the top two sellers of barrel cheese represented 68 percent of trading (GAO, 2007). Trading on the CME remains small today. For the week ending May 21, 2021, each day saw ten or fewer transactions in either block or barrel cheese markets.

Although the CME and the Commodity Futures Trading Commission (CFTC) provide oversight of all dairy product cash markets (cheese, butter, nonfat dry milk, and dry whey), there are still possible price manipulation issues that remain. A civil penalty was agreed to be paid by dairy participants for attempting to manipulate milk futures prices through CME cash cheese purchases in 2004 (Shields, 2009).

The NASS survey for dairy prices that gave way to the AMS mandatory dairy product prices has provided another check on cash markets. The use of mandatory AMS dairy product prices in the formulas that calculate minimum Federal order class prices have relaxed at least some of the concerns of the thinness of the CME cash dairy product markets. A unique piece of the pricing puzzle for dairy producers is that FMMO minimum milk prices for the four classes of milk are determined by formulas that are driven in part by the mandatory dairy product prices reported by AMS. Built into the formulas are fixed production coefficients and make allowances that provide a fixed margin to a processor of milk products. This adds additional complication to the milk pricing process for dairy producers and can lead to further concerns about their milk checks.

Dairy producers continue to worry that the days of cooperatives taking all the milk they want to produce are coming to an end and the assembly cost of milk for

[2] *https://usda.library.cornell.edu/concern/publications/zs25x847n?locale=en.*

cooperatives continues to offer scale economies for the larger producers they service. It's important to draw a few observations about dairy markets and how they relate to the cattle market:

1. If dairy product market participants feel that cash markets are being pushed or pulled to prices not in alignment with underlying supply and demand conditions, it is easier for dairy interests to take a market position on the opposite side. In the negotiated market for fed cattle it is not as simple to move from a buyer to a seller except for the use of futures markets for live cattle.
2. Exceptionally thin markets for dairy products can operate successfully, especially when mandatory prices help to provide additional market information. However, adequate price discovery is often difficult to measure.
2. The prevalence of dairy cooperatives may be providing a way for dairy producers to better negotiate with upstream users of milk even though at times producers have expressed concerns about the function of dairy cooperatives.

Other Markets

Hog markets have experienced a substantial decline in negotiated trade over the past 3 decades. In 1994, 62 percent of the hogs were sold on the negotiated market and by 2000 that percentage had fallen to 26 percent (Grimes, 2003). Current negotiated trade stands at a little more than one percent according to AMS mandatory price reporting data. Swine or pork market formula and packer-owned hogs have been the two largest categories of monthly hog slaughter for the past several years. The combination of these two categories is responsible for roughly ⅔ of all hogs marketed. The small percentage of negotiated trade has been a concern in hog markets for several years. There have been more hog formulas based off of the wholesale pork cutout value recently, which has some advantages in terms of the base price being closer to the consumer so that demand signals reach producers more quickly and both producers and packers can more quickly respond to changing pork cutout values. Hog pricing became an issue in the 1990s as negotiated trade fell dramatically as processors and producers took advantage of economies of scale. Mandatory price reporting for hogs has helped many market participants, but adequate spot trade will continue to be an issue for the foreseeable future.

As the hog market has evolved, enough time has passed to make permanent structural changes in how hogs are produced and priced. Relatively little negotiated trade remains, and there are even fewer auctions where finished hogs are bought and sold. The passage of time has solidified a new market and has lessened the call for policy-mandated changes. The time element in market changes appears to have been given little attention in the literature.

Chicken markets have reached a point where it is difficult to even find a cash market for chickens. The chicken industry has experienced vertical integration as market participants all along the marketing channel focus on transmitting consumer wants to all market participants to maximize overall demand for chicken.

Market coordination and efficiency has moved the chicken industry to the point where individual complexes produce one type of bird for one type of outlet or even one customer. Recent completion of Costco's Lincoln Premium Poultry is a market innovation where Costco has built out the production capacity to supply chickens for their in-house rotisserie market. The birds are produced with contracted growers, as in other companies, but Costco has expanded into agricultural production. Complaints remain about tournament system pricing and the lack of ability to switch to different integrators, creating the risk for even more market power. But, to date, little has been done to change this system.

A wide variety of vegetables and field crops, like malting barley, are examples of crops dominated by contracting. In many cases, the farmer grows the variety prescribed by the company and in the manner required. Often, there are few market prices reported or products traded. These are all considered to be thin markets, with the potential for problems associated with thinly traded markets. How might these other markets compare with fed cattle markets?

It's well known that agricultural markets are becoming more concentrated; there are fewer buyers and sellers. Cash markets have dwindled, having been replaced by contracts or vertically integrated firms owning much of the production. Yet, these arrangements can produce economically efficient outcomes. Three conditions have been postulated as necessary for buyers to get a stable supply of farm products: (1) source enough product to efficiently operate facilities, (2) produce in a least cost or profit maximizing method, and (3) procure products efficiently (Adjemian, 2016b)

For the market to work in the long run, buyers must pay a high enough price to keep farmers and ranchers producing. A market power argument that buyers force lower prices to producers means that, over time, resources in production will

exit, resulting in buyers or processors losing their investment as well. Two conditions have been suggested that would allow competitive returns in agricultural production under alternative marketing arrangements: (1) the benefits of preserving resources in production agriculture are maintained and (2) buyers (processors) and sellers (farmers and ranchers) value the future enough (have a low enough discount rate to value the future). When these conditions are met, buyers and sellers can find grounds to create supplies to meet demands at a profitable price to the farmer.

The agricultural markets mentioned above continue to produce agricultural commodities entering the processing and distribution systems. But, the transactions are not made in negotiated cash markets. The evolution of these markets was not pain free, meaning that many producers and processors exited as the market consolidated and concentrated. The fed cattle market might be thought of as being in this process now. Many other markets are years ahead in this process, leading to alternative marketing arrangements being the norm.

Why might cattle be late to these changes that have occurred around much of agriculture? One reason is likely the nature, or structure, of production. Cattle and beef production begins extensively, out on ranges and pastures. All told, huge investments in land are necessary to consolidate production, and more profitable uses of capital are available. That dynamic makes cattle different from hogs or chickens. The fed cattle segment of the industry aggregates cattle into relatively small geographic areas, similar to other industries.

Consolidation and concentration in feeding is happening now, leading to policy concerns that have already happened in other agricultural markets. At the same time, product differentiation into more varied market niches is happening. Beef is late to product differentiation as well. Niche markets such as grass-fed, organic, and other production system defined products are relatively new entrants. Branded beef products are even newer product niches compared to other agricultural products. Successful branded meat products have been slow to develop. Pork has long been branded in hams, sausage, and bacon by recipe differences. Fruit and vegetables are differentiated by variety. Milk and dairy products have long been successfully branded. Product differentiation and more niche markets lead to thinner markets and more alternative marketing arrangements.

Summary

Many agricultural markets have seen cash markets for their products dwindle or completely vanish over the past several decades. This has led to many questions about adequate price discovery in many of these agricultural markets. The discussion around price discovery has been complicated as the capture of economies of scale has made all market segments of many agricultural commodities become more concentrated. Economies of scale reduce the costs of delivering farm products to consumers but often cause the volume of trade that occurs in cash markets to dwindle. Coordination of market participants at each step of the marketing channel has helped maximize efficiencies at the expense of cash trade.

While many agricultural products moved in this direction long ago, the fed cattle market—and market participants—are now going through these growing pains. Yet, these markets mentioned above have found transaction mechanisms that ensure continued production and some kind of adequate market returns. Observing the changes that have occurred in other markets is helpful in thinking about alternative paths for the cattle market going forward.

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Chapter 8

Implications of Fed Cattle Pricing Changes on the Cow-Calf Sector

DAVID P. ANDERSON, CHARLEY C. MARTINEZ, and JUSTIN R. BENAVIDEZ

Introduction

Sometimes lost in the debate over negotiated sales *versus* alternative marketing arrangements (AMAs) is that, primarily, it is a fed cattle pricing issue. The debate taps into long held views, sometimes correct, about market structure, changing markets, and perceptions of buyer's market power. Some of these views have been shaped from a time when the cattle market was very different from today, and some are formed by recent events.

There is no doubt that fed cattle prices impact calf and feeder prices, wholesale prices, and retail prices throughout the supply chain. These price relationships are described in any basic price analysis class that one might (or might not) remember from college. Market signals are passed throughout the supply chain and reflect not only basic supply and demand, but incorporate information, quality, and production characteristics that are important at each production level. Market signals have changed dramatically over the last 40 years. Events such as the industry-led beef quality audit increased feeding, breed changes, and value-based marketing, and caused industry participants at all levels to work to improve production efficiencies and profits.

This chapter examines the potential impact of changes to fed cattle pricing alternatives on cattle and calf prices through the transmission of imposed costs. The second part of the chapter explores several hypotheses about market premiums and price signals that have emerged in a changing cattle market.

Impacts on the Cow-Calf Sector

This analysis begins with several premises: (1) the market has evolved over time to rely more on formula pricing, (2) moving to formula pricing has increased efficiency through the reduction of transaction costs in the industry, and (3) the reduction in transaction costs have affected farm, wholesale, and retail prices.

Given the assumptions, what would happen if the market reverted to more negotiated pricing? Moving away from reliance on formula pricing and back to greater reliance on negotiated pricing, then, results in an increase in transaction costs between feeders and packers. The cost increase can be expected to change live cattle prices, calf and feeder prices, and wholesale and retail beef prices. There is a long literature of research on these types of topics spanning technical change, transaction costs, changes in demand, and various other changes in the marketplace. The basic marketing margin description and graphical analysis can be found in most price analysis textbooks but is referred to in this chapter from Tomek and Robinson (1981). In this basic framework, an increase in transaction costs results in a decrease in the derived demand for fed cattle and a reduction in supplies of beef. This means that the cost increase is passed from where it occurs through the marketing channel, both backwards and forwards in the supply chain. The end result is lower farm level prices (fed cattle) and higher retail beef prices.

Koontz (2020) estimated that the value of formula pricing in efficiency, or reduced costs, was $25 per head.

The $25 per head cost increase applied to all cattle assumes that all fed cattle are traded in a negotiated cash format.

As expected, increasing transaction costs results in lower live animal prices and higher wholesale and retail beef prices.

If the live-to-cutout spread is a concern, the end result is a widening price spread.

This analysis uses an equilibrium displacement model (EDM) to quantify the effect of an increase in costs at the feeder-packer level on cattle and beef prices. This type of model has been widely used previously (Brester, Marsh, and Atwood, 2004; Gardner, 1975; Hanselka, *et al.,* 2005; Schroeder and Tonsor, 2011; Wohlegenant, 1989). EDMs utilize previously estimated supply and demand elasticities to evaluate the impact of exogenous shocks. In this case, the exogenous shock in question is the imposition of increased transaction costs from reduced transaction efficiency due to reduced AMA use. This work follows an EDM developed by Johnson (2016). Supply and demand elasticities are taken from the literature for each production level. These estimates are used to estimate price and quantity changes through the marketing chain given a change in costs, supplies, or demands. *Table 8.1* contains the elasticity estimates in the cattle and beef portion of the model.

Koontz (2020) estimated that the value of formula pricing in efficiency, or reduced costs, was $25 per head. Several caveats are in order when using this estimate. As noted in Chapter 5, the first is that the estimate is 16 years old and would not reflect changes since that time. It is likely that the value of efficiency is much larger than that today. The $25 per head is applied across all fed cattle, not just those traded by formula. The year 2019 is used as the base year for analysis in the model

to avoid 2020 given disruptions due to the pandemic (Martinez, *et al.,* 2020). The $25 per head cost increase applied to all cattle assumes that all fed cattle are traded in a negotiated cash format.

Table 8.1. Supply and Demand Elasticities Used in Estimating Impact of Reducing AMA Use.

Name	Elasticity
Own-price Elasticity of Demand for Retail Beef	−0.841
Own-price Elasticity of Supply for Retail Beef	0.352
Own-price Elasticity of Demand for Wholesale Beef	−0.567
Own-price Elasticity of Supply for Wholesale Beef	0.274
Own-price Elasticity of Demand for Slaughter Cattle	−0.291
Own-price Elasticity of Supply for Slaughter Cattle	0.254
Own-price Elasticity of Demand for Feeder Cattle	−0.137
Own-price Elasticity of Supply for Feeder Cattle	0.215

Table 8.2. EDM Results of the Impact of a $25 per Head Cost of Returning to a Negotiated Cash Market.

	2019 Base Price	Change
Calf Price $/cwt	163.40	−$2.62
Feeder Price $/cwt	144.67	−$2.32
Fed Cattle Price $/cwt	116.78	−$1.75
Cutout Value $/cwt	219.51	1.55
Retail Beef Price $/lb.	6.04	0.03

Table 8.2 contains the model estimates of the impact of a $25 per head increase in transaction costs. As expected, increasing transaction costs results in lower live animal prices and higher wholesale and retail beef prices. The impact on live prices ranges from −$1.75 per cwt for fed cattle to −$2.62 per cwt for calf prices. Beef prices at the wholesale (cutout) and retail levels increase. The impact on live prices are larger, in percentage terms, than meat prices. If the live-to-cutout spread is a concern, the end result is a widening price spread. Work by Brester, *et al.* (2009) provides a good analysis on why farm share of the retail dollar is not necessarily a good base for policy-making.

Cow-Calf Market Emerging Premiums

During uncertain times for beef demand in the 1980s, the industry began a series of studies including the National Consumer Retail Beef Study (Cross, 1986). Prior to the National Consumer Retail Beef Study, Rhodes, *et al.* (1978) summarized the state of producer alternatives in marketing cattle and beef and discussed the direction of value-based marketing, which is what the industry now knows as AMAs. While focused on retail demand, the National Consumer Retail Beef Study identified changes needed throughout the industry, from the cow-calf through feedlot sectors. Packer survey respondents indicated concerns about hide problems, injection site blemishes, implant related problems, and a lack of uniformity of cattle and carcasses as management problems. These were identified in phase III of the study as areas to improve cattle management (Savell, 1993).

Two consensus points from the National Consumer Retail Beef Study were of particular interest to the live cattle side of the industry. The first was that fed cattle should be valued on an individual basis rather than an average live price. At that time, most cattle were sold on the average, meaning that an average price was negotiated and applied to all cattle in a pen regardless of each animal's quality. This means that the risk was left in the hands of the buyer (Ward, *et al.*). Second, the study results revealed a need to identify genetics of carcass merit, to make changes to the cowherd, and to select breeding stock for improved carcass merit. Since the late 1980s, it is hard to argue that the cow herd has not changed dramatically with more focus on carcass quality.

A large body of research has been done on identifying the value contributions of various cattle characteristics. It has often been the case that price signals can be muted and different segments of the cattle industry value different traits (Outlaw, *et al.,* 1997; Feuz, 1999). The growth of value-based marketing and AMAs, as that value mechanism, has created a series of premiums and discounts reflecting quality. In the era of only negotiated prices, these premiums and discounts are likely to exist in limited forms due to on-average pricing.

If formula pricing in fed cattle is a way to increase profits by reducing transaction costs, some studies indicate strategies to reduce transaction costs are at work in the cow-calf, stocker, and backgrounder segments, as well. The implication is that market signals to reduce costs, or increase profits, are at work in all segments of the industry and the result is an evolving market.

A host of studies have examined factors affecting calf prices (Faminow and Gum, 1986; Marsh, 1985; Zapata, *et al.,* 2020, Martinez, 2020). The usual factors include weight, sex, breed type, color, castration, and horns. Looking at studies over time indicates that premiums between breeds have shifted. Early on, Angus (or black) calves sold at a discount to Herefords. That has changed over time to breeds selling at a discount to Angus (or black) calves. Past studies have shown higher prices accruing in video auctions compared to traditional auction markets. The increased prices were attributed to reducing transactions. Other studies have examined value added programs like VAC45, special sales of pre-conditioned calves, and marketing of commingled sales to capture volume premiums (Mathews, *et al.,* 2007; Schulte, 2001; Lawrence and Yeboah, 2002; Ward, Ratcliff, and Lalman; King and Seeger, 2005; Vaaler, Schroeder, and Boland, 2005).

The Beef Quality Assurance (BQA) certification program is a byproduct of the beef quality audits. The program targets a set of management practices to in crease quality. A survey of BQA certified cattle in Montana indicated that BQA members received $1.56 per cwt premium for steers and $1.09 per cwt premium for heifers (Brester, 2009). These premiums were realized after accounting for normal trait differences like weight and sex.

Mooney, *et al.* (2019) examined the effect of BQA certification on video prices in the Western United States. This work indicated a premium of $2.69 per cwt due to BQA certification. Interestingly, the analysis indicated that the premium had grown from $1.14 per cwt earlier in the study period. Participation in more value-added programs yielded even higher premiums.

The work on valuing characteristics can be summarized into three areas: cattle characteristics, management activities, and premium certifications. Cattle characteristics in the form of breed choice can be shown to have changed over time to more highly-valued Angus (or black calves). Management activities can be thought of as including selling in larger lots, pre-conditioning calves, selling by video auction *vs.* traditional auction, or other preparation activities prior to sale. Larger lots and different selling venues are examples of ranchers selling calves in a way that reduces transaction costs, much like AMAs reduce transaction costs. Premium certifications, like BQA, are another method of adding value through information.

Many of these value-adding traits are the direct result of producers looking to increase profit through the application of value-based marketing from fed cattle to calves and feeders. The beef quality audits indicated a set of desirable producer management changes to boost beef quality. Many of these practices that deliver premiums can be traced directly to the beef quality audit and its influence in moving the industry to value-based marketing.

It might be hard to conceive of market-based premiums and discounts going away if changes were made to AMAs. However, it is worth considering the impact of value-based marketing premiums and discounts that have occurred over the last few decades to avoid unintended consequences of potential legislative changes.

Conclusion

The beef industry's move to AMAs represents part of the progression to value-based marketing and economic pressures to reduce transaction costs. Legislation or efforts to increase negotiated trade will increase industry costs. Those increased costs are estimated to result in lower calf prices and higher beef prices.

Cattle pricing and market signals have evolved over the last 40 years. Premiums that were not present prior to AMAs are now common. One of the challenges is maintaining the reward for quality if the method of pricing changes. Thinking through the effect of the pricing mechanism on market signals is an important consideration to prevent even more negative impacts of potential changes.

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Chapter 9

Examining Negotiated Cash Trade Targets

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Introduction

On the evening of August 9, 2019, a fire caused severe damage to Tyson's beef processing plant in Holcomb, KS. The damage from the fire kept the plant and its base capacity of 6,000 head per day offline for the remainder of 2019. The decreased supply of beef to the open market led to a temporary spike in the price of boxed beef. At the same time, the decreased demand for fed (fattened, live) cattle resulted in a temporary decline in the price of fed cattle and feeder cattle.

Similar dynamics overtook the cattle market 8 months later with the onset of COVID–19. As the pandemic took hold in packing plants, federally inspected weekly cattle slaughter fell from 684,000 head to 438,000 head in just 5 weeks, a 36% decrease (Martinez, *et al.,* 2020). Federally inspected weekly cattle slaughter was 180,000 head below the 5 year average. Two weeks later, the boxed beef negotiated cutout value reached $459.04/cwt, while fed steers and feeder steers fell to some of the lowest levels in recent years. Three weeks before negotiated boxed beef prices peaked, the price of fed steers on the southern plains dipped to $99/cwt.

Fundamentally, the recent market disruptions were the result of low demand for live cattle, some high demand for beef products, and tight supplies of beef, all resulting from limited live cattle processing capacity (Martinez, *et al.,* 2020). These two events exacerbated concerns in the industry about price discovery, lower prices, market manipulation, capacity and utilization, and how fed cattle are bought and sold. The growth of alternative marketing arrangements (AMAs) have fueled concern about the lack of price discovery and their effect on prices. Some industry participants consider the divergent prices to be signs of, at minimum, a broken market. The United States Department of Agriculture (USDA) conducted investigations into beef and cattle price spreads. Others called for more packing capacity. At the same time, vocal groups within the largest cattle and beef trade organization in the United States began calling for changes to market structures as a solution.

The National Cattlemen's Beef Association (NCBA) set about seeking solutions for the cattle and beef industry and in July 2020 announced support for a voluntary framework to "increase frequent and transparent negotiated trade to regionally sufficient level" to achieve robust price discovery (Bohn, *et al.,* 2020). The idea is that increased negotiated trade volumes improve price discovery for fed cattle. Increased negotiated trade will result in a decrease in alternative marketing arrangements (AMAs) that, some argue, prevent adequate price discovery through creating markets that are too "thin." Others suggest that increased negotiated volumes will prevent price divergence like those resulting from the Tyson fire or the onset of COVID–19.

NCBA's "75% Plan" is a voluntary framework that establishes 'triggers' for each of the major cattle feeding regions (Bohn, *et al.*, 2020). The objective of this study is to evaluate the probability of tripping established triggers in different regions over time and, as a result, the probability of NCBA supporting legislative changes to cattle trading methods. The remainder of this chapter includes a brief review of

cattle trading methods, a review of the data utilized for the 75% Plan, an overview of the methods used and the simulation itself, and a discussion of results and conclusions.

Negotiated Trade

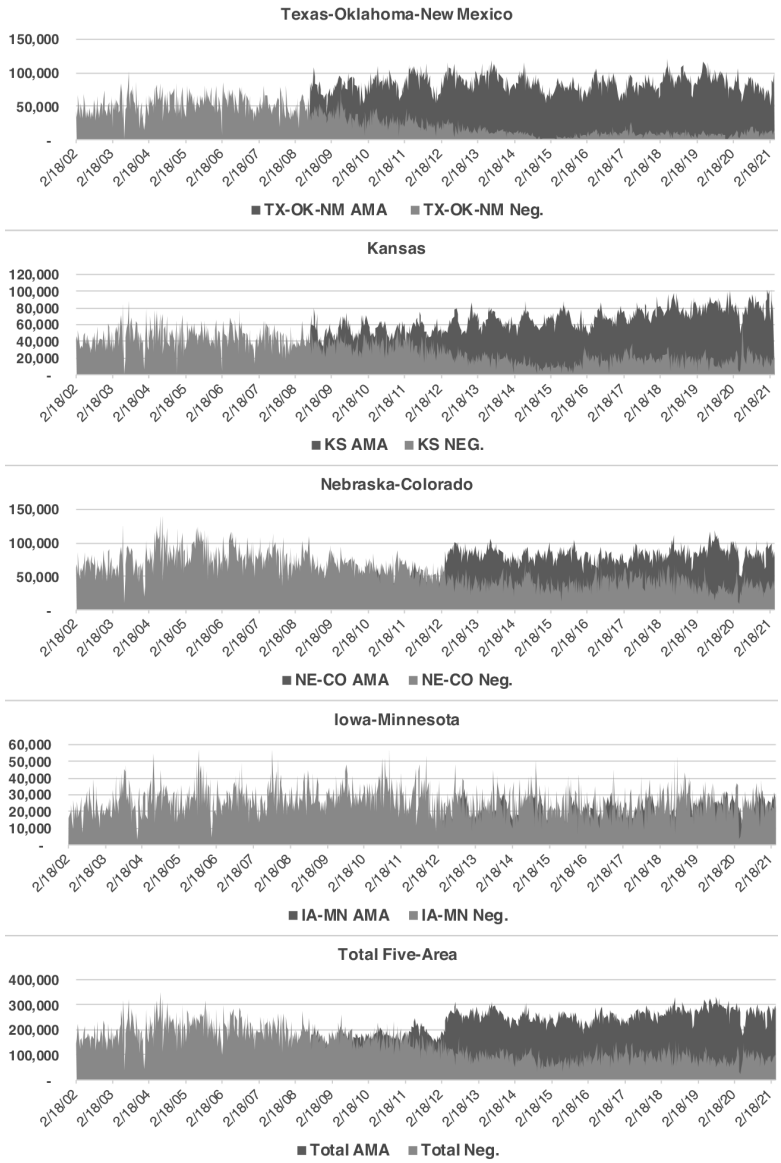
As noted throughout this book, USDA recognizes and records several types of fed cattle sales methods. These sales methods are grouped into two types of fed cattle trade, negotiated and non-negotiated. Negotiated fed cattle sales categories include negotiated cash and negotiated grid. Negotiated trade is, "[a] price . . . determined through buyer and seller interaction [where] the cattle are scheduled to be delivered to the plant within 30 days of the agreement" (Agricultural Marketing Service, 2020). Non-negotiated fed cattle sales categories include formula sales, non-negotiated grid sales, and contract sales. There are pros and cons to each type of sale, and they vary depending on the party (buyer or seller). Some methods decrease transaction costs, others change the risk borne by each party, and still others provide quality incentives.

Negotiated trade is valuable in that the spot market contributes to price discovery. Price discovery is the means through which an asset's price is set by matching buyers and sellers according to a price (Tomek and Kaiser, 2014). There is a bid and ask which leads to price *discovery.* Prices are set in other ways in non-negotiated trades. It might be plant average price, a USDA–AMS regional price, a futures price, or some other price (Agricultural Marketing Service, 2020). There is not a bid and ask to negotiate the price, and sellers do not know the price before the cattle are delivered. Research identified a clear and significant relationship between historical cash market volumes and the strength of price discovery in each USDA–AMS regional market.

The share of cattle sold via AMAs rose quickly from the late 2000s to the present (*Figure 9.1*). Much of the growth of cattle sold via AMAs was at the expense of cattle sold via negotiated methods.

The growth in AMAs was not equal across regions. *Figure 9.1* contains USDA reported AMA sales which appeared earliest in Texas-Oklahoma-New Mexico. When USDA began reporting non-negotiated sales separately in 2008, sales of fed cattle via negotiated trade averaged 44,509 head per week in Texas-Oklahoma-New Mexico. From 2015 to 2019 (the last full 5 years before the 75% Plan), sales of fed cattle via negotiated trade averaged 7,666 head per week in the same region, or 17% of 2008 weekly average negotiated volumes. Similar trends took hold shortly after in Kansas. In 2008, sales of fed cattle via negotiated trade averaged 38,323 head per week in Kansas. From 2015 to 2019, sales of fed cattle via negotiated trade averaged 17,274 head per week in the same region, or 45% of 2008 weekly average negotiated volumes.

Figure 9.1. USDA Weekly Reported Trade 2002–2021, by Region and Total Cattle Sold via Alternative Marketing Arrangements and Cattle Sold via Negotiated Sales.



Source: USDA/AMS.

Though AMAs are used in Nebraska-Colorado and Iowa-Minnesota, their share of total head sold is significantly smaller and did not begin until much later in the 2010s. In 2008, sales of fed cattle via negotiated trade averaged 70,653 head per week in Nebraska-Colorado and 28,404 in Iowa-Minnesota. From 2015 to 2019, sales of fed cattle via negotiated trade in Nebraska-Colorado averaged 41,113 head per week, 58% of 2008 weekly average negotiated volumes. From 2015 to 2019, sales of fed cattle via negotiated trade in Iowa-Minnesota averaged 24,115 head per week,

85% of 2008 weekly average negotiated volumes. Some of the changes in negotiated volume are due to fluctuations in the size of the cattle market over time. However, in Texas-Oklahoma-New Mexico and Kansas, most of the decline in negotiated fed cattle sales is directly inverse to the rise of AMAs.

The 75% Plan

The 75% Plan was developed and approved by NCBA's Live Cattle Marketing Working Group in 2020. The 75% Plan is a voluntary approach designed to, "increase frequent and transparent negotiated trade to regionally sufficient levels, to achieve robust price discovery determined by NCBA funded and directed research in all major cattle feeding regions" (Bohn, *et al.,* 2020). The plan is split into two silos: a packer silo and a feeder silo. At present, the rules of the packer silo are incomplete and therefore we will focus our attention primarily on the feeder silo.

The plan utilizes a set of triggers specific to each AMS reporting region. These regions are Texas-Oklahoma-New Mexico, Kansas, Nebraska-Colorado, and Iowa-Minnesota (*Figure 9.2*). Nebraska and Colorado are reported separately by AMS but the 75% Plan combines them to account for nonreporting occurrences in Colorado.

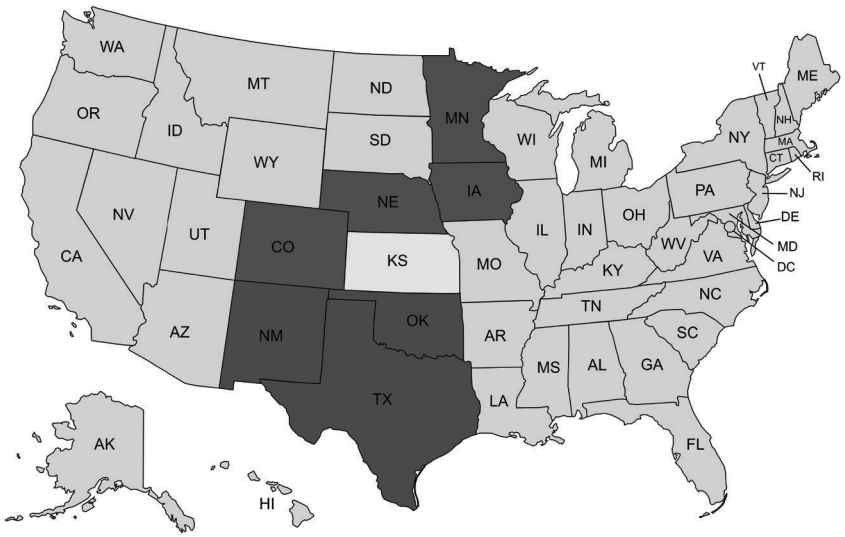
Under the voluntary 75% Plan, each region is expected to trade 75% of the negotiated volume, as defined by measurements developed by Koontz (2017), needed to meet robust price discovery in a given week. Each region must achieve these volumes 75% of the weeks in a quarter, *i.e.,* 10 weeks or more. Koontz's work established an estimated volume of cattle needed to be sold on a negotiated basis in each region to achieve minimum and robust price discovery (although, as noted in Chapter 10, Koontz has called into question the way in which his results were being used to justify changes to current practices). *Table 9.1* lays out the volume of negotiated trade needed each week in each region to achieve robust price discovery. *Table 9.1* also provides the NCBA's 75% of robust trade threshold.

Table 9.1. Negotiated Volume to Achieve Robust Price Discovery and the Minimum Negotiated Volume Required by the 75% Plan (Koontz, 2017; Bohn, *et al.*, 2020).

Region	Negotiated Volume Needed to Achieve Robust Price Discovery (Head/Week)	75% of Negotiated Volume Needed to Achieve Robust Price Discovery (Head/Week)
TX–OK–NM	13,000	9,750
KS	21,000	15,750
NE–CO	36,000	27,000
IA–MN	16,000	12,000

These 4 weekly regional trade obligations are independent of one another. Increased negotiated volume in Texas-Oklahoma-New Mexico does not contribute to the obligations of Kansas regional trade. The failure of a given region to meet its obligations in a quarter constitutes a minor trigger. Note that there will eventually be eight potential triggers: four potential feeder triggers and four potential packer triggers. Three or more minor triggers (out of the eight) in the same quarter constitute a major trigger. Two major triggers in rolling set of four quarters will result in the NCBA Live Cattle Marketing Working Group recommending that, ". . . NCBA pursue legislative or regulatory measures to compel adequate negotiated trade for robust price discovery" (Bohn, *et al.,* 2020).

Figure 9.2. National Cattlemen's Beef Association's 75% Plan Regions.



Source: National Cattlemen's Beef Association.

Table 9.2. Sum of Weekly Fed Cattle Sold via Negotiated Methods by NCBA 75% Plan Region, First Quarter 2021.

	Negotiated Trade Head/Week			
	TX–OK–NM	KS	NE–CO	IA–MN
75% Robust Threshold	9,750	15,750	27,000	12,000
1/4/2021	13,621	13,360	31,637	21,314
1/11/2021	9,285	17,184	27,763	19,414
1/18/2021	12,224	14,824	36,234	27,355
1/25/2021	8,344	24,001	35,109	18,887
2/1/2021	9,627	12,703	38,561	24,220
2/8/2021	12,088	21,589	36,383	26,081
2/15/2021	10,131	14,729	34,120	21,443
2/22/2021	10,393	9,692	30,191	20,342
3/1/2021	13,480	14,916	34,238	23,336
3/8/2021	15,041	19,242	24,210	22,939
3/15/2021	12,729	20,855	37,309	21,816
3/22/2021	6,327	17,237	26,066	29,424
3/29/2021	13,306	22,535	35,299	24,965

*[Highlighted] values indicates a week in which total head sold by negotiated methods fell below the threshold established by NCBA's 75% Plan.

For an example of minor triggers, consider the first quarter of 2021 in *Table 9.2,* which lists weekly combined sales of negotiated cash and negotiated grid sales of fed cattle by region. From January through March, Texas-Oklahoma-New Mexico failed to meet the 75% of robust threshold 4 of 13 weeks. During the same period, Kansas failed to meet the 75% of robust threshold 6 of 13 weeks. Allowances were made for force majeure for 2 weeks in Kansas. With that adjustment, Kansas failed to meet the 75% of robust threshold 4 of 13 weeks. Nebraska-Colorado met the 75% of robust threshold all but 2 of the 13 weeks. Iowa-Minnesota did not fail to meet the 75% of robust threshold at any time during the first quarter of 2021. Therefore, two minor triggers were tripped in the first quarter of 2021 (in TX–OK–NM and Kansas). A major trigger was not tripped because only two minor triggers were tripped in the quarter (recall that our stylized example does not include the packer silo).

Simulation of Minor and Major Triggers

The remainder of the study is dedicated to evaluating the likelihood of possible outcomes under NCBA's 75% Plan. Using the Microsoft Excel plugin SIMETAR, a simulation model was developed to analyze the 75% plan using historic weekly USDA–AMS data to examine the probability of tripping minor and major triggers in the feeding silo and reveal the quarters and regions within a given year most at risk for tripping triggers. The data informing the simulation is weekly data collected and reported by USDA–AMS (Agricultural Marketing Service, 2021). Data includes formula, grid, and contract purchases as well as negotiated purchases for each of the four regions defined by NCBA's 75% Plan (Bohn, *et al.,* 2020).

Anecdotal discussions with industry stakeholders indicated that the announcement of the 75% Plan may have induced changes in negotiated trade volumes in some regions as early as July 2020. Statistical testing confirmed that hypothesis, meaning that to accurately forecast future trade volumes the model must be adjusted for the change in behavior.[1]

If behavior has changed since (possibly as a result of) the announcement of the 75% Plan, then forecasting with historic negotiated volumes will underrepresent the potential negotiated sales. To base the forecasted negotiated volumes on data since then, while accounting for the low number of observations since July 2020 we developed an empirically distributed stochastic negotiated sales inflation factor (NSIF). The NSIF for each region is the difference between weekly negotiated sales since July 2020 and average weekly sales in the same week from 2015 to 2019.

$$NSIF_{i,x} = \frac{Negotiated\ Head\ Sold\ Since\ July\ 2020_x}{Negotiated\ Head\ Sold\ 2015–2019_x}$$

where i is one of the four NCBA 75% Plan fed cattle regions and x is a vector of weeks, $x \in \{1,2,...,52\}$ representing individual weeks in a calendar year. The average NSIF for Texas-Oklahoma-New Mexico is 1.7, Kansas is 1.24, Nebraska-Colorado is 0.83, and Iowa-Minnesota is 0.99. Simply put, negotiated trade in a given week in Texas-Oklahoma-New Mexico was 1.7 times greater on average from July 2020 to March 2021 than it was from 2015 to 2019. Tests of the values of the NSIF adjusted values and actual values in the testing period fail to reject the validity of the NSIF as an accurate adjustment value.[2]

The NSIF yields several advantages. First, it accounts for the effort of different regions to adapt to the announcement of the 75% Plan. Second, it incorporates the seasonality of fed cattle sales by inflating or deflating values in accordance with historic average volumes in a given week. Accounting for seasonality provides more clarity in determining at-risk quarters. Finally, the NSIF can be varied artificially to easily test the system. For example, what would a 65% Plan or 85% Plan look like given the current NSIF? If a 65% or 85% Plan were enacted, how much would

[1] A two-sample t-test of negotiated sales volumes from July 2020 through March 2021 when compared to the same period a year prior, a previous 5 year average of the same period, and the previous 5 years in general rejected the hypothesis that the mean weekly negotiated trade of the compared periods were equal in Texas-Oklahoma-New Mexico and Kansas. An F-test of the same periods rejected the hypothesis that the variances are equal for the same two regions. Stepwise regressions revealed that, before the announcement of the 75% Plan, a time trend and total fed cattle sales in a given week in Texas-Oklahoma-New Mexico explained 72.5% of the variation in negotiated sales in Texas-Oklahoma-New Mexico from 2010 to 2019. A time trend and total fed cattle sales in a given week in Kansas explained 67.8% of the variation in negotiated sales in Kansas from 2010 to 2019. The same measures in Nebraska-Colorado and Iowa-Minnesota explained only 39.1% and 31.0% of the variation in negotiated sales in those regions, respectively. As previously discussed, Texas-Oklahoma-New Mexico and Kansas are the two regions with the lowest negotiated trade and therefore pose the highest risk of tripping a minor trigger. Therefore, the duration of the study utilizes methods best-tailored to predicting changes in Texas-Oklahoma-New Mexico and Kansas. Upon including data from July 2020 to March 2021, post 75% Plan announcement, the explanatory value of the previously discussed regression models are reduced. The coefficient of time trend becomes insignificant; however, the total fed cattle sales in Texas-Oklahoma-New Mexico and Kansas remains significantly predictive of negotiated fed cattle sales, though with lower R-squared values.

[2] A two-sample t-test failed to reject the hypothesis that the actual means of January 2021 to March 2021 values and NSIF adjusted predicted means for the same period were equal for all regions (P-Value = 0.638 for Texas-Oklahoma-New Mexico; P-Value = 0.597 for Kansas; and P-Value = 0.237 for Nebraska-Colorado; P-Value = 0.967 for Iowa-Minnesota). An F-test revealed the same outcome for variances between the two samples in Texas-Oklahoma-New Mexico (P-Value = 0.064) and Kansas (P-Value = 0.532). The same test rejected the hypothesis of equal variance in Nebraska-Colorado (P-Value = 0.000) and Iowa-Minnesota (P-Value = 0.008). Again, we chose to tailor our methods on forecasting outcomes for the at-risk regions and applied those methods equally to the regions with very low chances of tripping minor triggers.

negotiated trade need to change to avoid tripping newly inflated or deflated triggers? One disadvantage is the assumption that negotiated trade continues to trade at increased levels one, 2, and even 5 years out. However, with regular updates, a decreasing NSIF will reveal industry changes quickly.

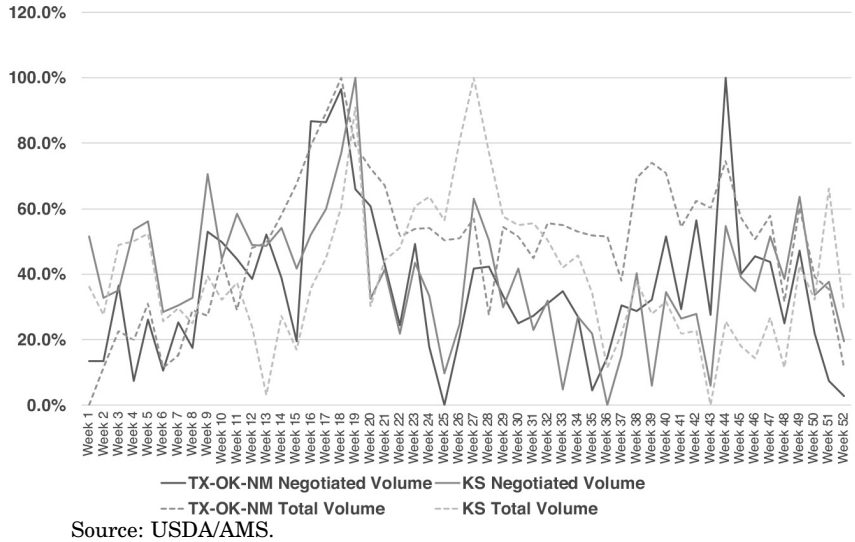
To forecast weekly negotiated sales for 2021, we multiply stochastic draws of NSIF by the 5 year average of negotiated sales in the corresponding week, $x \in \{1,2,...,52\}$. To forecast weekly negotiated sales for 2022 to 2025 we multiply stochastic draws of NSIF by the previous year's negotiated sales in the corresponding week, $x \in \{1,2,...,52\}$. Due to the previously discussed relationship between total fed cattle sales in a region and negotiated fed cattle sales in a region, we also accounted for the declining size of the U.S. cattle herd. The 2021 Cattle report described a decline in all cattle and calves from 93.8 million head on January 1, 2020 to 93.6 million head on January 1, 2021, a 0.2% decrease (Cowen, 2021). A review of cattle and calf inventory from 2000 to 2020 reveals that when the cattle herd is declining in size it declines 0.5% to 2.0% annually. To account for cattle herd declines, we draw stochastic, normally distributed values of herd decline from 0.5% to 1.0% and apply those values independently to each week from 2021 to 2024. In 2025 we apply a 0.5% to 1.0% stochastic, normally distributed value of herd increase independently to each week to account for a potential change in the direction of the cattle cycle at that time. Accounting for the NSIF adjustments to negotiated trade, we forecast values of negotiated trade from 2021 to 2025. The model then records weeks in which negotiated volumes in a region did not meet the 75% Plan threshold for that region. The model then counts the number of weeks in a quarter for which volumes did not meet the 75% Plan threshold. Finally, the model reports the number of quarters in which a minor trigger is tripped, the number of quarters in which a major trigger is tripped, and whether two major triggers were tripped in a rolling set of four quarters leading to NCBA support of legislative action. We then simulate 500 potential outcomes for the entire system using the SIMETAR© plugin for excel.

Results

The relationship between negotiated volumes sold and total volumes sold is as expected. *Figure 9.3* shows that the periods of the year in which total volumes sold are highest in the two most at-risk regions roughly correlate to the periods in which negotiated volumes sold are highest. Differing incentives throughout the year may induce different negotiated sales volumes as a percent of total sales, but when you consider *Figure 9.3* in a quarterly breakdown, the relationship between the two is clear. The reason for this relationship is simple: more fed cattle sales increase the likelihood that some buyer and seller will have some cattle sold via negotiated methods. The relationship between negotiated volume sold and total volume sold in a given quarter becomes important over time as the 75% Plan evaluates trade on whole values rather than percentages; quarters with seasonally lower sales may be more at risk for tripping triggers than quarters with higher total sales.

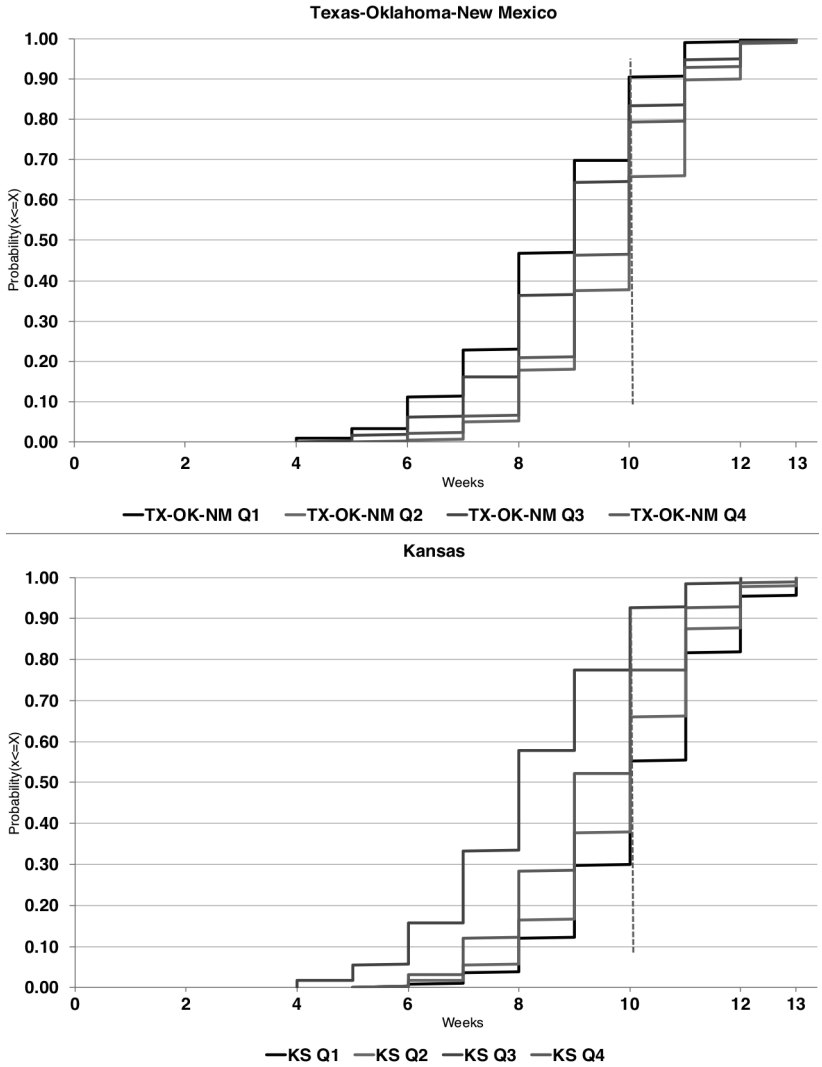
As the 75% Plan is evaluated on a quarterly basis and with the relationship between total trade and negotiated trade, it is important to know the quarters most at risk of failure in any given year. The Cumulative Distribution Functions (CDF) in *Figure 9.4* contain the probability of different counts of cumulative weeks that meet negotiated trade levels necessary to avoid tripping a regional trigger during the first, second, third, and fourth quarters in Texas-Oklahoma-New Mexico, and Kansas (the two at-risk regions) in a given year.

Figure 9.3. 2015–2019 Five-Year Average Index of Negotiated Volume Sold and Total Volume Sold in Texas-Oklahoma-New Mexico and Kansas.



Source: USDA/AMS.

Figure 9.4. Cumulative Distribution Function of Weeks Meeting Negotiated Trade Meeting Regional Requirements Under the 75% Plan, Texas-Oklahoma-New Mexico and Kansas.



The further to the left a CDF falls, the greater the likelihood that negotiated trade during that quarter in that region will not meet the weekly threshold necessary often enough to avoid tripping a minor trigger. For example, in Texas-Oklahoma-New Mexico there is approximately a 70% chance that, during a given first quarter, negotiated trade will exceed 9,750 head fewer than 10 weeks. However, there is only a 37.8% chance that during a given second quarter negotiated trade will exceed 9,750 head fewer than 10 weeks.

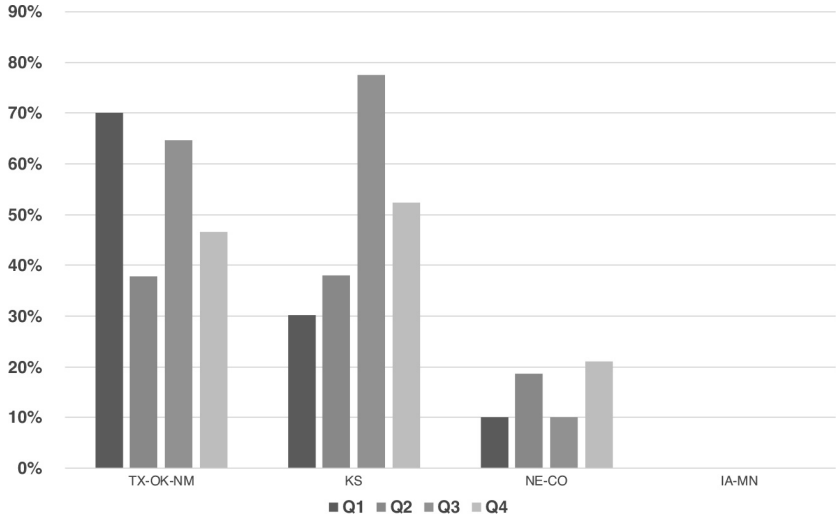
The risk of failing to trade at 75% of negotiated volumes needed for robust price discovery for at least 10 weeks, per the NCBA 75% Plan, varies substantially by quarter. *Figure 9.5* contains the probability of each quarter in each region tripping a minor trigger in a given year.

Since the Nebraska-Colorado feeding sector is expected to trip its minor trigger rarely, and Iowa-Minnesota is not expected to trip its minor trigger at any point,

it is important to focus on the two at-risk regions. The risk of a major trigger represented in *Figure 9.6* only represents the feeding sector and so half of the potential triggers are not included in those outcomes. Therefore, until the packer silo's triggers are set, the risk of simultaneous minor triggers being tripped in Texas-Oklahoma-New Mexico and Kansas is a better measure of the overall system risk. *Figure 9.7* charts the same information as *Figure 9.6;* however, *Figure 9.7* only includes the probability of simultaneous minor triggers being tripped in Texas-Oklahoma-New Mexico and Kansas.

The risk of Texas-Oklahoma-New Mexico and Kansas simultaneously tripping minor triggers before 2025 is substantially higher than the risk of the feeder silo alone triggering NCBA support for legislative action. In fact, on average the risk of Texas-Oklahoma-New Mexico and Kansas simultaneously tripping minor triggers before 2025 is 44 times the risk of the feeder silo triggering NCBA support for legislative action. Overall, it is 14 times more likely that Texas-Oklahoma-New Mexico and Kansas will simultaneously trip minor triggers than the likelihood that the industry will fail the 75% Plan based on the feeder silo alone.

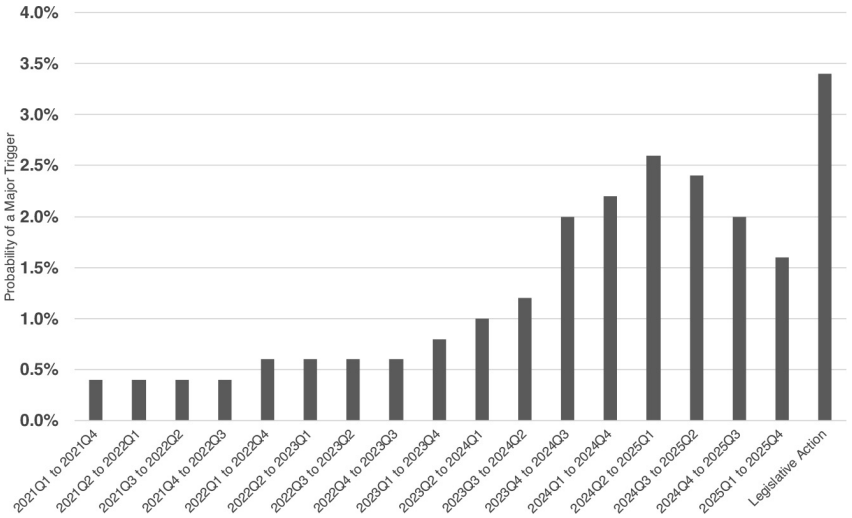
Figure 9.5. Probability of Failing 75% Volume > 3 Weeks in Quarter X, by Region.



Discussion

Why does the discrepancy in total system probability of triggering *vs.* the probability of at-risk regions matter? With the packer silo still not formed (as of this writing), there is no way to accurately measure the probability of those additional four triggers being tripped. In the best-case scenario, the risk of each minor packer trigger being tripped will be zero, and the overall risk distribution of the industry failing the 75% Plan over time will look like *Figure 9.6.* However, if we assume that there is any possibility of a packer silo trigger being tripped, the risk of the industry failing the 75% Plan over time looks like *Figure 9.7.* There is approximately a 48.8% chance of Texas-Oklahoma-New Mexico and Kansas simultaneously tripping their minor triggers in a given set of rolling quarters. That level of risk suggests that half the time that a single packer silo trigger is tripped, it will constitute a major trigger.

Figure 9.6. Probability of Only Feeder Silo Tripping a Major Trigger, Rolling Quarters 2021–2025; Probability of 75% Plan Triggering Legislative Action Before 2025.

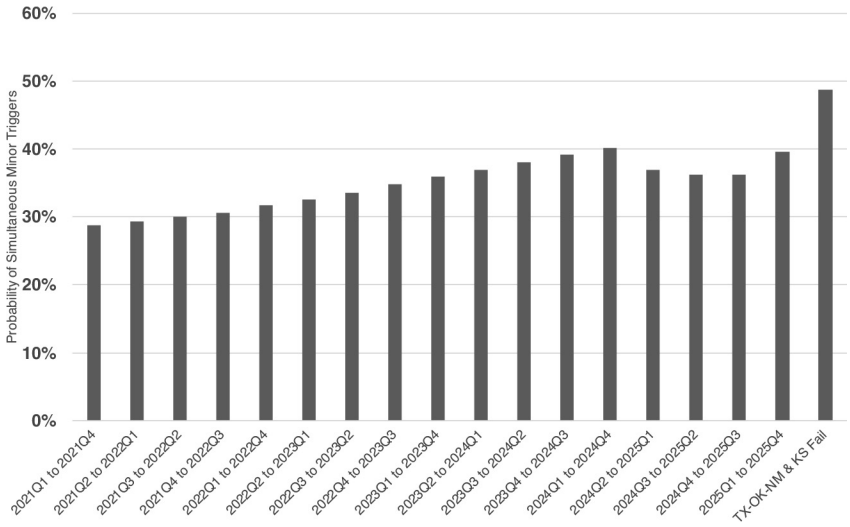


The number of fed cattle sold via negotiated methods has increased since the 75% Plan was introduced. The need to construct the NSIF alone suggests that the announcement of the 75% Plan induced a change in negotiated volumes. During the first quarter of 2021, both Texas-Oklahoma-New Mexico and Kansas tripped their minor feeding silo triggers, but the number of fed cattle traded via negotiated methods grew over 2020. Every week in Texas-Oklahoma-New Mexico, and 6 of 13 weeks in Kansas, fed cattle traded via negotiated methods was above the minimum volume needed to achieve price discovery. In Texas-Oklahoma-New Mexico the number of fed cattle traded via negotiated methods was above the volume needed to achieve robust price discovery 4 of 13 weeks, robust price discovery being a higher threshold to cross. The same was true of Kansas 3 of 13 weeks.

The final outcomes of the 75% Plan will depend largely on two things; the structure of the triggers in the packer silo and continued efforts of cattle feeders to trade fed cattle via negotiated methods. If the rules of the packer silo yield similar results to the feeder silo as it stands, it is very likely that the industry will fail the 75% Plan. One region's packer silo minor trigger tripping regularly suggests an approximately 50% chance of the industry failing the 75% Plan.

There are potential fixes from the cattle feeder side. The need for further research remains and questions still need to be answered. How much will negotiated trade from the feeder side continue to exceed negotiated trade in previous years? On average, how many more fed cattle must be traded weekly via negotiated methods to lower or eliminate the risk of one or two simultaneously tripped triggers in the at-risk regions? Will drought-induced liquidations force lower total fed cattle sales in the future once the cow herd is reduced, and if those lower total sales lead to lower negotiated sales, does long-term drought constitute force majeure? Are adjustments to the plan necessary to facilitate more realistic outcomes? Is a hard number of negotiated volume the best way to ensure increased prices? Most importantly, what is the ultimate impact of the 75% Plan on prices received at the fed cattle and feeder cattle levels?

Figure 9.7. Probability of Texas-Oklahoma-New Mexico and Kansas Simultaneously Tripping Minor Triggers, Rolling Quarters 2021–2025; Probability of Texas-Oklahoma-New Mexico and Kansas Simultaneously Tripping Minor Triggers Once before 2025.



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Chapter 10

Workshop Discussion Summary

DAVID P. ANDERSON

The authors of the various chapters in this book presented their findings at a 2 day workshop in Kansas City, MO, from June 3–4, 2021. The workshop was open to the public, and time was reserved for Q&A following each presentation. In addition, at the end of each day, a formal discussion panel offered feedback on the presentations.

The discussants were selected to represent a diverse cross-section of the industry. Following are their bios at the time of the workshop:

- **Michael Nepveux** serves as an Economist at the American Farm Bureau Federation. His issue portfolio consists of livestock and dairy markets, farm bill and Federal crop insurance, renewable fuels, and hemp issues.
- **Shelby Horn** is currently part of the management team for Abell Livestock, a commercial cow-calf/stocker operator with ranches in Texas, Florida and New Mexico. Horn serves on the Board of Directors of Texas and Southwestern Cattle Raisers Association and is a member of the National Cattlemen's Beef Association Marketing Committee.
- **Don Close** is the cattle market analyst for Rabobank, one of the largest agricultural lenders in the world. He has had a 40 year career in agriculture and livestock markets, including at a packer startup and as a market analyst at the Texas Cattle Feeders Association. He speaks around the country on cattle market issues to audiences of ranchers and other segments of the industry. He is a well known and respected cattle market analyst.
- **Justin Tupper** is the owner and operator of St. Onge Livestock Auction Company. He is a leader in cattle organizations, including serving as Vice President

of U.S. Cattlemen's Association, and a participant in recent leadership meetings of all the national livestock organizations. He has also testified before Congress on livestock market issues. He brings an important perspective as a livestock auction company owner to the fed cattle price discussion at the workshop. He also brings an important regional perspective on fed cattle pricing issues.

Initial drafts of the papers (that eventually became chapters in this book) were provided to the discussants in advance so they had time to prepare for the workshop. They were invited to highlight where they agreed or disagreed with the presentations and to identify issues they thought were not sufficiently addressed. The discussion panels also spurred a number of audience questions and comments.

While it is virtually impossible to fully capture 2 days of formal and information discussions in a succinct manner, this chapter attempts to highlight the major themes/comments that arose from the discussants and/or the audience. Further, it was made clear at the workshop that any comments would not be attributed to individual particpants so as to encourage robust discussion; as a result, the comments below are offered as-is with no attribution to individual participants.

Complexity

- In responding to Dr. Derrell Peel's point about the complexity of the beef industry (as noted in Chapter 1), one discussant observed that there are no easy solutions to solve the problems of price discovery (and others) addressed in this workshop. The complexity of the system suggests that it might be likely that proposed solutions are either ineffective or are counterproductive.
- One view expressed by a discussant was that, while complex, efficiency in the marketplace is quite strong. The efficiency of production practices and the speed with which information moves through the marketplace is incredibly fast. Market information and price signals move through the market faster than legislation.

AMAs Have Value

- The general view was that AMAs have value to both buyers and sellers. AMAs have led to the implementation of value-based marketing that has increased cattle and beef quality throughout the industry. Ranchers have drastically changed the genetic makeup of their herds due to value-based marketing. There appeared to be little interest in the audience in going away from (or backtracking from) the improved beef quality that AMAs have fostered, although some did question if the value provided by AMAs is worth the perceived tradeoff in transparency.
- Some pointed out that premiums and discounts for quality are not going away and, in fact, are going to become more valuable over time, including for both feeder cattle and calves. In fact, the entire beef supply chain has had to adapt to accommodate the production of beef with specific attributes. To that end, the days of buying on average (*i.e.,* not differentiating for quality) are numbered.

Packing Capacity

- One view of capacity constraints might suggest that one part of the industry has low barriers to entry and a very liquid market; the other side of the industry has high costs of entry and limited liquidity. These conditions describe cattle production and meat packing, respectively. Cattle producers, at times, outproduce fixed plant capacity to process the cattle. With those industry differences, there are times when the supply of cattle is out of balance with the ability to slaughter those cattle. The relative balance of the supply of cattle and capacity creates leverage for either the buyer or the seller.
- One estimate was that packing capacity needs to increase 4,000–5,000 head per day to alleviate the packing capacity constraint. Recent press releases have indicated about 9,000 head per day in expansion is currently planned. While not all of the proposed facilities may be built, when some of those come on line—coupled with fewer cattle, cyclically—cattle prices may take off like a rocket. In this case, packing capacity exceeds the number of cattle produced, leading to a change in the competitive position of feeders and packers.
- Another concern expressed was about reinvestment by current major packers into new plants. The level of profits generated over the last 2 years has not resulted in expansion and that has led to frustration by many cattle producers.
- Others noted there are constraints to packing expansion, and the labor constraint is an important one. One solution to the lack of labor is additional investment in robotics. There might be a role for government action in this area by funding research on robotics. Those systems might be targeted to smaller

plants, whose success would expand capacity, increase competition, and might increase price discovery.

- A question came from the audience about whether or not new small plants would participate in the negotiated cash market and if it matters how they buy cattle? The answer from one discussant was that it shouldn't matter how they buy cattle, but at least they would provide more competition in the marketplace.

Risk Management

- One discussant noted that price discovery is important in another way that was not addressed by the presenters. Accurate spot prices, discovered prices, affect the futures market. If cattle prices are not accurate, then there's no way to have a viable risk management tool to hedge risk. Or, at least, futures market prices would have to rely on some other mechanism than inaccurate spot prices to be useful. A downsteam impact of inaccurate price discovery would be spill-over effects in the futures market and the loss of useful risk management tools. Livestock risk management through crop insurance policies like Livestock Risk Protection (LRP) also relies on the futures market.

A Profitable Industry

- The discussion made it clear that certainly some of the worries about price discovery exist because of difficult times for cattle producers. Low prices and the lack of profits have occurred at the same time as, seemingly, record profits for packers. Some of the discussion centered around the need for a profitable industry in all segments and not just one. The view was expressed for the industry to be healthy long-term, there need to be profits in every segment.

Market Transparency

- One discussant addressed the topic of confidentiality. The prevailing view expressed was that if a trade happens, USDA should report the price, arguing that eliminating confidentiality constraints would greatly increase transparency. They argued it would also reduce worries about "sweetheart" deals where the playing field is not level. Trades often happen very quickly, over the course of only an hour. In that quick market action, does confidentiality really matter?
- The contract library addressed in some legislation was viewed positively by the discussants. The library would, at least, add some information for producers to know what has been offered. Examples from the hog market contract library were discussed as an example of how a cattle contract library might work. While the contract library was viewed positively, it was noted that there are clear limitations on what a contract library can be expected to solve in terms of price discovery and/or transparency.

Market "Rules of the Road"

- Several discussants expressed a series of ideas that might be termed "defining the rules of the road for the market." The losses suffered by cattle producers compared to the apparent profits by the packing sector over the last 2 years suggests to some that there is a problem. One view is that there needs to be a referee. Recent legislative options offer some additional rules for the market. More effective Justice Department actions would also provide some market oversight.

Price Discovery

- There was a general discussion about the fact that price discovery is important throughout the industry, not just for fed cattle. Prices at the fed cattle level certainly affect calf prices and wholesale and retail beef prices. Every price throughout the beef value chain is related to fed cattle prices.
- One of the interesting issues in price discovery (or in the market working) is the issue of having a second bidder in the market. This idea was brought up in the second day's discussion session. The view of one discussant was that he views this bidder as the most important. A second bidder, in this view, is someone who is actively bidding for cattle and they want to buy. They force the bid winner to really work for the cattle. So, the second bidder has to be honestly bidding to get the cattle, it just so happens that they don't win. But, the problem was viewed that there is often no second bidder in cattle markets. This issue is also related to competitiveness and market power.
- Discussion on both days included how thin is too thin for adequate price discovery. During the discussion, one of the authors noted that if all the research on price discovery was summarized very briefly it would say that markets can

be a lot thinner than you think and still work very well. While the academics in the room seemed reluctant to drive a stake in the ground and say this is all you need, it is because there are times in the market that you need a lot more trades to get price discovery because there is some uncertainty in the market. A good example might be in the height of the COVID–19 pandemic, or when a cow with bovine spongiform encephalopathy (BSE) was discovered, or when some other economic turmoil hits and there is a huge amount of uncertainty, then you need more cattle traded. But, when there are not big events happening that cause turmoil, then the number needed to trade is likely very small. So, there is no right number that works for every week. The number that need to trade is likely different depending on events.

- Others noted that it is also not clear what low price discovery means. It's not clear that we are close to losing it either. Many people assume that if we had more discovery, we would see higher producer prices. That is not at all clear and the end result might be the opposite.
- One participant expressed the notion that giving up known benefits for an unknown cost is a difficult policy step to take.

Research

- Discussants identified a need for more research on these topics to be able to make the most informed decision they can. There is a lot of research about the value of AMAs and estimated costs of not having AMAs. But, there are other questions about what happens in the market if there is no discovery or if trading becomes so thin there is no confidence in the market.
- There was general discussion about a view of research—related to price discovery—that we can't destroy price discovery in the pursuit of efficiency. In pursuit of efficiency, we may lose price discovery to the detriment of cattle producers. Research could build on what has been presented in this conference to explore how far negotiated trade can be pushed and still have adequate price discovery. Research might also examine the tradeoffs between efficiency and discovery.
- The view was expressed that a lot of price discovery questions could be answered with more access to LMR data. There is a lot of data that is not publicly released. Obtaining some access to that data to answer a variety of price discovery research questions would likely help in shedding light on the market for buyers and sellers.
- While most research shows that very little market power is exerted by packers, the view was expressed that this topic needs to be monitored and periodically revisited due to the concentrated nature of the industry.

AMS and NASS

- Discussion also revolved around the good work that USDA's Agricultural Marketing Service (AMS) does in disseminating information. While they face many constraints, some self inflicted, they do a tremendous amount of good work in reporting prices to help producers know what is happening in the marketplace. USDA's National Agricultural Statistics Service (NASS) was also praised for the job they do in developing market data. The lack of data in other countries was viewed as a real constraint.
- Another comment focused on the difficulty in getting more market data reported by AMS because it often requires industry consensus. That is difficult to get sometimes given competing interests.

Voluntary Solutions

- Participants discussed the fact that voluntary industry efforts have increased negotiated trade. Those efforts have resulted in more feeders offering more cattle in negotiated trade. However, packers are not showing up to buy them. There are packers who refuse to buy cattle in a negotiated format. So, voluntary solutions have worked to some extent, but it does take more buyers to be willing to participate.
- There is a view that there are some packers who are tone deaf to the problems in the market. Those sharing that view expressed frustration that the packers have been unwilling to participate in voluntary solutions. The view is that they will not work on voluntary measures unless they are required to.

The discussion as a whole illustrated that in an audience of cattle industry stakeholders, the viewpoints on solutions to current concerns about cattle markets are highly diverse. There was general agreement that price discovery matters to the

functioning of cattle markets, including fed cattle markets, but any needed policy changes remain an open question. With that said, there seemed to be general agreement on concerns about unintended consequences of otherwise well-intentioned policy changes.

In 2020, at the request of the bipartisan leadership of the Committee on Agriculture in the U.S. House of Representatives, USDA was asked to commission a study to look into the issues surrounding fed cattle pricing. Ultimately, USDA partnered with the Agricultural and Food Policy Center (AFPC) at Texas A&M University, and this book is a culmination of that request.

In carrying out our work, papers were commissioned from noted experts around the country on a variety of topics, ranging from a history of how the industry arrived at this point to an initial evaluation of voluntary proposals introduced by industry to address some of these pressing challenges. AFPC hosted a workshop in Kansas City, MO, on June 3–4, 2021, where the authors of the respective papers presented their findings. Four discussants—representing a diverse cross-section of the industry—were invited to offer a formal response. The workshop was open to the public, and participants offered a number of helpful comments.

AFPC
Agricultural and Food Policy Center
The Texas A&M University System

SUBMITTED LETTER BY HON. JIM HAGEDORN, A REPRESENTATIVE IN CONGRESS FROM MINNESOTA

June 24, 2021

Hon. THOMAS "TOM" J. VILSACK,
U.S. Department of Agriculture
Washington, D.C.

Dear Secretary Vilsack,

We are writing to direct your attention to a recent U.S. district court decision which vacated a portion of the Department of Agriculture ("USDA") New Swine Inspection System ("NSIS") rule relating to line speeds at NSIS packing plants. By removing this provision six plants will be forced to reduce their output, and by extension, their purchase of hogs.

While the economic impact to these packers will be significant, it is the nation's small- and medium-sized hog farmers who will suffer the greatest harm from upstream impacts. It is imperative that USDA act quickly, and pursue all available options, to prevent this reduction in packing capacity which is set to take place at the end of June.

Although NSIS is relatively new, it is based upon a pilot program that operated successfully for decades. Its predecessor, the Hazard Analysis and Critical Control Point ("HACCP") Inspection Models Project ("HIMP") program was developed during the Clinton Administration and ran continuously through 2019. As a result of HIMP's success, USDA began consideration of a permanent program during your first term as Secretary under the Obama Administration and finalized the program during the Trump Administration.

The order to vacate the NSIS line speed provisions was due to the rulemaking process. The court determined the agency failed to satisfy the Administrative Procedure Act ("APA"), claiming it did not address certain comments raising worker safety concerns. Adherence to the APA is crucial to preserve sound and reasoned rulemaking by Federal agencies. However, there is compelling data about the safety of workers in NSIS. Specifically, FSIS data between 2002 and 2010 shows fewer worker injuries in NSIS program facilities over time and fewer injuries at NSIS plants when compared to their non-NSIS counterparts.

If USDA fails to act, American hog farmers will face significant harm. Research from Dr. Dermot Hayes at Iowa State University indicates that the decision would reduce national packing capacity by 2.5% which will create a surplus of hogs on the market-dropping prices by $10.70/cwt or roughly $23.22 per animal. The total economic loss of this decision on U.S. hog farmers is estimated at $80 million in 2021.

As the hog production cycle spans nearly a year, hogs set to enter this reduced-capacity market are already being raised. Farmers have little ability to alter their supply in the next year. Many farmers supplying these NSIS plants will need to find alternative destinations for their hogs. The resulting surplus and reduced de-

mand in a concentrated geographic region will shift economic power to pork processing companies. The culmination of economic losses from the producers selling their operation. By failing to act, USDA will drive consolidation in the pork industry.

To avoid these consequences, the Department must defend the NSIS program through all available channels while the court-ordered 90 day stay is in place. Failure to do so will leave our nation's hog producers to bear the brunt of the consequences due to no fault of their own. Thank you for your consideration.

Sincerely,

Hon. CHUCK GRASSLEY,
United States Senator

Hon. JIM HAGEDORN,
Member of Congress

Hon. JOHN BOOZMAN,
United States Senator

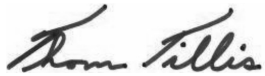
Hon. DUSTY JOHNSON,
Member of Congress

Hon. JOHN THUNE,
United States Senator

Hon. GLENN THOMPSON,
Member of Congress

Hon. ROGER MARSHALL,
United States Senator

Hon. RANDY FEENSTRA,
Member of Congress



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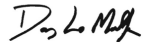

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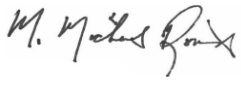
Member of Congress



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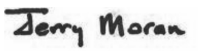
Hon. ADRIAN SMITH,

United States Senator



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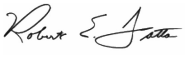

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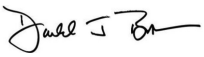

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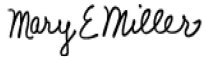

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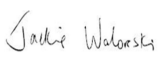

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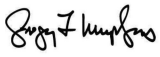

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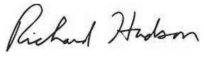

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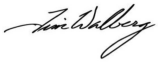
Hon. KAT CAMMACK,
Member of Congress



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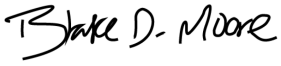

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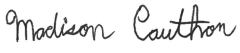

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Member of Congress

Hon. MIKE GALLAGHER,
Member of Congress

Hon. JASON SMITH,
Member of Congress

SUPPLEMENTARY MATERIAL SUBMITTED BY HON. THOMAS "TOM" J. VILSACK, SECRETARY, U.S. DEPARTMENT OF AGRICULTURE

Insert 1

Mr. AUSTIN SCOTT of Georgia. Thank you, Mr. Chairman. Secretary Vilsack, thank you for joining us today. My pork producers are telling me that the pork producers still have not been paid the CFAP payments. Is that correct?

Secretary VILSACK. I think we have announced those payments, Representative, but I am more than happy to double check and get back to you with exactly how many dollars have actually been paid out to those producers.

Mr. AUSTIN SCOTT of Georgia. Okay. I would be interested in knowing that on the pork, as well as any of the other CFAP payments.

Secretary VILSACK. I can tell you that over $4 billion have been distributed to producers, commodity producers, livestock producers, but we can get you very specific information and dollar amounts.

Mr. AUSTIN SCOTT of Georgia. Okay. I would very much appreciate that, thank you.

To date, of the 3,092 applications for SMHPP, 2,036 have been approved with total payments disbursed equaling $63.9M. Most SMHPP payments have been issued except for a few states working through appeals. You can also find additional information on our CFAP dashboard, which is here: *https://www.farmers.gov/coronavirus/pandemic-assistance/cfap2/data*

Insert 2

Mr. ALLEN. Well, as the industry, we need to maybe communicate a little better, because there is concern out there. Your Department announced a Packers and Stockyards investigation to explore potential packer wrongdoing in the wake of the Tyson facility fire in Holcomb, Kansas, and the ongoing pandemic. Can you clarify whether that investigation is ongoing, and if not, what were the findings?

Secretary VILSACK. Well, if there is an investigation undertaken, I am assuming it also involves the Department of Justice, who would be sort of the lead in this effort. But I will get back to you, Congressman. I don't know the answer to that question.

The previous Administration completed the investigation and corresponding report, which can be found here: *https://www.usda.gov/media/press-releases/2020/07/22/usda-provides-update-investigation-following-2019-tyson-beef-plant*.[1]

[1] **Editor's note:** the press release and report are retained in Committee file.

Insert 3

Mrs. CAMMACK. Well, Mr. Secretary, I have information that is contrary to your statement about the level of efficiency within the FSA offices, and I know in a state like Florida, that is a top ten state in total agricultural output, we have agriculture as our number one economic driver, the fact that we do not have these positions filled is a huge issue for states like ours, and I would love to continue that conversation offline. But, in the interest of time, and the fact that I only have 34 seconds left, I do want to get to a final question. And, of course, if you could detail this into a report back to us in the coming weeks, I sure would appreciate it. Have you been communicating, Mr. Secretary, with the Department of Homeland Security, working with your counterparts in other agencies, to ensure that there is a cohesive, effective response to preventing African Swine Fever from entering the United States through our ports in Florida and elsewhere? This is a concern that we have seen here recently in the news, and we want to ensure that this is at top of mind.

Secretary VILSACK. My first call was to Secretary Mayorkas on African Swine Fever——

Mrs. CAMMACK. And would you be willing to detail the conversation, and the plan, in a report, in a follow up?

The CHAIRMAN. The lady's time has expired. Mr. Secretary, you might respond to that in writing.

Secretary VILSACK. Sure. I am happy to share with everyone the work that we are doing in building up surveillance and building up detection, increasing canine, increasing vigilance at the border, as well as working with our friends in the Dominican Republic and Haiti to minimize the risk.

USDA confirmed ASF in the Dominican Republic (DR) in July 2021 and in Haiti in September 2021. APHIS received $500 million in emergency funds from the CCC at the end of FY 2021, to assist with the response to these detections, establish a protection zone in Puerto Rico and the U.S. Virgin Islands, and steps to prevent the introduction of the disease in the United States. Those resources have helped USDA increase its testing capacity and capabilities and implement a surveillance plan. We are also working with States and industry to enhance preparedness, including preparing for a possible national swine movement standstill, improving depopulation and disposal methods, emphasizing biosecurity practices, and expanding diagnostic strategies.

SUBMITTED STATEMENT BY UNITED STATES CATTLEMEN'S ASSOCIATION

Introduction

On behalf of the United States Cattlemen's Association (USCA), we thank you for the opportunity to provide this written testimony on behalf of the nation's cow-calf producers, backgrounders, feedlot operators, livestock haulers, and independent processors.

USCA was founded on the principle that a grassroots effort by U.S. cow-calf producers, feedlot operators, backgrounders, and livestock haulers can work positively and effectively with Congress and the Administration to reform U.S. agriculture policy and ensure a fair, competitive marketplace. Our work is to ensure that the U.S. cattle industry that we leave for the next generation is one that can be both profitable and sustainable.

Increasing consolidation and foreign ownership in the meatpacking sector has eroded the foundation of the U.S. cattle market. Congress holds the necessary power and tools to restore solid ground beneath the boots of U.S. cattle producers. We offer the following for consideration by this Committee.

Background

In 1977, the number of cattle slaughtered by four firms accounted for only 25 percent of total slaughter capacity. Over the course of 2 decades, that number increased to 71 percent.

Today, four companies slaughter about 85% of U.S. fed cattle, according to the most recent data from the U.S. Department of Agriculture (USDA). (Matilda Coleman, 2021).[1] Two of those companies—JBS USA and National Beef—are owned and operated outside of the United States, in Brazil.

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[1] Matilda Coleman, R. (2021, 06 17). *How four big companies control the U.S. beef industry.*† Retrieved from UP News: *https://upnewsinfo.com/2021/06/17/how-four-big-companies-control-the-u-s-beef-industry-by-reuters/*.***

The holding company behind JBS, J & F Investments, paid $3.2 billion in fines in 2017 for its involvement in a government bribery scandal. That same year, news broke that JBS had paid Federal meat inspectors to ignore tainted meat product leaving their processing facilities—with some of that product intended for U.S. borders.

It is a wholly unsustainable model for the U.S. beef production chain to rely on such a concentrated number of players, especially when half are foreign owned. Though the industry has been steadily building to this boiling point, three separate events in 2019, 2020, and 2021 served to heighten awareness of the increased level of concentration in the meatpacking sector.

On August 9, 2019, a fire broke out at one of the largest beef packing plants in the U.S. The Finney County Beef Plant in Holcomb, Kansas, owned by Tyson Foods, accounts for nearly six percent of the nation's slaughter capacity. In the days following the fire, U.S. cattle producers witnessed extreme volatility in the daily feeder and live cattle futures.

A September 16, 2019, report released from Kansas State University listed projected values for finished steers in Kansas feedyards at *negative* $184.99.(Tonsor, 2019).[2] During that same period, packer margins spiked significantly to nearly four times their annual average, or approximately $549. Within that same report, Kansas State University predicted that cattle feeders would not see a positive net return on finished steers or heifers until May 2020.

Unfortunately, that positive net return never came. Instead, a global pandemic disrupted supply chains across the globe. The arrival of COVID–19 exposed inherent flaws in the U.S. meatpacking industry, resulting in a compromised food supply chain and exposing the vulnerability of our global meat processing workforce. In a report prepared by Brett Crosby of Custom Ag Solutions, Inc. (Crosby, 2017),[3] USCA estimated that the total impact of COVID–19 on the cattle industry would exceed $14.6 billion.

Then, on May 30, 2021, JBS detected a ransomware attack that temporarily halted all production at its U.S. facilities, and certain facilities around the world.

The combination of these so-called "Black Swan" events earned the attention of lawmakers, media, and the public. With the spotlight now on the cracks in the system, it is USCA's hope that we can finally make meaningful change to ensure a robust and secure domestic food system.

Ensuring a Fair and Competitive Market

USCA supports clarifying definitions within the Packers and Stockyards Act of 1921 (P&S Act). The P&S Act was passed "to regulate the sale of livestock by farmers to the more economically powerful livestock buyers." The Act passed following a long list of existing antitrust laws: the Sherman Antitrust Act of 1890, the Federal Trade Commission Act of 1914, and the Clayton Act of 1914. Congress recognized that while these existing laws addressed issues of anti-competitive and collusive behaviors in U.S. markets, they did not address the subject of individual producers interacting with the highly concentrated meatpacking sector. Thus, the P&S Act directly addressed this issue with its most critical portion of the law, Section 202.

The legislative history and purposes clearly demonstrate that sections 202(a) and (b) were to be distinct from the antitrust injuries illustrated in subsections (c), (d), and (e) based on the absence of anticompetitive language. The Congressional intent was clearly to provide remedies for individual producers in the instance that meat packers took unwarranted actions to provide less than fair market value to similarly situated producers. Consistent with the language and structure of the P&S Act, USCA wholly supports the USDA's longstanding position that the protections intended by sections 202(a) and (b) extend beyond the competitive injury required under the antitrust laws.

USCA also believes that the "harm to competition" phrase must be addressed. The interpretation of this phrase has led to preferential contract agreements between meatpackers and select producers that has increased packer's control of supply and decimated price discovery, leading to a favorable position for the meatpacker. The

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* **Editor's note:** references annotated with † are retained in Committee file.

** **Editor's note:** The referenced hyperlink is no longer available. The link to the official *Reuters* article is: *https://www.reuters.com/business/how-four-big-companies-control-us-beef-industry-2021-06-17/*.

[2] Tonsor, D.G. (2019). *Historical and Projected Kansas Feedlot Net Returns.*† Kansas State University. Retrieved from *https://agmanager.info/livestock-meat/cattle-finishing-historical-and-projected-returns/cattle-feeding-returns-september-1.*

[3] Crosby, B. (2017, 04 17). *Estimating COVID–19 Effects on the Cattle Markets.*† Retrieved from *https://www.drovers.com/news/covid-19s-impact-146-billion-usca-analysis-says*.

"unreasonable" requirement allows packers to continue paying premiums for higher quality and value-based pricing without the threat of litigation.

USCA urges the USDA Packers and Stockyards Division to carry out its mission of promoting "fair and competitive trading practices for the overall benefit of consumers and American agriculture."

Further, U.S. Senators Jon Tester (D–MT), Charles Grassley (R–IA), and Mike Rounds (R–SD) introduced legislation in June 2021 that would amend the Packers and Stockyards Act to establish the Office of the Special Investigator for Competition Matters.

This bill directs coordination between the U.S. Department of Agriculture, the U.S. Department of Justice (DOJ), the Federal Trade Commission, and the U.S. Department of Homeland Security. It grants subpoena power to aid in the investigation and prosecution of violators of the Packers & Stockyards Act and bolsters the legal power of the USDA by maintaining a staff of attorneys and other professionals with relevant expertise that can elevate cases of corruption.

Regardless of whether anti-competitive practices are occurring, the four largest packers obviously have enough power and market share to manipulate cattle prices. This justifies additional oversight of the packing sector. For this reason, USCA strongly supports the successful passage of the Meat Packing Special Investigator Act (Senator Jon Tester, 2021)[4] into law.

Cattle Marketing in 2021

Historically, packers have purchased most cattle through weekly negotiations with feedlots to agree upon the price of slaughter-ready animals' live weight (Live) or carcass weight (Dressed). Prices are stated either per pound ($/lb.) or per hundred pounds (hundred weight, or $/cwt). The industry generally refers to this pricing method as Negotiated Cash or Cash.

In most regions, packers presently purchase a small minority of cattle through Cash pricing, and instead use Alternative Marketing Agreements (AMAs). AMAs generally use two components, market price and carcass quality, to arrive at a final price for cattle.

The market price (Base Price) is usually a function of the Cash price in a particular area, and premiums or discounts are given based on carcass quality (the Grid). AMAs with the Base Price contractually established as a function of Cash or other markets (*i.e.,* futures, boxed beef, *etc.*) are considered Formula cattle. AMAs with a Base Price negotiated weekly between the feedlot and packer are considered Negotiated Grid.

Formula pricing is by far the most common AMA, and most formulas are based on a regional Cash price. Following is an example of a typical formula, including the timing of the information reported by MPR:

Base Price: Kansas weighted average Cash price.

Grid: Premiums for prime, choice, and high-yielding carcasses. Discounts for select, standard, low-yielding carcasses, and carcasses over 1,000 lbs. or under 700 lbs.

a. Day 1 (Monday): Feedlots commit slaughter-ready cattle to a single processor.
b. Day 6 (Saturday): Weekly Kansas Cash trade, reported daily (*MPR Reports LM_CT119, LM_CT120*), averages $124/cwt for the week.
c. Day 8 (Monday): MPR Weekly Cash trade is released (*MPR Report LM_CT161*), setting Base Price at $124/cwt.
d. Day 9–18: Cattle are processed and graded. Grid Premium to seller is $1/cwt.
e. Day 21: (Monday): MPR reports Formula Cattle Net Price of $125 (*MPR Report LM_CT151*)

While AMAs offer advantages of reduced transaction costs and quality incentives, they also adversely affect price transparency, price discovery, and price competition.

Ensure Transparency and True Price Discovery

The livestock industry is a historically up and down, ever-changing marketplace due to its dependence on consumer trends, domestic and international policies, and foreign market factors; however, today's marketplace lacks the transparency and true price discovery indicative of a healthy industry.

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[4] Senator Jon Tester. (2021, 06 11). *Tester, Grassley, Rounds Unveil Bill To Combat Anti-Competitive Practices in Meat Processing Industry that Threaten Nation's Food Supply.*† Retrieved from *https://www.tester.senate.gov/?p=press_release&id=8380.*

Fewer and fewer cattle are sold on a negotiated cash basis, which reduces the ability for true price discovery in the cattle marketplace. Negotiated cash cattle make up less than 20 percent of the market yet set the price for the other 80 percent of cattle sold through formula contracts and or cattle futures market.

The Livestock Mandatory Reporting (LMR) program expires December 31, 2021, following a 1 year extension that was granted in December 2020 and another 3 month extension granted in September 2021. USCA would like to see changes made to this program to provide more accurate and transparent reports of daily prices and number of cattle purchased via the cash market.

The Base Price and grid structure of formula agreements may vary significantly between feedlots, and the variation of these agreements is currently known only to the packers. This places cattle feeders at a disadvantage when negotiating formula agreements, because packers know what they have negotiated with other feedlots and the negotiating cattle feeder does not. For this reason, the USCA strongly supports creating a contract library and including it in LMR, as set forth in the Cattle Market Transparency Act of 2021. (Senator Deb Fischer, 2021).[5]

Also, timely live cattle price information presently exists only for Negotiated Cash transactions. LMR currently requires packers to report Negotiated Cash transactions (Cash) twice daily, within at least 16 hours of establishing a price. But LMR only reports prices for cattle purchased under Formulated (Formula), Negotiated Grid (Grid), and Forward Contract purchases only after they have been slaughtered.

Formula, Grid, and Contract price reports are reported once weekly as an aggregated price of cattle slaughtered the prior week and daily prices are not reported. Because Formula and Grid prices include a carcass quality component, a substantial time lag exists for reporting these transactions.

The time lag between base price establishment and slaughter for Formula and Grid Cattle is 7 to 21 days after the base price is established. The result is that prices for Formula, and Grid cattle, comprising roughly 60–80% of all cattle slaughtered, are reported an average of 2 weeks later than Cash prices.

USCA's proposed solution is to require Base Price reporting twice daily. The Agriculture Marketing Service (AMS) publishes live cattle prices daily, weekly, and monthly through its LMR Datamart web portal. MPR reports include average, high, and low grid premiums and discounts weekly. Daily base price reports, combined with recent weeks' grid reports, offer a good estimate of the final value of formula cattle within the same timeframe of Cash reports.

However, USCA also believes that overly burdensome Cash requirements may incentivize formula traders to bypass true negotiation. Packers and Feedlots who exclusively use Formulas for marketing and procurement may find the transaction cost of overly burdensome negotiation requirements large enough to circumvent the process completely.

Feedlots may circumvent negotiation by simply offering cattle later, after the base price for their formula cattle has been established. A hypothetical example is described below:

a. Feedlot Formula uses the average Kansas Cash price as a base.
b. The feedlot's 3 week rolling average grid premium has been $1/cwt.
c. Feedlot waits until Kansas Cash price is reported, then offers cattle to packer for $1 over reported Kansas price.
d. Packer accepts offer because the long-run average of procuring cattle this way is nearly identical to procuring through a formula.

Transactions such as the one described in the previous example will be reported earlier than formula transactions, but they are not truly negotiated, as they rely on other market participants to negotiate the base price.

As the number of negotiating market participants continues declining, market liquidity dwindles, and the possibility of price manipulation becomes a greater risk. The result is the appearance of price discovery without sufficient real price negotiation to keep markets truly competitive. USCA offers four proposed solutions.

The first is to establish Negotiated Cash requirements high enough to facilitate price discovery, thereby reducing marketing costs and incentive for formula traders to circumvent the intent of the law.

The second is to allow a base price proxy peg that is not easily manipulated to satisfy conditions for cash trade under certain conditions. USCA proposes allowing formula contracts with Base Prices that are either negotiated, or that are estab-

[5] Senator Deb Fischer. (2021, 03 2). *Fischer, Wyden Introduce Cattle Market Transparency Act of 2021.*† Retrieved from *https://www.fischer.senate.gov/public/index.cfm/2021/3/fischer-wyden-introduce-cattle-market-transparency-act-of-2021.*

lished using liquid, actively traded markets (*e.g.,* live cattle futures) to satisfy negotiated cash requirements.

A liquid, actively traded market reflects very little risk of price manipulation. Using such a market to establish base prices for formulas substantially decreases the risk that true price negotiation becomes so thinly traded as to be manipulated by any particular packer.

Establishing base prices in this way still relies on others to negotiate, but the sheer volume of market participants ensures a competitive market.

If the base price in the example described above were either negotiated weekly or based on an actively traded market like futures or boxed beef prices, and offered cattle for sale as described, it would be a true negotiated price.

Allowing this type of trade to satisfy negotiated cash prices (assuming timely reporting) may encourage packers and feedlots to move toward a base price that is dependent on something other than Cash because the base price has less potential for manipulation.

The third proposed solution is to limit the number of cattle any one plant can procure in advance, thereby limiting packer control of supply and the need for packers to be active bidders every week.

This solution requires some analysis to determine the appropriate limit, but a packer who has 90% of their kill procured or otherwise committed in advance obviously has less incentive to be an active market participant than a packer who only has 30% of their cattle committed.

This is the one proposed solution that appears certain to require changes to the Packers & Stockyards Act rather than using LMR reauthorization to implement.

Finally, USCA believes packers should be required to offer cash bids or floor prices for cattle they would like feedlots to commit. Currently, most feedlots are required to commit cattle for sale without any cash offer or floor price. This forces feedlots to decide whether to commit cattle without any knowledge or guarantee of a base price or floor price.

Build Independent Processing Capacity

The cost to build a new construction meat-processing facility is estimated at approximately $400 per square foot, inclusive of permits, site prep, utilities, property, building, refrigeration, and other costs. (Newlin, 2020).[6] At that estimation, a small 20 head-per-week operation would need at least a 3,000 to 4,000 square feet of facility at an estimated cost of $1.2 million. Repurposing an existing building is slightly more economical, at a cost of approximately $150 per square foot.

Before breaking ground, however, there are pre-occupational capital expenses to be accounted for, including design of the facility, blueprints, consulting, utility prepayments, soil tests and environment impact. These expenses are estimated at 20% of the overall plant. For our small plant example listed above, we estimate $300,000 in pre-occupational capital.

Next, the facility will need to be filled with the necessary equipment for slaughter and processing, which includes rails, hand tools, cookers, smokers, and grinders. New equipment will run approximately $300,000 to $400,000.

Just in our example, this small operation would require $1.8 million just in startup capital. To meet this need, they may turn to private or public financing depending on their individual situation. Examples of public financing opportunities include Tax Increment Financing; Tax Abatement; the Rural Economic Development loan and grant program; or the Small Business Administration's (SBA) Certified Development Corporation ("504") Loan Program. (Niche Meat Processors Assistance Network, 2021.)[7]

However, more public funding opportunities are needed; in addition to streamlining and increasing the efficiency of current loan and grant programs. USCA recommends the following programmatic updates:

- Congress should direct funding authority to USDA to provide capital infrastructure improvement grants to communities for water sewage systems to support the development of independent slaughter and processing facilities.
- Congress should provide tax income incentives to individuals who invest in the construction of independent slaughter and processing facilities.

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[6] Newlin, L. (2020, 06 12). *So you want to build a slaughter plant?*† Retrieved from HIGH PLAINS JOURNAL: *https://www.hpj.com/livestock/so-you-want-to-build-a-slaughter-plant/article_a033a44e-acaf-11ea-a32d-63beecbd5f05.html.*

[7] Niche Meat Processors Assistance Network. (2021, 06 17). *Finding Capital: Financing Options for Meat Processors.*† Retrieved from *https://www.nichemeatprocessing.org/finding-capital:-financing-options-for-meat-processors/.*

- Congress should direct funding authority to USDA to provide substantial grants, rather than cost-share programs, to individuals for the purchasing of reuse buildings and to upgrade the buildings to meet USDA Food Safety and Inspection Service (FSIS) regulations for the development of independent slaughter and processing facilities.

USCA partners with independent local, state, and Federal meat processors to ensure that American beef is an option on every American plate. We value the independent processors' role in our supply chain and believe that our enhanced collaboration can bring policy changes that are both mutually beneficial and economically sustainable. USCA supports increased competition in this sector by increasing the opportunities for independent processors to succeed. Aside from capital investment, the following recommendations would greatly strengthen the bottom lines of independent processors:

- Plants classified by the USDA FSIS as small or very small should be provided a USDA licensed grader by the USDA Agricultural Marketing Service (AMS) free of charge; or be allowed to utilize electronic instrument grade augmentation systems within their plant.
- Congress should immediately halt the payout of Federal subsidies to any of the Big Four meat packing plants, distributors, and retailers and instead prioritize subsidy distribution to Very Small/Small independent meat packing facilities.
- Congress should direct USDA to set aside a percentage of their bids for meat purchase to Very Small/Small independent meat packing facilities.
- USDA and DOJ need to have stronger, clearer, and enforceable predatory pricing guidelines to protect these new properties and investments.

It is imperative that we invest in our independent processing capacity to address the increasing control of supply that the Big Four meatpackers hold over the rest of the industry. The "efficiencies" packers benefit from due to their massive size are not passed on throughout the supply chain. In a true, competitive, and functioning market, one would see these efficiencies pass all the way through the production chain. Instead, these for-profit multinational conglomerates have passed the cost savings of these efficiencies on to their shareholders. As a result, consumers pay higher prices at the grocery store, independent cattle producers and feeders continue to go broke, and meatpacker executives pat their backs and pad their pockets.

Finally, an outdated regulation (9 CFR 201.67) that dates back to the terminal stockyards of the 1920s prevents livestock auction owners from owning or investing in a processing facility. In today's environment, where the cattle industry is focused on additional shackle space and wanting more packers to compete for livestock, this dated ban should be removed. Having another local or regional packer would bring more competition for cattle, and we should not be excluding people in the cattle industry that may want to invest in the packing segment.

Establish Truth in Labeling

Currently, there exists a loophole which allows imported beef product, most often lean ground trim from South America, to be transported to our borders; undergo a "significant transformation", which can be as insignificant as trimming, rewrapping, or blending a small percentage of domestic product; and then claim the "Product of the U.S.A." label on the final product.

With the existence of this loophole, it is virtually impossible to provide assurance to consumers that the product they are purchasing is truly U.S. beef.

Because of the large number of cattle from Canada and Mexico that enter the United States each year and are slaughtered in U.S. packing facilities, the possibility of beef products which are not born and raised as well as harvested in the United States carrying a label indicating "Product of USA" or some such other claim of U.S. origin is very real.

It is our understanding that all products advertised or sold in the U.S., including food products like beef, must meet the Federal Trade Commission's (FTC) "all or virtually all" standard if "made in USA" or "product of USA" (or similar labeling) is to be applied. Without clear guidance from USDA FSIS, product either is already or will likely be mislabeled and cause confusion to consumers who are purchasing beef products and harm to American cattle producers.

To eliminate the likelihood of confusion and to better inform consumers, USCA contends that labels indicating "Made in USA," "Product of USA" or similar content should be limited to beef from cattle born, raised, and harvested in the United States.

In 2019, USCA submitted a petition for rulemaking to USDA FSIS (U.S. Cattlemen's Association, 2019)[8] requesting this change. In its official response, FSIS acknowledged that the current regulatory framework "may be causing confusion in the marketplace" and decided to initiate rulemaking which is scheduled for release in 2021.

USCA also supports two bills currently introduced that would seek to further define what constitutes a U.S. beef product. Those are the American Beef Labeling Act of 2021, or S. 2716, and the U.S.A. Beef Act, or S. 2623 and H.R. 4973.

Conclusion

On Monday, May 10, 2021, member leaders of the American Farm Bureau Federation, National Cattlemen's Beef Association, National Farmers Union, R–CALF USA, and USCA met in Phoenix, Arizona.

These groups convened at the request of the Livestock Marketing Association to discuss challenges involved in the marketing of finished cattle with the ultimate goal of bringing about a more financially sustainable situation for cattle feeders and cow-calf producers.

This historic meeting of industry groups underscores the importance of advancing much needed market reform to ensure the viability of our nation's food supply. However, our work is not done. We need bold, immediate leadership from Congress to enact these changes.

With the help of our lawmakers, we will overcome the industry's current challenges and continue to produce a healthy and abundant food supply; while simultaneously serving as stewards of the environment and ensuring a thriving rural and national economy. USCA looks forward to working with Members of the House Agriculture Committee to advance these goals.

SUBMITTED QUESTIONS

Response from Hon. Thomas "Tom" J. Vilsack, Secretary, U.S. Department of Agriculture

Question Submitted by Hon. Jim Costa, a Representative in Congress from California

Question. Mr. Secretary, in August USDA announced that it would publish two new reports from Livestock Mandatory Reporting Data: The *National Daily Direct Formula Base Cattle Report* and the *Weekly Cattle Net Price Distribution* report. What kind of feedback has the Department received from industry since these reports became available?

Answer. In August 2021, USDA launched two new USDA *Market News* reports (the *National Daily Direct Formula Base Cattle* and the *National Weekly Cattle Net Price Distribution* reports) based on Livestock Mandatory Reporting data to provide additional insight into formula cattle trades and help promote fair and competitive markets. These new reports have been well-received by a broad range of cattle market stakeholders including producers, producer organizations, beef processors and their respective trade organizations, private market analysts, and academics who work closely with the cattle industry. Many praised the increased transparency these reports bring to formula cattle purchasing as it provides producers with a better understanding of value differentials that allow them to market their cattle more competitively.

Question Submitted by Hon. Ann M. Kuster, a Representative in Congress from New Hampshire

Question. Mr. Secretary, I wanted to touch on the Pandemic Dairy Volatility Assistance Program, which is helping milk producers recover from the lopsided cheese prices and other disruptions last year. Do you have a sense of how these payments to producers will differ between Federal Milk Order regions? Some Federal Orders, including our Northeast Federal Order, were affected more than others.

Answer. Because payments are based on what was paid for Class I fluid milk in each region during the period of July through December 2020, payment rates in the Northeast do reflect the regions' higher Class I use relative to many other regions

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[8]* **Editor's note:** This reference was not included in the USCA's submitted statement. The reference is to 2019 Petition filed by USCA. The Petition and Response Letter are retained in Committee file and are available at: *Petition for the Imposition of Beef Labeling Requirements: To Address "Made in USA" Or "Product of USA" Claims*, *https://www.fsis.usda.gov/sites/default/files/media_file/2020-07/19-05-usca-102319.pdf* and Response Letter *https://www.fsis.usda.gov/sites/default/files/media_file/2021-04/19-05-fsis-final-response-032620.pdf*.

of the country. Once all producer payments are made, USDA will report total PMVAP monies paid to producers by region.

Questions Submitted by Hon. Glenn Thompson, a Representative in Congress from Pennsylvania

Question 1. Mr. Secretary, I have been pleased to see Congress and the Administration team up to focus on expanding access to processing and overall processing capacity—a goal seemingly everyone agrees on. However, I continue to hear concerns that the announced funding sources may only be used to support small- and very-small-establishments. Will there be a limitation on the size of plants eligible for the $500 million in assistance announced on July 9, 2021, and if so, what will that limitation be and how will it be determined?

Answer. There are a *variety of programs*[1] planned or currently available to increase meat and poultry processing capacity and improve the meat and poultry supply chain. On February 24, 2022, USDA announced the new *Meat and Poultry Processing Expansion program*[2] (MPPEP). Using $150 million in funding from the American Rescue Plan Act, the MPPEP program will provide gap financing grants of up to $25 million to eligible processors of any size. In addition, there is no minimum grant size and no restriction on the type of entity that can apply. Applications are welcomed from cooperatives, tribal entities, individuals, state entities, and others and funds can be used to both start new facilities and expand existing facilities. There are no restrictions on project size and there is no minimum request amount. There are, however, eligibility restrictions in place to ensure that major meat packers do not participate in the program. The MPPEP is one in a suite of programs that are being designed to address the range of needs and opportunities presented in the meat and poultry processing sector.

Question 2. Mr. Secretary, I continue to hear from members of the livestock community about the need to reform the Federal Government's approach to the regulation of animals developed or enhanced through genetic engineering. I was pleased to see USDA's publication of an Advance Notice of Proposed Rulemaking (ANPR) on this matter and hope that, under your leadership, USDA will continue to pursue an updated and more workable regulatory framework. Can you assure me that the Department will move forward with a proposed rule that would prevent amenable species modified or developed using genetic engineering and intended for agricultural purposes from being regulated subject to FDA's animal drug authority?

Answer. Innovation is key to the success of American agriculture. Ensuring that U.S. producers have tools to keep them competitive here and abroad is an important priority for all of us and I understand the concerns some producers have raised about the current regulatory process for developing or enhancing animals using genetic engineering. We continue to work closely with our Federal partners to identify paths forward to improve these processes and we will continue to use the feedback we gathered through the Advance Notice of Proposed Rulemaking process to guide these conversations and our next steps.

Question 3. Mr. Secretary, as you know, President Biden's recent Executive Order requires all Federal employees to be fully vaccinated against the coronavirus by November 22. Given federally inspected establishments cannot operate without USDA inspection, what is USDA's plan to ensure federally inspected meat and poultry processing plants are adequately staffed if a significant percentage of the inspection workforce elects not to get vaccinated and is subsequently discharged?

Answer. The vast majority of the USDA workforce has opted to get vaccinated for COVID–19 in order to protect themselves, their loved ones, and everyone with whom they interact at work and in their personal lives. 97% of the USDA workforce is in compliance with Executive Order 14043. Therefore, we did not anticipate any disruptions to USDA's ability to provide services to our stakeholders.

On Friday, January 21, 2022, a District Court issued an Order enjoining the implementation and enforcement of Executive Order 14043. Consistent with that preliminary nationwide injunction, USDA has not taken action to implement or enforce the COVID–19 vaccination requirement pursuant to E.O. 14043 since the date of the injunction. All enforcement actions are currently paused, including the processing of suspensions or removals related to the vaccination requirement, as long as the nationwide preliminary injunction is in place.

As long as the nationwide preliminary injunction is in place, the few meat and poultry inspectors who are still unvaccinated will continue to perform their jobs while following all safety protocols.

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[1] *https://www.usda.gov/meat.*
[2] *https://rd.usda.gov/mppep.*

Question 4. Mr. Secretary, I continue to hear concerns from small processors about their ability to comply with the recently imposed FSIS mask mandate. These small businesses are worried about the health of their employees in small-, partially open-air facilities, exposed to extreme high temperatures and moisture and debris that would contaminate the mask making it unwearable for practical purposes. I am worried that a very strict application of this policy without common sense exceptions will hinder the same small- and very-small-establishments we have all been so jointly interested in seeing succeed.

How has USDA been working to ensure a pragmatic implementation of this standard while avoiding unintended consequences?

Answer. FSIS regulates approximately 6,600 establishments. FSIS has worked locally with each establishment to find solutions that meet the needs of both industry and our inspection staff and continues to do so.

Question 4a. Prior to implementation, was any economic analysis conducted to estimate the potential impacts of this policy on producers, processors, and the economy generally? If so, what were the findings of that analysis?

Answer. While FSIS considered the costs on industry, it did not conduct a full economic analysis because the Agency determined that immediate action was necessary to reduce or avoid health hazards.

Question 4b. Can you cite the specific FSIS regulation that authorizes the withholding of inspection due to a facility's non-compliance with the mask directive (FSIS Notice 34–21)?

Answer. FSIS is authorized to protect the health and safety of our inspection force by the mandates of the Federal Meat Inspection Act (FMIA), the Poultry Products Inspection Act (PPIA), and the Egg Products Inspection Act (EPIA), the regulations issued under the FMIA, PPIA, EPIA, and the Occupational Safety and Health Act of 1970 (OSH Act).

Question 4c. At how many facilities have inspection services been withheld as a result of noncompliance with this notice?

Answer. Out of the approximately 6,600 establishments only a few have not complied.

Question 4d. How many facilities have voluntarily suspended inspection since the publication of this notice?

Answer. FSIS does not collect information on what reason an establishment has for voluntarily suspended inspection. However, records show that over time the number of establishments under FSIS' regulation has grown.

FY 2020	6,531 active establishments
FY 2021	6,630 active establishments

Question 5. Mr. Secretary, what role does the Department of Agriculture play in preventing and responding to cyber attacks on critical agricultural infrastructure like the one recently experienced by JBS, and what proactive steps has the Department of Agriculture taken ensure other critical infrastructure is better protected against such hacking attempts?

Answer. USDA works with food and agriculture companies with operations in the United States to take necessary steps to protect their IT and supply chain infrastructure so that it is more durable, distributed, and better able to withstand modern challenges, including cybersecurity threats and disruptions. In addition, USDA and the Department of Health and Human Services (HHS), specifically the Food and Drug Administration (FDA), are the Food and Agriculture Critical Infrastructure Co-Sector Risk Management Agencies (SRMA) and through this partnership:

a. Maintains and updates the Food and Agriculture Sector-Specific Plan that also addresses cybersecurity risks.
b. Periodically conducts the Cybersecurity Assessment and Risk Management Approach (CARMA) to examine cyber threats, consequences, and vulnerabilities to improve identification and management of cyber risks.
c. Provides leadership to the sector but has no regulatory authority to mandate action within it.
d. Produces weekly emails and facilitates bi-annual joint membership meetings that include cybersecurity topics.

Question 6. It seems virtually everyone—industry, Congress, and the Administration—agree on the importance of access to protein processing and the need for an increase in overall processing capacity. That is why I remain baffled at the lack of

an appeal of a court decision that has, and will continue, to directly reduce processing capacity for the pork industry.

Did the Department recommend that the Solicitor General appeal the March 31, 2021, U.S. District Court for the District of Minnesota's ruling regarding the elimination of line speed limits under USDA FSIS' New Swine Inspection System? If not, why not?

Answer. USDA does not have the responsibility to decide whether to appeal a court's ruling. That decision rests with the Department of Justice, which litigated this case.

Question 6a. Why has the Department decided not to use the rulemaking process to address the deficiencies in the original New Swine Inspection System rulemaking cited by the U.S. District Court for the District of Minnesota in its March 31, 2021, decision?

Answer. USDA has been collaborating with OSHA, the agency primarily responsible for worker safety, to develop a plan, consistent with the Court's decision, to obtain accurate data on the impact of increased line speed on worker safety in NSIS plants. We hope to announce something on this soon.

Question 6b. Why has the Department not yet granted line speed waivers to the establishments effected by the court's decision—especially those with a demonstrated history of worker safety while operating at higher line speeds?

Answer. USDA has been collaborating with OSHA, the agency primarily responsible for worker safety, to develop a plan, consistent with the Court's decision, to obtain accurate data on the impact of increased line speed on worker safety in NSIS plants. We hope to announce something on this soon.

Question 6c. When will the Department grant line speed waivers, or implement alternative regulatory solutions to allow effected plants to operate at the line speeds such establishments utilized prior to the March 31, 2021 court decision?

Answer. USDA has been collaborating with OSHA, the agency primarily responsible for worker safety, to identify how best to implement the Court's decision so that we can obtain accurate data on the impact of increased line speed on worker safety in NSIS plants. We hope to announce something on this soon.

Questions Submitted by Hon. Vicky Hartzler, a Representative in Congress from Missouri

Question 1. Mr. Secretary, I appreciate the ongoing efforts to increase U.S. beef packing capacity. However, due to an outdated Packers and Stockyards Act regulation dating back to the terminal stockyards of the early 1900s, local livestock auction market or sale barn owners cannot own or invest in a packing facility. This seems to run counter to the current efforts to increase competition and supply chain resiliency, by limiting interested parties from opening or investing in new facilities. Are you open to removing this barrier to entry to allow people active in the livestock sector to invest in local and regional processing?

Answer. Owing to the conflicting interests between those selling livestock and those buying livestock, the principle that packing companies and market agencies selling on commission must operate independently and with separate ownership dates back more than 100 years, to the era that resulted in the passage of the P&S Act. While there is always a need to ensure our rules and regulations reflect the needs and circumstances of the times, I believe we need to carefully protect rules that guard against conflicts of interest.

Enhancing competition and choice in meat processing is a top priority. My team and I welcome the chance to discuss ideas for how to maintain basic market fairness principles and also accomplish the goals of greater choice and competition in meat processing.

Question 2. Mr. Secretary, for several months now USDA has held pork producers in the balance as they await a formerly promised "top-up" payment of $17 per head. Members and staff have requested additional information several times and to my knowledge, not received a clear answer. Can you please provide a specific update as to the status of these payments and details as to when U.S. swine producers will receive formal notice regarding this payment?

Answer. On December 13, 2021, USDA announced the Spot Market Hog Pandemic Program (SMHPP) to provide additional pandemic assistance for hog producers. As indicated previously, USDA initially evaluated past Coronavirus Food Assistance Program (CFAP) program assistance to target relief based on gaps or disparities in previous aid. Hog producers, especially those who sell through a spot market or a negotiated price, were burdened with a disproportionate share of losses due to pandemic disruptions. USDA examined the difference between negotiated prices for hogs and the five-year average, which demonstrated a significant price drop during

April through September 2020. As a result, the proposed assistance under the prior administration to provide a flat rate swine payment based on CFAP 1 inventories will not be pursued.

After the SMHPP was announced, stakeholders identified additional gaps where price declines occurred involving direct sales to sale barns, individuals, and brokers that also resulted in significant price declines. USDA [has] amended the Notice of Funds Availability to address those gaps and has extended sign up for the SMHPP through April 19, 2022, so the gaps can be captured and producers can amend their applications to take those losses into consideration. With the additional gaps identified, USDA is waiting until sign up is complete to compensate all producers to ensure payments stay within the $50 million funding limitation.

Questions Submitted Hon. David Rouzer, a Representative in Congress from North Carolina

Question 1. Mr. Secretary, the ink was barely dry on the previous Administration's new rule on Undue and Unreasonable preferences under the Packers and Stockyards Act when you announced plans to revitalize a trio of additional Packers and Stockyards regulations. It seems these rules will be similar or even identical to three rules promulgated during your previous tenure—rules that proved very controversial with stakeholders and Congress. Please share any updated economic analysis that led to your decision you to again move ahead with these rules.

Answer. The pandemic drove home just how fragile our supply chains are, and how much concentration can harm both producers and consumers when prices collapse for producers and skyrocket for consumers. We are also seeing how concentrated industries are posing problems across the economy: indeed, the Biden-Harris Executive Order on Promoting Competition in the American Economy has 72 actions across all range of sectors. Ensuring our agricultural markets are open and competitive is an important part of making sure our entire economy is open, fair, and competitive-where with hard work, entrepreneurs can build successful businesses, deliver innovation and value to working families, and drive economic growth.

Question 2. In a 2014 Packers and Stockyards report from the Western Regional Office, USDA found that Alternative Marketing Arrangements (AMAs) benefit cattle producers, including by locking in future prices to reduce risk, assuring timely market access, demonstrating creditworthiness to lenders, and reducing transaction costs. Likewise, USDA found that consumers benefit from AMAs due to improved overall beef quality and by providing a price signal to producers about the value of specific cattle qualities related to consumers' beef preferences. Overall, the report concluded the net effect of AMAs was a positive gain to the economy. Unfortunately, I continue to hear industry concern that despite these positive findings, your forthcoming Packers and Stockyards rules will most certainly impair the use of AMAs. Can you ensure that will not be the case? Will you ensure that these findings are included in the economic analysis underpinning the forthcoming rules?

Answer. As I indicated, the pandemic drove home just how fragile our supply chains are, and how much concentration can harm both producers and consumers when prices collapse for producers and skyrocket for consumers. Ensuring our agricultural markets are open and competitive is an important part of making sure our entire economy is open, fair, and competitive.

Our new rules are inspired by what was proposed in the past because many of those problems remain unaddressed. Yet the rules will also be different this time—to reflect the evolution of the markets and an evolution of thinking. I am committed to engaging with all stakeholders in our livestock and poultry markets, including those who value the benefits of AMAs, and taking all viewpoints into account. Our purpose is to increase choice, transparency, and fair play in the markets. To that end, I welcome the chance to engage on the substance of what we are doing when the proposals are ready.

Please also know that consistent with administrative procedures we conduct a full economic analysis for each of the rules we are doing.

Question 3. Last month, USDA announced a program to give $700 million to farm and food workers impacted by COVID, including meat and poultry plants workers. As I understand it, the money would be given to unions and other nonprofit organizations who would then be responsible for distributing the funds to impacted workers.

Answer. The Farm and Food Worker Relief (FFWR) Grant Program will issue competitive grants to State agencies, Tribal entities, and nonprofit organizations with experience in providing support or relief services to farmworkers or meatpacking workers. Entities receiving awards will then distribute relief payments to frontline farmworkers and meatpacking workers who incurred expenses pre-

paring for, preventing exposure to, and responding to the COVID–19 pandemic. These entities are expected to have robust financial controls to prevent fraud, waste, and abuse.

Question 3a. What efficiency considerations led USDA to select this implementation model rather than sending the money directly to the affected accompanies for dispersal or directly to the impacted workers?

Answer. Stakeholder input led USDA to select the grants implementation model to award grants ranging from $5M to $50M to state agencies, Tribal entities, and nonprofit organizations serving farmworkers and meatpacking workers. This allows USDA to distribute funds to organizations, which will efficiently meet local and regional needs. In addition, section 751 of Division N of the Consolidated Appropriations Act of 2021 (Pub. L. No. 116–260), which is the authorization for FFWR, limits the USDA's authority to grants and loans. Issuing thousands of $600 grants would be overly burdensome for both individuals and the USDA to ensure alignment with both financial assistance and transparency laws and regulations.

Question 3b. How will USDA audit and oversee this program to prevent fraud and abuse?

Answer. Non-Federal entities (states, local governments, Tribes, and nonprofit organizations) with $750,000 or more in Federal expenditures within their fiscal year are required by the Single Audit Act Amendments of 1996 to have an annual audit of their Federal awards (*e.g.,* grant and loan programs). Given the $5M minimum award, recipients of grants through this program will exceed this threshold and will be required to have an annual audit of their Federal award(s). AMS is also investing additional resources in fraud prevention and oversight mechanisms.

Question 3c. What sort of limitations will be included to ensure the vast majority of funds make it into the hands of workers rather than being siphoned off for potentially exorbitant administrative costs?

Answer. USDA will conduct a competitive review of the applications received and administrative review of the applications that are considered for funding. This review process will take into account the reasonableness of the administrative costs necessary to prevent waste, fraud, and abuse.

Question 3d. I understand that some companies have already covered workers' costs or provided related benefits for the kind of worker expenses this program seeks to reimburse. Will that be taken into consideration when benefits are dispersed?

Answer. Payments to individual workers are limited to a one-time payment of $600 per person to defray costs for reasonable and necessary personal, family, or living expenses such as, but not limited to: costs for personal protective equipment (PPE), expenses associated with quarantines and testing, and dependent care. Front-line workers applying for this disaster relief from the grant recipients must self-certify that they incurred such expenses and have not received payment through another entity.

Question Submitted Hon. Michelle Fischbach, a Representative in Congress from Minnesota

Question. Secretary Vilsack, in your written testimony, you mentioned that producers have faced the *possibility* of having to liquidate herds due to the lack of availability or affordability of feed and forage from this summer's drought. In my district, this was not just a possibility, but a reality. Nearly all of my state has been in some kind of abnormally dry condition, and over ¾ in severe drought. Most notably, the northwest and north central portion of my district spent significant time in the highest level of drought conditions, which is where I heard from producers that unfortunately the possibility of herd culling became a reality. To this day, portions of that northern point are still in D3 extreme drought.

The producers in my district saw this coming and requested emergency authorization to hay and graze CRP acres prior to the nesting season. In July, I responded to these calls by leading a delegation letter with Senator Klobuchar formally requesting action from you prior to the primary nesting season. Other Members and delegations including South Dakota, North Dakota and Montana made this same request to you. To this day, I have yet to receive any response from you or your staff on what drove that decision.

You mentioned in your response to my question about what drove you to this decision that the law does not allow you to authorize emergency haying during the primary nesting season. However, statute specifically includes this authority:

> (1) IN GENERAL.—The Secretary, in coordination with the applicable state technical committee established under section 1261(a), shall permit certain ac-

tivities or commercial uses of established cover on land that is subject to a contract under the conservation reserve program if—

(B) the Secretary, in coordination with the state technical committee, includes contract modifications—

'(i) without any reduction in the rental rate for—

'(II) emergency grazing on all practices during the primary nesting season if payments are authorized for a county under the livestock forage disaster program under clause (ii) of section 1501(c)(3)(D) of the Agricultural Act of 2014 (7 U.S.C. 9081(c)(3)(D)), at 50 percent of the normal carrying capacity determined under clause (i) of that section, adjusted to the site-specific plan.[1]

Please respond with the following:

1. *Question.* The specific statute and language you referred to that does not allow emergency haying and grazing during primary nesting season for drought-affected counties.

1. *Answer.* CRP statutory authority for emergency haying and grazing on CRP land is located in 16 U.S.C. 3833. In all cases, emergency haying may only take place outside of the primary nesting season (PNS). Emergency grazing can take place outside of PNS or during PNS, depending on the circumstances, as described in the statute. What follows is a summary of the key provisions of this authority.

Emergency haying authority:

16 U.S.C. 3833(b)(1)(B)(i)(I)(aa)—Emergency haying only outside PNS, on all practices, when a county is designated as being in a D2 or greater drought.

16 U.S.C. 3833(b)(1)(B)(i)(III)—Emergency haying only outside PNS, on only certain practices, if payments are authorized for a county under the livestock forage disaster program. (This version of emergency haying is allowed when payments are authorized for a county under the livestock forage disaster program pursuant to U.S.C. 9081(c)(3)(D). The rules for this kind of emergency haying are different).

Emergency grazing authority:

16 U.S.C. 3833(b)(1)(B)(i)(I)(aa)—only outside PNS, on all practices, when a county is designated as being in a D2 or greater drought.

16 U.S.C. 3833(b)(1)(B)(i)(II)—during PNS, on all practices, if payments are authorized for a county under the livestock forage disaster program. (This version of emergency grazing is allowed when payments are authorized for a county under the livestock forage disaster program pursuant to U.S.C. 9081(c)(3)(D). The rules for this kind of emergency grazing are different).

In sum: emergency haying and emergency grazing are allowed on all practices when a county is designated as a D2 or greater drought. But, once such a drought lasts for 8 consecutive weeks (in the case of D2), or the drought becomes a D3 or greater, then the county becomes eligible for payments under the livestock forage disaster program. If and when such payments are actually authorized for the county, then emergency haying and grazing are allowed, albeit under different rules, as noted above.

2. *Question.* The reasoning behind the decision to not allow emergency haying and grazing during primary nesting season due to this language.

2. *Answer.* As noted in the above statutory citations, emergency haying is never allowed during primary nesting season. Emergency grazing during primary nesting season is only allowed, in a specific county, if payments are authorized for the county under the livestock forage disaster program.

3. *Question.* Recommendations to modify this language in order to provide you with the adequate authority to allow these practices should a similar drought arise in the future.

3. *Answer.* The authority to allow emergency haying and grazing already exists in current CRP statutory authority. Depending upon Congress' desired outcomes, the statutory provisions described above can be combined and/or revised.

If Congress wishes to do away with the more restrictive conditions on emergency haying and grazing, it can remove the trigger language regarding authorization of livestock forage disaster program payments. Please note, how-

[1] 16 U.S.C. 3833. (Retained in Committee file.)

ever, that authorization of livestock forage disaster program payments also permits emergency grazing during PNS, albeit under certain restrictions.

Put another way, Congress can permit emergency haying and grazing under only one set of conditions (D2 or greater drought), with whatever restrictions Congress deems appropriate.

In addition, I heard frustrations from producers that emergency haying post-primary nesting season was disallowed upon the graduation of a county from D2 to D3 drought. In your response to my question during the hearing, you explained that this "didn't sound right." Indeed, U.S. Code authorizes emergency haying and grazing outside of the primary nesting for counties "D2 (severe drought) or greater . . . "[2]

With that in mind, please respond with the following:

1. *Question.* If you our one of your staff authorized this revocation.
2. *Question.* The specific statute and language that drove this decision.

1–2. *Answer.* 16 U.S.C. 3833(b)(1)(B)(i)(III)—Emergency haying on *certain practices,* outside the primary nesting season. The restriction to permit emergency haying to *certain practices* is ratified in 7 CFR 141.63(f)(2) "as determined by CCC".

FSA determined these "certain practices" to be CP1, CP2, CP4B, CP4D, CP10, CP18B, CP18C, and CP38E but only if such activity is specifically authorized in a CRP SAFE agreement.

FSA coordinated with the Environmental Activities Division to identify the timeline and impact involved with completing the NEPA process to identify additional practices for emergency haying during the LFP period. Additional practices may be authorized by Deputy Administrator of Farm Programs if conditions warrant and are covered in both the 2014 Farm Bill SPEIS and 2018 Farm Bill Programmatic Environmental Assessment (PEA) and Finding of No Significant Impact (FONSI). FSA and the Environmental Activities Division identified additional practices in the 2014 Farm Bill, Supplemental Programmatic Environmental Impact Statement (SPEIS) and 2015 Record of Decision (ROD) that could be approved on a case specific basis. These practices include:

- CP8 Grass Waterways,
- CP21 Filter Strips,
- CP23 Wetland Restoration,
- CP23A Wetland Restoration, Non-floodplain,
- CP25 (grazing only) Rare and Declining Habitats,
- CP27 Farmable Wetlands,
- CP28 Farmable Wetland Buffers,
- CP37 Duck Nesting Habitat,
- CP39 Constructed Wetland, and
- CP41 Flooded Prairie Farmable Wetlands.

Including the additional practices listed above would not require additional NEPA compliance since they were covered in the original 2014 SPEIS, 2015 ROD, and 2018 Farm Bill CRP PEA and FONSI. However, to allow emergency haying on CP25, or additional practices beyond the ones covered in both the 2014 SPEIS and 2018 PEA, a new SPEIS could be required which would take a minimum of one year to complete and could result in possible litigation against the agency.

FSA is currently evaluating its policies regarding restricting the distance of non-emergency and emergency haying and grazing from adjacent water bodies. Current policy indicates haying and grazing activities are prohibited on land within 20′ of a perennial or season/intermittent stream or permanent waterbody. Whereas the 2014 SPEIS and 2018 PEA prohibit non-emergency and emergency haying and grazing activities from occurring within 120′ of a permanent waterbody and these areas must be fenced to confine livestock, thus minimizing the potential for these types of impacts.

Livestock having access to surface waterbodies may pollute water with nutrients mobilized by damage to streambanks and vegetation from trampling, and the addition of manure.

[2] 16 U.S.C. 3833.

3. *Question.* Recommendations to modify this language in order to provide you with the adequate authority to allow these practices should a similar drought arise in the future.

3. *Answer.* Please see the answer above.

Response from Todd Wilkinson, Vice President, National Cattlemen's Beef Association

Question Submitted by Hon. Jim Costa, a Representative in Congress from California

Question. If Livestock Mandatory Reporting is not reauthorized, what would the consequences be for livestock markets? Right now we have a short-term extension, does a long-term extension provide more stability for producers and markets? If so, do you have any specific request to be included in a 5 year reauthorization?

Answer. Livestock Mandatory Reporting (LMR) is the most accessible source of information and most critical market transparency tool currently available to cattle producers. Since the program's inception in 2001, cattlemen and -women have used the information reported by large meatpackers and published by the U.S. Department of Agriculture (USDA) to obtain the timeliest price and volume information for a variety of cattle types, track seasonal and cyclical market trends, more precisely calculate basis for Live and Feeder cattle futures contracts, and establish base prices for alternative marketing arrangements.

LMR authority has temporary lapsed twice in the program's 20 year history: once for 2 months in 2004 and once for approximately 1 year between 2005 and 2006. During the year-long lapse, USDA requested reporting entities continue to submit data to the Agricultural Marketing Service (USDA–AMS) on a voluntary basis. According to estimates, about 90% of meatpackers covered under the LMR statute continued data submission. Some information was better than none, but the omission of even small portions of packer data reduced confidence in the accuracy of information reported by USDA–AMS. Additionally, because the statutory authority had lapsed for over a year, USDA–AMS was required to reestablish regulatory authority and promulgated new implementing rules to continue administering LMR programming, further delaying the program from returning to its intended efficacy.

The Livestock Mandatory Reporting Act of 1999 (P.L. 106–78) clearly intended large meatpackers be required by law to submit information in order to maintain consistency. During lapses in statutory authority, USDA–AMS and cattle producers alike must rely upon the good graces of reporting entities to continue submitting essential market information. While we would expect the vast majority of large meatpackers to continue data submission during potential lapses in the future, the possibility of less-than-full participation creates tremendous uncertainty in the marketplace. Such unpredictability is especially unhelpful during these times of great volatility within our supply chain. Should authority for the program lapse, producers would immediately lose access to reliable information necessary to conduct business in the livestock sector, and increased volatility in both the spot and futures markets should be expected to follow.

NCBA favors long-term reauthorizations of the program, especially the standard 5 year durations. However, we have also been supportive of temporary measures to extend the program's authority, such the provision in the current Federal spending authority which has guaranteed LMR authority continues through February 18, 2022 (P.L. 117–70). We were also supportive of Chairman David Scott's bill to extend the program's authority through September 30, 2022 (H.R. 5290), and were pleased to see this measure pass the House of Representatives on such a broad, bipartisan basis.

The adverse cattle marketing environment of the last several years has prompted many in the industry to take a close look at the LMR statute and implementing regulations to see if changes could be made to strengthen the program. During our organization's convention in July 2021, NCBA established a working group of cattle producers from across the country to evaluate market transparency tools, including several provisions of LMR. The working group will deliver its recommendations to our Live Cattle Marketing Committee in January 2022, and NCBA may adopt new policy advocating changes to LMR at that time. In the meantime, our priority is to keep the program viable and functioning with full statutory authority.

Finally, we strongly oppose using LMR as a vehicle for legislative proposals which do not enjoy vast support within the industry. LMR has historically been reauthorized after exhaustive stakeholder engagement, and only those changes enjoying the broadest favor have been adopted into the final version of the bill. It is too critical a program to be jeopardized by frivolous riders and personal agendas. NCBA urges

Congress continue the tradition of seeking stakeholder agreement as discussions occur on a full, 5 year reauthorization of LMR.

Thank you.

Response from François Léger, Owner, FPL Food; on behalf of North American Meat Institute

Question Submitted by Hon. Jim Costa, a Representative in Congress from California

Question. If Livestock Mandatory Reporting is not reauthorized, what would the consequences be for livestock markets? Right now we have a short-term extension, does a long-term extension provide more stability for producers and markets? If so, do you have any specific request to be included in a 5 year reauthorization?

Answer. Under Livestock Mandatory Reporting (LMR) packers must report to USDA's Agricultural Marketing Service daily on the prices they pay to procure livestock, as well as slaughter data, net prices, actual weights, dressing percentages, and, for beef, the percent grading Choice, and more. Further, packers report all original sale beef transactions in both volume and price through the Daily Boxed Beef Report, twice daily.

AMS publishes 24 daily and 20 weekly cattle reports each week—and just added two more reports in August, the *Daily Direct Formula Base* cattle report, and the *National Weekly Cattle Net Price Distribution* report. The data reported are derived from myriad transactions; changing reporting requirements runs the risk of changing the underlying transactions and potentially moving markets.

When LMR authorization lapsed in the past, meat packers continued to voluntary report data to the U.S. Department of Agriculture (USDA). Packer reporting, however, is not the same as USDA publishing the information it receives and if LMR lapses it raises concerns about USDA's ability to publish report—creating an information void. This risk highlights the importance of a long-term reauthorization of LMR to provide certainty for all industry participants.

Another key consideration is that the Agricultural Marketing Act contains a strong confidentiality requirement that protects the reporting entities. Poorly conceived proposals to "loosen" confidentiality would risk exposing the strategic business decisions and market positions of reporting entities to the public, as well as those of the entities with which reporting entities do business.

Finally, since LMR's inception any policy changes in reauthorization have always been achieved through the consensus agreement of all stakeholders.

Response from Scott Blubaugh, President, Oklahoma Farmers Union; on behalf of National Farmers Union

Question Submitted by Hon. Jim Costa, a Representative in Congress from California

Question. If Livestock Mandatory Reporting is not reauthorized, what would the consequences be for livestock markets? Right now we have a short-term extension, does a long-term extension provide more stability for producers and markets? If so, do you have any specific request to be included in a 5 year reauthorization?

Answer. The continuation of Livestock Mandatory Reporting (LMR) is critical to maintaining price discovery in today's marketplace. If LMR were to lapse or be discontinued, there would be serious consequences for producers, and the marketplace would be generally harmed.

With the current limited competition in the marketplace, farmers and ranchers are already at a disadvantage when compared to the large meat packers, even with LMR in effect. Removing LMR completely would further reduce access to information about the transactions that move livestock markets and would further undermine independent producers' ability to plan and negotiate.

In previous instances when LMR lapsed during the mid-2000s, voluntary requests to meat packers were made by USDA. Most meat packers complied, but that is not to be expected or relied upon. Long-term extensions of LMR rectifies this uncertainty of compliance and leads to a more stable market for producers.

With these considerations in mind, a simple reauthorization or extension of LMR without additional, meaningful reforms to market transparency and fairness would be a disservice to family farmers and ranchers. The points I raised in my testimony, along with the viewpoints from some of my fellow witnesses, should be considered and included in the next continuation or expansion of LMR. Of particular note, efforts should be made to encourage participation in the cash market by implementing a minimum cash trade percentage. A cattle contract library should be created for producers to consult when entering into agreements, and there should be greater transparency in alternative marketing arrangements. Additionally, tougher pen-

alties should be implemented for those meat packers who fail to report or comply with LMR requirements, with fewer confidentiality loopholes.

Response from Scott Hays, Vice President, National Pork Producers Council

Question Submitted by Hon. Jim Costa, a Representative in Congress from California

Question 1. If Livestock Mandatory Reporting is not reauthorized, what would the consequences be for livestock markets?

Answer. If USDA is unable to continue any kind of publishing, the consequences would be immediate and severe. Producers would be left with few-to-no price discovery tools and would be effectively guessing in contract negotiations. Price volatility would increase dramatically as evidenced in the futures market, which would itself face decreased utility and increased premiums for farmers looking to hedge their production. Moreover, producers with existing marketing agreements often have portions of their contract based on LMR reportable data. A fair payout of an agreement could become a legal issue without the underlying data to reference. These potential issues are of particular importance now, as LMR is tied to USDA funding. Should a continuing resolution not be agreed to, a lapse in funding could result in no employees at USDA to report.

Should USDA be able to continue publication of the reports on a non-mandatory basis, in the short term, impact would be less dire. Most meat process[o]rs have systems in place that automatically report price data to USDA without the need for manual reporting. In some cases, a packer might not find it worth it (in terms of either man-hour or actual cost) to disable such a system. However, over time, the utility of LMR will surely diminish. New packers will be unlikely or significantly late to provide USDA with meaningful price data. Additionally, some packers may choose to withdraw entirely given enough time after a lapse in authorization—opening the door for manipulation of the voluntary data or, at minimum, suspicion of manipulation. Should this occur, LMR will no longer fulfill its purpose of providing accurate market averages and will lose its utility. Producers will need to enter new marketing agreements without solid price discovery information and will likely pay for this with reduced profits.

Additionally, there is some concern that USDA in either case may need to undergo entirely new rulemaking on LMR should it lapse. If this were to occur, that could itself create some unease when making new agreements due to an uncertainty of which data points may be available to base prices against.

Question 1a. Right now we have a short-term extension, does a long-term extension provide more stability for producers and markets?

Answer. Absolutely. Marketing agreements entered into by producers are consistently lasting longer than the authorization of Livestock Mandatory Reporting. This is to say that producers are often facing situations where they do not know if they will have the same price discovery tools when negotiating their next agreement. This can force some producers that are worried about LMR's continued publication to negotiate their agreements earlier than they might otherwise—leading to agreements that may be less reflective of the market environment once executed.

Question 1b. If so, do you have any specific request to be included in a 5 year reauthorization?

Answer. Yes, NPPC has a number of recommended edits to the Livestock Mandatory Reporting program detailed below. With that said, it is important to note that, while these modernizing edits would be extremely helpful to pork producers, they cannot come at the expense of a lapse in LMR authorization.

a. Amend section 212(12) definition of "Reporting Day"

Purpose: This amendment amends the current definition of "reporting day" to include any day on which a USDA employee is on shutdown or emergency furlough as a result of a lapse in appropriations.

Need: LMR data are the lifeblood of the hog and pork markets. Without them, producers, packers, processors, retailers and foodservice operators are in the dark about the value of hogs and pork products. There simply is no context for commercial decisions affecting thousands of businesses and millions of end-users. Without timely and transparent publicly available data, commerce can be significantly impaired. Past Administrations have suspended mandatory livestock reporting when there was a lapse in appropriations. Although the current Administration determined that mandatory livestock reporting was an essential service, there is a concern that a future Administration could reverse that determination. The amendment is needed to ensure that timely and accurate in-

formation about the number of hogs, the volume of product being traded, and the prices of all items continues to be available even during a government shutdown.

b. Amend section 231(10) definition of "Noncarcass Merit Premium"

Purpose: This amendment amends the current definition of "noncarcass merit premium" to also include discounts. Under current law only an increase (premium) in the base price of swine is required. The amendment will require decreases (discounts).

Need: The change provides for the possibility that any pricing mechanism that offers premiums for certain non-carcass characteristics could also involve discounts.

c. Amend section 231(13) definition of "Packer"

Purpose: This amendment amends the current definition of "packer" to require that the Secretary Agriculture require a new processing plant which meets the definition of packer to begin reporting LMR data within 6 months of beginning slaughter operations

Need: Under current law there is no time requirement specified for determining the packer status of a new processing plant or person or requiring the new plant or person to begin reporting. In the past although USDA has the information needed to make the determination, the process of including new plants in the LMR system has lagged. The amendment is needed to ensure that within 6 months of beginning operations information from a new processing plant will be included in price reports. A 6 month deadline allows plants to know clearly when they must start reporting and USDA–AMS to know clearly when they should begin enforcing the requirements of the law. Providing a statutory deadline allows AMS to implement the requirements of MPR and avoid appearing arbitrary or punitive.

d. Amend section 231(22) definition of "Swine or Pork Market Formula Purchase"

Purpose: This amendment amends the current definition of "swine or pork market formula purchase" to separate into two distinct definitions the swine market formula purchase (which is based on a market for swine) from a pork market formula purchase (which is based on a market for pork or a pork product). Additional technical and conforming amendments are made to other definitions and program operations to reflect this change.

Need: The amendment is needed to provide clarity about how formula prices for hogs are derived. When LMR was passed in 1999, swine and pork market formulas were lumped together because (1) there were very few hogs priced off the cutout value or other pork valued, (2) negotiated prices and the cutout value were highly correlated, and (3) it simplified reporting in the new program. Under current industry practices, neither (1) or (2) still apply. The use of cutout value as the base price for hog formulas has grown dramatically in recent years but the extent of that growth cannot be seen because the number of animals priced off the cutout and the value of those animals is masked by adding them in with swine market formulas. In addition, the cutout value and negotiated hog prices are far less correlated now meaning that a summation category represents neither sub-group well. Having this information reported and published separately will be useful to the entire industry. While simplicity and efficiency in reporting is still a desirable goal, the programming changes for reporting that are required to implement this separation should not be onerous.

e. Amend section 232(c)(1)(C) the Daily Reporting of Barrows and Gilts of the Prior Day Report

Purpose: This amendment amends the information required from the prior business day of a packer relating to slaughter data for the total number of barrows and gilts slaughtered to include two additional items of information. The first is information concerning the average noncarcass merit premiums or discounts, and the second is information concerning the average net price without the average noncarcass merit premiums or discounts.

Need: At the time that the Act was passed in 1999, noncarcass merit premiums were generally small and fit into very few categories, primarily transportation, specified genetics, and volume. Today, these premiums/discounts cover characteristics such as gestation stall free, antibiotic-free, ractopamine-free, among others. In addition, some of the premiums are large. Knowing this information on daily basis instead of weekly provides significantly more transparency to current hog pricing. USDA–AMS has implemented the practice of

placing any lot of animals that has noncarcass merit premiums in the Other Purchase Arrangement category regardless of how the base price of the lot is determined. Including noncarcass merit premiums and the price net of these premiums in the data required from packers will allow USDA–AMS to correctly categorize every purchase based on the method of price determination (*i.e.,* negotiated, swine market formula, pork market formula, negotiated formula and other market formula), increasing the accuracy of both hog purchase volumes and the prices net of noncarcass merit premiums/discounts.

f. Amend section 232(e) the Weekly Noncarcass Merit Premium Report

Purpose: This amendment amends the weekly noncarcass merit premium report to also include noncarcass discounts.

Need: This amendment is needed to conform the weekly non-carcass merit premium report with the new daily non-carcass merit premium/discount information required.

g. Amend section 233 the Mandatory Reporting of Wholesale Pork Cuts

Purpose: This amendment will require the mandatory reporting of carcasses. Under current regulations, the definition of wholesale pork cuts does not include carcasses.

Need: The amendment is needed to improve the provision of information to both producers and packers. The 2008 Farm Bill directed USDA to conduct a study of the thin wholesale pork reporting, which was a voluntary reporting activity at the time. USDA concluded in the Wholesale Pork Reporting report that there would be benefits from a mandatory reporting program. When LMR was reauthorized in 2010, and a provision for mandatory reporting of wholesale pork cuts was added, the Secretary conducted a negotiated rulemaking to make the required regulatory changes for mandatory wholesale pork reporting. At that time there were few carcasses traded. Consequently, USDA–AMS did not include pork carcasses in its regulatory definition of Wholesale Pork Cuts. Now, however, there is a significant volume of pork that moves, especially into export markets, in the form of 3- and 6-piece carcasses. The omission of "pork carcasses" from the wholesale pork definition results in a deficiency in the report. The amendment clarifies that "pork carcasses" are included in the reporting of wholesale pork cuts.

h. Additional Report language on FOB Omaha

When regulations for LMR were finalized in 2012, maintaining FOB Omaha prices was important so market participants could clearly see any differences that might exist between the FOB Omaha prices and the FOB plant prices. Those difference are now clear. In addition, few, if any, market participants use the FOB Omaha series. FOB Omaha prices is produced by AMS by adjusting FOB plant prices for transportation costs, thus taking up scarce manpower. Dropping the system will have no impact on the market and free AMS resources for more productive work. Therefore, the Committee expects USDA to reform the regulations accordingly and allow USDA–AMS to more efficiently utilize their resources.

Response from Brad Boner, Vice President, American Sheep Industry Association

Questions Submitted by Hon. Jim Costa, a Representative in Congress from California

Question. If Livestock Mandatory Reporting is not reauthorized, what would the consequences be for livestock markets? Right now we have a short-term extension, does a long-term extension provide more stability for producers and markets? If so, do you have any specific request to be included in a 5 year reauthorization?

Answer. Livestock Mandatory Price Reporting is critical to the ability of sheep producers to make informed marketing decisions and the lapse of this reporting would significantly hamper price discovery in the sheep and lamb market, placing producers, lamb feeder, processors and industry stakeholders at a severe disadvantage in marketing lambs and lamb meat products. While we are appreciative of the current short-term extension, a long-term full reauthorization benefits producers and market participants who in turn know they can count on continued, accurate and timely reporting of market information, encouraging competition and transparency in the marketplace while ensuring that cutting access to market information isn't used as a negotiating tool for individual priorities. For our industry, LMR is the sole source of market information on imported lamb which is critical as imports in 2021 accounted for an estimated 68% of the total lamb and mutton supply

in the U.S. The sheep industry supports the full reauthorization of LMR and asks Congress and USDA to work collaboratively to address the current confidentiality guidelines to provide sheep producers with more, not less, marketing information.

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