

S. HRG. 119-408

**PERSPECTIVES ON THE FERTILIZER INDUSTRY:
ENSURING A STABLE AND AFFORDABLE
SUPPLY FOR AMERICAN PRODUCERS**

HEARING
BEFORE THE
**COMMITTEE ON AGRICULTURE,
NUTRITION, AND FORESTRY**
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PERSPECTIVES ON THE FERTILIZER INDUSTRY: ENSURING A STABLE AND AFFORDABLE SUPPLY FOR AMERICAN PRODUCERS

TUESDAY, MAY 12, 2026

U.S. SENATE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
Washington, DC.

The Committee met, pursuant to notice, at 3 p.m., in Room 106, Dirksen Senate Office Building, Hon. John Boozman, Chairman of the Committee, presiding.

Present: Senators Boozman [presiding], McConnell, Hoeven, Ernst, Marshall, Justice, Grassley, Thune, Fischer, Moran, Klobuchar, Smith, Luján, Warnock, Welch, Schiff, and Slotkin.

STATEMENT OF HON. BOOZMAN, U.S. SENATOR FROM THE STATE OF ARKANSAS, CHAIRMAN, U.S. COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

Chairman BOOZMAN. Thank all of you very much for being here today. As we all know, this hearing is being held during what continues to be a very precarious time across America's agricultural economy. I would call that an understatement. I would say it is a generational event.

While input prices for our producers have been stubbornly high for the past several years, this situation has recently become more acute as farm bankruptcies increase, fuel prices remain high, and interest rates have yet to come down. The cost of fertilizer, the topic of today's hearing, has also gone up, and I look forward to hearing from our witnesses about the current state of the fertilizer industry, how these high prices directly affect our producers, and what potential solutions exist for Congress to ensure a stable and affordable supply of this important crop input. Again, this is a national security issue.

This is not a simple problem to address, as fertilizer is not a single, uniform input. Nitrogen, phosphate, and potassium, commonly referred to as N, P, and K, present a complicated picture of global supply chains that have been affected by the war in Ukraine, trade disputes that have also resulted in countervailing duties, and the recent conflict in the Middle East. Today's hearing is an important opportunity to learn more about how these factors, and others, directly impact producer costs.

I want to commend the Trump Administration for the attention it has given to high fertilizer prices. Over the last couple months, the Administration has responded by waiving the Jones Act and re-

focusing the Fertilizer Product Expansion Program to ensure projects funded under this program are up and running as soon as possible.

In November, U.S. Department of Interior Secretary Doug Burgum also announced the addition of phosphate and potash to the crucial minerals list, which will streamline regulatory hurdles and increase domestic production of these fertilizer inputs. These minerals' important to food security, which is national security, were clear, and this was a welcome and much-needed change.

U.S. Department of Agriculture Secretary Rollins has continued to engage with our producers and brought together her colleagues from across the Administration to determine what additional steps they can take to provide relief.

Several Members of this Committee have also proposed legislative solutions to address higher fertilizer prices, and I welcome hearing from our witnesses about proposals. How they may help; and what additional actions Congress and the Administration might take to ensure a reliable and accessible affordable supply of fertilizer for hardworking American farmers.

With our colleagues in the House successfully passing a bipartisan farm bill 2.0, I look forward to engaging with the Members of this Committee on what we learn today to ensure a Senate version addresses the urgent needs of agriculture. Congress owes our Nation's producers an updated farm bill that will complement the improvements we made last year in the One Big Beautiful Bill, and I am committed to making that happen.

While the proposals and solutions we hear about today may help increase production of fertilizer and bring down prices in the long-term, in the immediate future, Congress must provide additional assistance to supplement what USDA provided with the Farmer Bridge Payments and the Assistance for Specialty Crop Farmers programs, to ensure producers have the working capital available to see them through the 2026 crop season.

I have been working with my friend, Senator Hoeven, to advocate for this assistance and appreciate President Trump's acknowledgment of this need when a larger supplemental funding package is requested.

Before I turn it over to Ranking Member Klobuchar for her opening statement, I ask unanimous consent that statements sent to the Committee for this hearing be included in the record, including an op-ed written by USDA Secretary Rollins and a statement submitted to the Committee by Deputy Secretary Vaden. Without objection, so ordered.

[The letters can be found on pages 126–137 in the appendix.]

Chairman BOOZMAN. Again, I thank my colleagues and our witnesses for being here today.

With that, I now turn to Ranking Member Klobuchar for her opening statement.

STATEMENT OF HON. KLOBUCHAR, U.S. SENATOR FROM THE STATE OF MINNESOTA

Senator KLOBUCHAR. Thank you very much, Chairman Boozman, and thank you for holding this important hearing today and for bringing such distinguished witnesses. In particular, I would men-

tion the farmers who have come to Washington in the middle of planting season to share their perspective. Thank you for doing that, including a number from Minnesota.

As we hear from our witnesses today, I would say that farmers need policies that encourage new investment, reduce supply disruptions, and improve transparency in the fertilizer market. We know there are many reasons that fertilizer prices are astronomically high. They were high before the war started, but I will note that there is a direct link between recent escalations and this war.

In the months since the President started the war, with no consultation or authorization from Congress, fertilizer prices—urea has spiked more than 40 percent, and the cost of diesel has hit near record highs in Midwest states. Now, why? Well, nearly half of the global urea goes through the Strait of Hormuz. Thirty percent of ammonia goes through the Strait of Hormuz.

Yet even before the war, farmers were walloped by the presence of across-the-board tariffs. An analysis by North Dakota State University—you may not like the result, go Bison, here is what it found—found that IEEPA tariffs added nearly \$1 billion in costs to critical inputs like fertilizer, seed, machinery, and chemicals from February through October of last year.

I was at the Supreme Court argument, and as you are well aware, the Supreme Court found the tariffs illegal. Last week, the Court of International Trade ruled against the President's authorities to use a different statute for these tariffs. Again, they are not targeted. They are across the board, and it has led to part of these problems.

Just last month, I was at a family farm in Cannon Falls, Minnesota, where I met with corn and soybean farmers who are facing escalating costs this planting season. Many of them said stubbornly high fertilizer prices have been an issue for years in a market with little competition. Some of them were able to lock in before the war, not knowing it was going to happen, but others now are even in worse shape.

Beyond the geopolitical challenges, there are other reasons: farmers have just a handful of domestic suppliers to choose from, with little transparency about the prices that they ultimately pay. In 2024, just four fertilizer companies accounted for 77 percent of U.S. nitrogen fertilizer sales and all domestic potash and phosphate. That is why I partnered with Senator Thune, who is here with us, and farmers in our states, to introduce the Fertilizer Price Transparency Act to create a mandatory price reporting structure at USDA to ensure farmers and co-ops have adequate market information on fertilizer components, especially at times when we see major supply chain shocks. We believe getting this information out there would be very helpful.

Aside from price transparency, we need to increase domestic fertilizer production and storage. Senator Marshall, who is also with us, and I have introduced the Homegrown Fertilizer Act to do just that, so we can ease our dependence on imports. I know Senator Grassley and others on this Committee have introduced other pieces of legislation to address these issues.

Acting now will ultimately help stabilize prices and give farmers the certainty they need. It is going to have to be a combination of

things: ending the tariffs, or reducing them, or making them much more targeted, ending this war, finding a way to resolve it, so the Strait of Hormuz is open again, and then going at this long-term systemic problem about the lack of competition in this area.

Thank you to our witnesses today.

Chairman BOOZMAN. Thank you. We will now introduce our witnesses.

We are going to Senator McConnell first to introduce our witness from Kentucky.

Senator MCCONNELL. Thank you, Mr. Chairman. You know how politicians frequently refer to each other as “my friend” or “my good friend.” It is usually not true.

[Laughter.]

Senator MCCONNELL. Frequently, we say that about some of our constituents. I have got a prepared text here. I am going to ask the Chairman to put it in the record.

[The letter can be found on pages 138–141 in the appendix.]

I want to tell you about Eddie Melton. We have been literally friends for decades. We have worked together on issue after issue after issue for a big part of the 42 years I have been here. He is bright as hell and is extremely creative.

Example, a year or so ago, he came to me and said, “I’m really, really concerned, as I’m sure we all are, about the loss of farmland.” Not only did he say he was concerned about it, he had an idea about how to make it less likely to happen, which was to give a tax relief proposal for people who bought a farm if they agreed to continue farming for at least 10 years.

I took that idea and put it in the Big Beautiful Bill. It is law. If Eddie had not thought of that it would not have happened.

I can tell you, he has made a difference, not only for Kentucky agriculture but for agriculture all across the country. I just wanted to come by, Eddie, and thank you for all you have done.

Thank you, Mr. Chairman.

Chairman BOOZMAN. Thank you very much. Senator Klobuchar.

Senator KLOBUCHAR. Thank you very much, Mr. Chair. It is my pleasure to welcome Andy Green to the Committee today. Mr. Green is a partner in Center Market Strategies, a bipartisan firm dedicated to keeping markets fair, and ensuring a seat at the table for businesses of all sizes. He previously served as the first senior advisor for Fair and Competitive Markets at the USDA during the previous administration, where he spearheaded efforts to promote competitive markets across agriculture.

In addition, he worked for the Public Company Accounting Oversight Board, the U.S. Securities and Exchange Commission, and started his career in D.C. here in the Senate for Senator Merkley of Oregon. Thank you for joining us today.

Chairman BOOZMAN. Senator Thune.

Senator THUNE. Thank you, Mr. Chairman, and by the way, thank you for shining a light on this really important subject. I am glad we are having this hearing. We need to get to the bottom of one of the biggest challenges farmers are facing these days, and that is the cost of inputs, particularly fertilizer.

It is my pleasure, Mr. Chairman, to introduce to the Committee Trent Kubik. He is not only the current President of the South Da-

kota Corn Growers but also a farmer and a rancher, along with his wife and parents. They farm near Hamill, South Dakota, raise corn, soybeans, alfalfa, and milo, alongside their cow-calf operation. By the way, for any of you who have been to South Dakota, in that part of South Dakota, they also have a very, very abundant pheasant supply.

Trent graduated from South Dakota State University with a degree in agronomy. He and his wife Shannon have two sons. He stays very busy as a certified crop advisor and as a volunteer—FFA and 4-H volunteer, and he is a very active member of his church. I know also that he is a person—a man—of great courage because he is a diehard Green Bay Packer fan in Viking country, which is a distinction that we share, by the way.

I am very pleased to have him here today and look forward to hearing a South Dakota perspective on this issue. Trent, welcome. Thank you, Mr. Chairman.

Chairman BOOZMAN. Corey Rosenbusch serves as The Fertilizer Institute's President and CEO, where he is responsible for leading efforts to advance the fertilizer industry. Before joining TFI, Mr. Rosenbusch served as President and CEO for the Global Cold Chain Alliance and worked for The Borlaug Institute. Mr. Rosenbusch holds a degree in international development from Harvard University, a bachelor of science degree in agriculture education from Texas A&M. That is a combination. We appreciate you being here very, very much. Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman. I am pleased today to introduce Mr. Joshua Westling, who is here today as a witness for this Committee on a very, very important subject. Mr. Westling is leading the development of Project Meadowlark, a new fertilizer plant in Gothenburg, Nebraska. This facility is projected to produce 5,000 tons of liquid fertilizer and reach commercial operation. I am afraid not until 2029.

Before working on Project Meadowlark, Mr. Westling led the development and construction of an anhydrous ammonia plant in Geneva, Nebraska, that became one of the few greenfield nitrogen fertilizer facilities built here in this country.

Mr. Westling, we are so happy to see you here today, and I look forward to your comments. Thank you.

Chairman BOOZMAN. Thank you. Mr. Green, you are recognized.

STATEMENT OF ANDY GREEN, PRINCIPAL AND SENIOR ADVISOR, CENTER MARKET STRATEGIES, WASHINGTON, DC

Mr. GREEN. Thank you, Chairman Boozman and Ranking Member Klobuchar, for the opportunity to testify this afternoon.

We are here because the American farmer is hurting. For more than five years, farmers have endured both price spikes and sustained higher prices, squeezing their margins and affecting their planting choices.

It is well known that fertilizer markets are highly concentrated. Indeed, one relatively recent merger created a giant that controls six percent of one type of fertilizer and 30 percent of the market for another. Amazingly, Federal Trade Commission economists took a victory lap barely two years after its completion to say everything is fine. That was a mistake.

What are the pillars of building fair, more competitive fertilizer markets? First, enforcement. I am pleased to see this Administration has prioritized investigations into agricultural competition around both agricultural inputs and cattle markets. I hope their efforts yield fruit. I would be pleased if they were building on the groundwork laid out previously, for example, with the Agri Stats case.

High, sustained increases in profits should also be cause for anti-trust scrutiny, particularly in light of market shocks that are repeating today. To that end, it may be appropriate to reconsider those recent mergers that have helped form this highly concentrated sector. Effective enforcement of the law also requires funding and staffing at agencies, including USDA.

Second, more transparency would be beneficial for a more accountable fertilizer market. Kudos to the bipartisan sponsors of legislation to enhance USDA's role in providing additional transparency, including, in particular, S. 4152, the Fertilizer Transparency Act of 2026.

Public reporting can highlight, and in some cases, deter problematic trends, for example, where there is a disconnect between price and underlying supply and demand. In that way, transparency can lead to beneficial outcomes for farmers even beyond their use of the information itself. I also commend the legislation for its use of modern dashboards, and the bill appropriately preserves the ability for the data to be used for enforcement purposes. Additionally, regular public company disclosures should be preserved and enhanced as valuable for both investors' and for farmers' risk management.

Third, investment in an important tool for enhancing competitive markets. The Fertilizer Production Expansion Program, FPEP, was USDA's \$900 million commitment to support American-made sustainable fertilizer capacity in the face of similarly sharply increasing prices and long-term trends toward concentration. Over the course of three years, FPEP invested over \$778 million in more than 100 projects across 39 states. That adds up to an estimated 12 million tons of new production online and more than 1,500 jobs. More than \$100 million remains available to the program, and more via the CCC.

Funding for USDA's Rural Cooperative and Business Services and the Agricultural Marketing Service are important for these types of efforts and others that benefit more choices for farmers.

Fourth, consumers can support pro-competition initiatives incentives upstream for farmers. Clear labels for consumers help producers that actually do the hard work of delivering value-added products that consumers want. In fertilizer, opportunities may exist to align America's desire for healthy food and a clean environment with competition and resiliency in fertilizer. Expanding bio-fertilizer and nutrient recycling options for farmers should be part of the equation.

Fifth and finally, economic research and academic legal analysis are foundational aspects of building and maintaining effective market competition. Government investment in objective, unbiased research, such as the land-grant university system, helps policymakers identify trends and design interventions to restore market competitiveness.

I want to particularly highlight the importance of research into seed resiliency. New varieties can help support more efficient fertilizer choices. To that end, special attention should go to ensuring the maintenance and staffing for the Agricultural Research Service's National Plant Germplasm System to avoid the loss of irreplaceable genetics, including in corn.

In conclusion, more can and should be done on a bipartisan basis to enhance competition in the fertilizer sector so that America's farmers can compete based on hard work, smart investments, and nature's abundance. Thank you very much.

[The prepared statement of Mr. Green can be found on pages 42–59 in the appendix.]

Chairman BOOZMAN. Thank you. Mr. Kubik.

**STATEMENT OF TRENT KUBIK, PRESIDENT, SOUTH DAKOTA
CORN GROWERS, HAMILL, SD**

Mr. KUBIK. Chairman Boozman, Ranking Member Klobuchar, and Members of the Senate Agriculture Committee, thank you for the opportunity to speak here today. My name is Trent Kubik. I am a farmer from Hamill, South Dakota, and President of the South Dakota Corn Growers Association.

I farm in an area of the country where weather varies much more than normal, and more often than not, we are threatened by lack of rainfall. Due to this, we try and limit the amount of fertilizer we purchase and apply at the start of the year to determine if we need more while the crop is growing, which, in turn, does not allow us to early book and/or prepay all of our fertilizer needs.

In the first few months of this year, we were not in a position to book or prepay for any fertilizer, so we expected our costs were going to be higher than normal, as we would be purchasing closer to peak demand season, but now we are left with costs nearly doubling. This leads me to ask, what is causing fertilizer to increase in price?

Despite the cost of natural gas in the U.S. being relatively cheaper than any fertilizer-producing area in the world, the price of nitrogen fertilizer in the U.S. has continued to rise in concert with prices in areas with higher-costing natural gas. The resulting rise in margins for U.S. manufacturers should, in theory, encourage expansion of production and higher capacity utilization for the industry. Instead, market power has allowed manufacturers to maintain higher prices at the expense of the U.S. farmer.

In fact, last week, a Bloomberg article showed the recent earning reports indicate record profits for fertilizer companies. When my input price goes up, my profit margin shrinks. I will be frank. It is unclear to corn farmers in South Dakota how the opposite is possible for the fertilizer industry.

What I do know is that profit increase illustrate an industry that does not have to increase my fertilizer prices but can do so. In my written testimony, I also included analysis that indicated the use of market power to directly impact fertilizer pricing. An analysis conducted in 2024 illustrated the producer price index, measuring the change in price of goods sold, both for corn and nitrogen, indicating that nitrogen fertilizer prices nearly precisely tracked increases in corn prices.

What is the structure of this marketplace? Over the past 40 years, fewer and fewer fertilizer firms serve the U.S. farmer, due in no small part to industry mergers. By almost any measure, these are highly concentrated markets.

In addition, large manufacturers appear to have developed and to own distribution networks. For instance, Nutrien operates the largest direct-to-grower distribution network with distribution points and retail locations. Unfortunately, there is limited publicly available information regarding distributors and wholesalers.

It is important to note that vertical integration has not led to the efficiency gains passed on to growers and consumers. Instead, our experience is that the integration has resulted in the largest fertilizer companies locking up and leveraging distribution channels, entrenching their dominant position, and extracting excessive profits from farmers and consumers. Market power allows even the simple act of storing these products to be turned against the farmer.

For instance, it is my understanding that the fertilizer manufacturers are able to park barges of product and hold onto inventory. In addition, under a scenario where there are only two market participants, the first market participant could set the price for a barge of fertilizer, with the second one following at that price. It is easy to see how this might occur.

We also need the ability of manufacturers to exert pressure downstream on wholesalers and retailers to be mitigated. As I have already mentioned, there is not significant amounts of information available to the public about wholesalers. I have heard credible reports of practices that undoubtedly could affect farmers, such as the delay in availability of fertilizer books by a retailer, but it is difficult to assess what is really happening, due to the opaque nature of parts of that supply chain.

Two key pieces of legislation would be helpful to begin to provide the type of data needed to assess the use of market output control. The Fertilizer Transparency Act of 2026 would increase the data available to help improve market signals by providing public access to meaningful pricing data and give farmers a tool to help plan for these costs. Ultimately, this legislation will make the market for key farm inputs more transparent and therefore represent a step toward making the market more competitive. It also might help provide data that would aid in the analysis of whether market control has been used to limit the supply of fertilizer. We greatly appreciate South Dakota Senator John Thune and Ranking Member Klobuchar for introducing this much-needed step toward market transparency.

In addition, the Fertilizer Research Act authorizes a study on fertilizer competition trends and pricing. This bill also increases transparency and would provide much-needed information to better assess the marketplace, including key data such as sectors capacity utilization rates. We thank Senate Judiciary Chair Chuck Grassley and Senator Tammy Baldwin for introducing this bill.

Simply put, farmers need more competition in this marketplace. We thank the U.S. Department of Ag Deputy Secretary Stephen Vaden for his significant interest in this area and call upon the federal agencies that signed the September 2025 Memorandum of Un-

derstanding to take meaningful steps toward solutions to concentration in this subsector. Federal antitrust laws exist for precisely this reason, to promote and sustain competition, the lifeblood of our economy.

Increased competition for more participants in the fertilizer manufacturing space is the only thing that can deliver meaningful and durable price relief.

Thank you again for the opportunity to be here and thank you to Chairman Boozman and Ranking Member Klobuchar for taking up such a critical issue of fertilizer. I look forward to your questions.

[The prepared statement of Mr. Kubik can be found on pages 60–71 in the appendix.]

Chairman BOOZMAN. Thank you very much. Mr. Melton.

**STATEMENT OF EDDIE MELTON, PRESIDENT, KENTUCKY
FARM BUREAU FEDERATION, LOUISVILLE, KY**

Mr. MELTON. Chairman Boozman, Ranking Member Klobuchar, and Members of the Senate Ag Committee, my name is Eddie Melton and I am fifth-generation row crop and beef cattle farmer from Webster County, Kentucky, and I currently serve as President of Kentucky Farm Bureau. It is an honor to be with you today to speak on behalf of the farmers of Kentucky as well as the 470,000 Kentucky Farm Bureau member families.

My family has been farming in Webster County since 1900, when my great-great-grandfather purchased our farm. During my lifetime, I have helped bring in more than 50 years of crops. We typically raise corn, soybeans, canola, wheat, and beef cattle. My business partner, Patrick Howard, and I made a decision last August to not plant wheat and canola, due to the increased fertilizer price. This is the kind of decisions farmers across the country have had to make.

This hearing comes at a critical time as we assess the current state of the farm economy and the ongoing challenges facing American agriculture. Today's fertilizer price challenges do not begin with the recent conflict in Iran. While global tensions often draw attention to input markets, prices for fertilizer have been elevated for years. Though the current crisis is not new, disruptions in the Strait of Hormuz have, beyond a doubt, exacerbated the problem. The shipping disruptions contributed to an increase in the price of nitrogen fertilizer. The unpredictability in the region has led to concerns about availability, not for just this current crop year but also for next year, as well.

Since February, we have seen a 33 percent rise in anhydrous prices, a 55 percent rise in urea prices, and a 25 percent increase in liquid nitrogen. All the while, corn prices have declined from \$7 a bushel in 2022 to approximately \$4.50 per bushel today. Meanwhile, many farmers are operating with little or no working capital, limiting their ability to manage risk or invest in future production.

In the first quarter of 2026, 86 farms have already filed for Chapter 12 bankruptcy, including 25 of those in the southeastern region.

Last month, American Farm Bureau Federation conducted a Fertilizer Availability Survey of more than 5,700 farmers and ranchers nationwide. The results highlight significant challenges in fertilizer access. Affordability challenges are especially acute in the South, with roughly 78 percent of the respondents indicating that they were unable to afford all the fertilizer they need. In my home State of Kentucky, just 29 percent of farmers were reported to be able to prebook fertilizer, with almost 72 percent stating that they could not afford all the fertilizer that they needed this growing season.

Addressing these challenges requires both immediate and long-term action. In the near term, greater transparency in the fertilizer market and ensuring farmers have access to the fertilizer they need to get through this growing season is essential. We appreciate the efforts of the Administration so far, but we continue to call on the President and Congress to do everything in their power to increase availability of fertilizer and ease the price burdens on farmers this growing season.

Over the longer term, the United States must strengthen its domestic fertilizer production capacity. We are grateful to the Administration, especially Secretary Rollins and the team at USDA, for the work on this issue. Expanding domestic production would improve supply reliability and help moderate price volatility over time.

These challenges facing agriculture today are the result of sustained economic pressure that is reshaping the farm economy. According to the last USDA census, we lost more than 20 million acres of farmland and almost 200,000 farms nationwide. If farm closures, farmland loss, and consolidation continue, the long-term structure of American agriculture will begin to change. Ensuring that producers have access to affordable inputs and fair, transparent markets is critical, not only for their operations but for the long-term stability of American agriculture and national food security.

For producers operating on thin margins, there is no flexibility to wait for longer-term solutions. That is why near-term support matters. Congress should act now with additional economic assistance to help farmers manage today's cost pressures to prevent further financial strain and stabilize operations while longer-term fixes are put in place.

Chairman Boozman, Ranking Member Klobuchar, and Members of the Committee, thank you for the opportunity to speak to you today as both as a farmer and as President of Kentucky Farm Bureau. This Committee's work is so important to agriculture and the farm economy to ensure the reliable supply of food, fiber, and fuel for generations to come. Thank you.

[The prepared statement of Mr. Melton can be found on pages 72–80 in the appendix.]

Chairman BOOZMAN. Thank you. Mr. Rosenbusch.

**STATEMENT OF COREY ROSENBUSCH, PRESIDENT AND CEO,
THE FERTILIZER INSTITUTE, ARLINGTON, VA**

Mr. ROSENBUSCH. Thank you, Chairman Boozman, Ranking Member Klobuchar, and Members of the Committee.

The Fertilizer Institute represents manufacturers, importers, wholesalers, and retailers who serve America's farmers. There are over 500 producers of fertilizer globally, and the United States is one of three countries that has more than 20 unique companies producing fertilizer. Half of all the crop yields in the world today are only possible through the use of these crop nutrients. Thank you, farmers, because without farmers, there would be no fertilizer industry.

I grew up in a small Texas town where my dad was my FFA advisor, and it was really FFA that broadened my horizons to leave rural America and move to Indonesia, where I spent three years helping smallholder farmers. It was really that experience that shaped my view on agriculture. Whether you farm in Indonesia or in Iowa, farmers are highly exposed to global markets.

Fertilizer is one of those global markets, which is not a single product, but they are typically represented by three macronutrients, nitrogen, phosphate, and potash, each with its own unique market dynamics.

The United States does have significant production of nitrogen and phosphate, and while we do have some potash production, we import over 98 percent. The U.S. only accounts for seven percent of total global fertilizer production, and we are a net importer of fertilizer. Over 90 percent of all fertilizers applied in the world are actually used outside of the United States.

We also have one of the world's most sophisticated logistics systems to enable large-scale delivery of fertilizer. That infrastructure helps support strong competition and options for farmers, from both domestic and international suppliers to the market.

Please hear this. Fertilizer is a globally traded commodity that is subject to fierce competition and global supply and demand.

To understand that supply and demand, we really have to begin with geopolitics, starting with Iran. The closure of the Strait of Hormuz impacted about 34 percent of globally traded urea, 20 percent of phosphate, and half of the world's sulfur exports. Iran itself is actually the second-largest exporter of urea, with about 12 percent of the marketplace. Twenty percent of the natural gas is supplied from the region, and natural gas is the feedstock, of course, for all nitrogen fertilizer.

The Strait is really only part of the story. There have been 31 ammonia plants in the region that have curtailed production or have been damaged during the conflict. Another 49 plants in India and South Asia were also shuttered due to disruption of their natural gas supply from the region. Even with the Strait reopening, we do not know the extent of the damage to those production facilities.

These issues really just exacerbated what was already a very tight global supply. China, who is the world's largest producer of fertilizer, with about a third of all nitrogen production and 43 percent of the global phosphate supply, are currently restricting all of their exports. Twenty Russian nitrogen plants have been damaged due to Ukrainian drone strikes, and Russia also has implemented an export ban on their fertilizer, or restriction.

At the same time, we are also experiencing strong demand for fertilizer. For example, in India, the world's second-largest con-

sumer of fertilizer behind China, their Federal Government procures their fertilizer. They then heavily subsidize it to keep prices low for their farmers. Because a significant volume of urea was stranded behind the Strait, India recently did another urea tender for 2.5 million metric tons of urea, at nearly \$1,000 per metric ton.

We recognize that this is a very challenging and frustrating time for our farmers, that are already experiencing very low crop prices. That is why we would like to be a partner, to develop solutions.

In the interest of time, I will refer to my written testimony for some of those solutions, but we support policies that bolster domestic supply. Ammonia facilities can take more than five years and cost \$4 to \$5 billion to build, or a decade or more for development of a potash or phosphate mine.

We also support transparency. Farmers need a reliable source of data and market information. We have proposed the creation of a crop input economist at USDA that can analyze price information and supply factors to aid farmers in their decision-making.

Even with these policy solutions, I want to be clear that fertilizer is a globally traded commodity. While we cannot directly influence prices, we can produce productive policies to bolster domestic supply that mitigates geopolitical risks for the American farmer. Thank you.

[The prepared statement of Mr. Rosenbusch can be found on pages 81–116 in the appendix.]

Chairman BOOZMAN. Thank you. Mr. Westling.

**STATEMENT OF JOSHUA WESTLING, CEO, J. WESTLING & CO.,
LLC, OMAHA, NE**

Mr. WESTLING. Chairman Boozman, Ranking Member Klobuchar, Members of the Committee, thank you, and Senator Fischer, thank you for the introduction.

My name is Joshua Westling. I am the Founder and CEO of J Westling & Company, and I am leading the development of Project Meadowlark, a new domestic fertilizer complex in Gothenburg, Nebraska. I am the only developer of new domestic fertilizer capacity testifying today, and I want to give you a candid view from the front line.

Six years ago, I started working on this project because the fertilizer supply problem in our region was getting worse, and nobody was solving it. Nebraska is consistently one of the largest agricultural markets in the United States, with farm cash receipts approaching \$40 billion annually, and we are one of the largest markets for UAN and ATS in the country, yet local production of nitrogen fertilizer is minimal relative to what we consume. The cost of moving fertilizer to where it is needed and the consequences when it does not arrive on time are borne by our farmers. Very often, they are also exposed to supply disruptions, thousands of miles away from their operations.

Project Meadowlark helps change that. Once it reaches commercial operation in 2029, it will produce 365,000 tons of UAN per year, 140,000 tons of ATS, and 52,000 tons of diesel exhaust fluid. The plant is fully integrated. We produce ammonia as an intermediate, but every pound is converted onsite into products our farmers and truckers actually use.

This is the second greenfield nitrogen fertilizer plant I will have developed. When Fortigen came online in 2018, it was one of only three greenfield nitrogen fertilizer plants of meaningful scale built in the United States in over 30 years. Project Meadowlark will be the fourth. My team and I have done this before.

The total budget for this project is over \$1 billion dollars. We have raised over \$50 million in predevelopment capital to date, the substantial majority from regional investors, farmer-aligned partners, and members of our community. These are the people who understand the supply problem most directly, because they live it every season. They have always believed the Federal Government should have a role in solving this problem, but they also recognize the government often acts only in response to crisis, so they took the initiative. I am honored and humbled by their support. I take very seriously the responsibility of delivering what we say we will deliver. When farmers are putting their own capital into restoring domestic fertilizer production that is essential to our Nation's farm and food security, that is rural America trying to tell you something.

One challenge unique to fertilizer projects is that so little domestic nitrogen capacity has been built in the United States over the past several decades. Unlike sectors such as power generation or data centers, there are relatively few recent reference projects for institutional investors, lenders, engineers, and contractors to rely upon. As a result, substantially more diligence, engineering work, and development capital are required before large-scale, private capital can move with confidence. Early-stage funding, through any number of mechanisms, is one of the biggest areas of opportunity for any capital deployment program, new or pursuing.

I support the framework announced on April 29th by Secretaries Rollins, Lutnick, and Bergum, Administrator Zeldin, Director Hassett, and others as a serious response to a serious problem, and this Committee's bipartisan engagement is exactly what this moment requires. If domestic fertilizer production is truly a strategic infrastructure, then we need to finance and permit it like strategic infrastructure.

I want to use my remaining time to highlight three additional steps that would meaningfully strengthen American farm and food security. First, predictability and execution certainty. If domestic fertilizer capacity is truly a strategic priority then federal timelines must operate with the urgency that this priority requires. Clear and predictable timelines allow private capital to move faster on strategically important projects to come online sooner.

Second, coordination across agencies and programs. Large industrial projects move through multiple federal processes simultaneously. When agencies operate independently, delays compound and timelines stretch unnecessarily. Better coordination would materially accelerate the deployment of private capital into strategically important domestic capacity.

Third, urgency. If Congress and the Administration believe domestic fertilizer production is critical to American food and national security then we should act like it. Every year of delay is another planting cycle exposed to fragile supply chains and foreign dependency. Projects like ours are ready to move. The faster stra-

tegic federal support becomes real and deployable, the faster new domestic capacity comes online.

Three years from now, the measure of success will not be how many frameworks were announced or how many hearings were held. It will be whether new domestic fertilizer capacity actually came online in the United States. This Committee has the opportunity to help ensure that projects like ours move fast enough to matter.

I am grateful for your attention to this issue, and for the bipartisan seriousness this Committee has brought to the problem. I look forward to your questions and thank you.

[The prepared statement of Mr. Westling can be found on page 117–123 in the appendix.]

Chairman BOOZMAN. Thank you very much. We are going to go to our round of questions, and I am going to allow Senator Thune to take my place in the order. We appreciate the fact that even though he is the majority leader he is one of our most active Members.

Senator THUNE. Thank you.

Chairman BOOZMAN. He has not forgotten his roots.

Senator THUNE. Thank you, Mr. Chairman, and you can count on that. Thank you again for your leadership on this, and Senator Klobuchar, for taking on this issue. Let me add, I would be remiss, and I know this is not the subject here, but we need to get E15 done. That solves a couple of important problems, one of which is demand for corn in this country, at a time when we are losing some of our export markets. Secondly, increasing the supply of fuel in this country, at a time when gas prices are going up. As an economic matter, it makes all the sense in the world.

I deviate, and I understand, and thank you for your indulgence on that subject.

I want to thank all of our panelists for being here today and for sharing your thoughts on the impact of fertilizer prices and supply chains on the ag economy. These high input costs, adverse weather conditions, low commodity provides all impact our ag economy, and it is important that Congress continue its work toward long-term solutions that support the entire ag industry. I am very proud of what we did last summer in the Working Families Tax Cuts to increase reference prices for ARC and PLC, improve crop insurance protection, and update disaster programs.

I will say there remains more to be done. All of the Members of this Committee know that rising input costs have been eating into producers' bottom lines over the last several years, particularly, I would add, the price of fertilizer. This steep increase would shrink or altogether eliminate any grower's profit margins, even during times of strong commodity prices. It needs to be addressed.

Mr. Kubik, would you elaborate on how the price you have paid for nitrogen and phosphate fertilizer has changed over the last several years and how those changes have impacted your planting decisions over the last few years?

Mr. KUBIK. Thank you, Senator, for that question. I did go back and look. From 2020 to 2026, kind of where the trend in fertilizer, I got a little bit of PTSD from 2022, I will be honest, and I must

have blocked it out of my memory, because I cannot believe we paid that much for fertilizer in 2022.

Just for reference, in 2020, my farm paid \$355 for a ton of urea. By the time 2022 hit, that price jumped to \$830. A little bit of retract in 2023 and 2024 to \$400 and \$500, \$600 range, which at the time, it does not take a sharp pencil to figure out that that is not sustainable, and we cannot be profitable at those levels.

Then when we look at phosphates, so MAP, \$435 a ton in 2020, and it jumped to \$1,100 a ton in 2022, and it has stayed consistently high. It came off that high of 2022, but stayed in the \$700 to \$800 range consistently for the last four to five years. That has changed, and we apply less because of it. Actually, in 2025, we did not apply any phosphate on our farm because it just did not make economic sense for us. We are taking the risk that, hopefully, in the coming years, it will get cheaper, and we can catch up.

We have dealt with this for a long time, and then when we have world events that happen, that completely blows that up and really exacerbates the problem. We feel it. This has been a longstanding problem for us.

Senator THUNE. It predates current events, but nevertheless, I mean, this is contributing. This is something that is going back a long ways, and there are some structural things I think here that need to be addressed, which is why we have some of these transparency bills.

Could you just very quickly share your experience with the recent shortages, in particular the shortage of nitrogen in South Dakota?

Mr. KUBIK. I will be honest, Senator, we have not experienced a shortage of nitrogen yet. For our spring needs, the nitrogen fertilizer has been there. A lot of this stuff was in place and in country long before the events around the world happened. They went up in price significantly, the product that was here. We do have a product. We are starting to get concerned about what do we in-crop, as our crop is growing and needs more fertilizer, and as we look toward 2027. It is a real consideration.

Senator THUNE. As we know, there are a small number of manufacturers who have the lion's share of domestic fertilizer production. I would like to ask this question of Mr. Rosenbusch. In the United States, what percentage of sales for potash, nitrogen, and phosphorus, respectively, to U.S. retailers come from manufacturers other than the largest companies?

Mr. ROSENBUSCH. Thank you, Senator, for that question. Each market is very different, so I will start with potash. Potash, only about two percent of our domestic manufactured product, represents the market here. When you look at nitrogen, again, it depends on each of the different products. Ammonia, we have a large percentage of U.S. domestic producers. We have 18 different companies that make up about 80 percent of that. Then, when you get to phosphate, about 60 percent of our domestic manufacturers represent the market share in the United States. The other 40 percent is imported product.

It depends on each of those, and when you think about the total market for the United States, it is not just the domestic produced

product, but it is also the imported product that we need to serve all the farmers' needs.

Senator THUNE. Mr. Chairman, my time has expired but if I can I would like to submit a couple of questions for the record.

Chairman BOOZMAN. Without objection.

Senator THUNE. Thank you.

Chairman BOOZMAN. Senator Klobuchar.

Senator KLOBUCHAR. Thank you very much, Mr. Chair. Mr. Kubik, in March, Leader Thune and I introduced the bill I mentioned that would create a mandatory price reporting system for price transparency of fertilizer components. Could you talk about how price transparency in the fertilizer market helps farmers like yourself gain insight into the market and can make informed financial decisions? How is it helpful during the current market volatility we find ourselves in?

Mr. KUBIK. Thank you for that question, Senator, and it would be huge. You know, we just want to understand this market. Time and time again, I have found myself saying it, my neighbors saying it, that when the price of fertilizer is so high, we keep asking ourselves, why is it so high? You know what is going on now? This one little event, you know, a couple of months ago, it was easy to point to, but leading up to that, nobody knew that answer.

We just want transparency in that for (a) risk mitigation, so we can understand how we purchase our fertilizer, early when we do it, the trends, everything else, and just pull back some layers to see how our fertilizer, our main component, one of our main input components, is priced, and priced to us.

Senator KLOBUCHAR. Thank you. Mr. Green, you spent some time during the last administration looking at competition challenges in fertilizer and other input markets. Can you talk quickly about some of your findings back then?

Mr. GREEN. Well, we did a request for information around fertilizer. I gather your question is focused on fertilizer. We did a lot of different things on seeds, on cattle, on poultry, but on fertilizer, we did a request for comments, and we did a summary of that. It was made available. We really found, this was in 2002, 2003, so many of the trends you are hearing today were entirely present then. These have been building up for a number of years, but they are small number of choices, high concentration, high prices, prices that follow the price of corn rather than the price of the supply and demand for the actual product itself, or supply and demand for the inputs into fertilizer itself. That really just raises questions. I mean, obviously, there are some reasons why it might be connected, but the extent of the connection is really a focus of concern.

We made all of that public, hundreds of comments, and we would certainly be happy to share that with your office.

Senator KLOBUCHAR. Thank you. Thank you very much. Mr. Melton, you mentioned the war, and many of our farmers have found themselves stuck with higher costs right before the planting season, or during it actually, which was reflected in your Farm Bureau Fertilizer Survey. Fifty-eight percent of the respondents reported that their financial situation has worsened this year.

How are these costs going to affect the next generation of farmers that are trying to get started, that maybe do not have the mar-

gin or the savings of some of our farmers who have been around a while?

Mr. MELTON. We have probably seen four years of balance sheet deterioration. We have had four years of where prices have declined, and basically all of our inputs have gone up, but especially fertilizer here.

It is concerning about the next generation, because they probably do not have the balance sheet strength that some of our mature farmers, I would say, and it is very concerning. Plus, actually talking a young person to getting into agriculture right now is concerning to me, because what would make you want to do this? I mean, when you are looking at not being able to make a profit, or basically not planting the crops that you normally plant because of fertilizer prices. We have to do something to try to stabilize this market and make us more profitable. There are a lot of different things that we can do——

Senator KLOBUCHAR. Agreed.

Mr. MELTON [continuing]. but we have to get farmers back to profitability again.

Senator KLOBUCHAR. Agreed. Thank you. Quickly, Mr. Rosenbusch, can you talk more about the unique challenges fertilizer companies are facing with these supply chain disruptions? You mentioned some things internationally that I did not even know about, and I want to quickly get to Mr. Westling. If you could be fast. Thanks.

Mr. ROSENBUSCH. Yes, thank you, Senator Klobuchar. I think I would just summarize it by saying that we are competing as a free market in the United States with a significant amount of manufactured fertilizer in countries where you have state-controlled enterprises. I referenced China with almost half of the world's phosphates. When they decide to keep that all for domestic consumption, that is what is driving market trends more so than any other factor right now, is their internal government policies.

Senator KLOBUCHAR. Thank you. Mr. Westling, thanks for being here. I mentioned Senator Marshall and I introduced the bill to create a grant and loan program at the USDA to help domestic fertilizer companies, getting at some of the concerns that your previous witness mentioned, like yours, to get into financing. What are the challenges in creating a novel fertilizer production facility like Project Meadowlark? Nice name, by the way.

Mr. WESTLING. Thank you, Senator, for the question. The biggest challenges on projects that get to a certain scale are the upfront capital requirements, and in this industry, in particular, since so few of them built, as I alluded to in my testimony, there is a real lack of expertise around it. In the case of our project, for example, we will have spent \$50 to \$100 million before we sign some of the major contracts for construction. That upfront capital cost to bridge to the point where you have got the certainty to be able to execute and give certainty to other investors and lenders, I would say is the biggest challenge, for sure.

Senator KLOBUCHAR. Thank you very much.

Chairman BOOZMAN. Senator Marshall.

Senator MARSHALL. Thank you so much, Chairman and Ranking Member, for your leadership in this, as well.

Thanks to the Working Family Tax Cuts Law, crop insurance and reference prices have been taken care of, for the most part. Now, input costs are the number one issue concerning American farmers. In fact, fertilizer costs now account for up to 40 percent of input costs. That is now the number one issue, these input costs. American farmers are price-takers on both ends, paying monopoly prices for inputs. They must buy and accept commodity prices they cannot control. With no pricing power on either side, that is not a market. It is a trap for the American farmers.

I do point out that prices for fertilizer were higher for some 18 months when Russia invaded Ukraine, and those prices came down. Of course, now they are up significantly.

We will speak to Mr. Rosenbusch first. As you know, one particular company controls 64 percent of U.S. phosphate rock mined, may account for 90 percent of retail sales to farmers. It is being reported that this largest domestic supplier of phosphate is closing plants, which will reduce domestic supplies, while we have a 16 percent duty on Moroccan imports on phosphate.

I guess the other question I would ask you, what are these countervailing duties protecting? Aren't farmers not getting squeezed from both sides with less domestic supply and restricted imports?

Mr. ROSENBUSCH. Yes, thank you, Senator Marshall, for that question, and really, an interesting topic that I think is going to be the hot topic going forward into the future. I cannot speak for specific company's business decisions, and as you are aware, those are companies that are all TFI members on opposite sides of that case. We remain neutral when it comes to that specific case.

Senator MARSHALL. I am not asking you to comment on their plan, but I think you would agree with me that the farmers are getting squeezed on both sides now, less domestic supply and restricted imports. Does The Fertilizer Institute support free market competition and fertilizer pricing? Yes or no. If the answer is yes, you have to justify the duties that block the world's largest phosphate producer from competing for American farmers' business.

Mr. ROSENBUSCH. There is no question, Senator, that farmers are going through a really difficult economic time, and TFI does support policies that promote open, fair, predictable, and transparent trading environment. I think when we think about phosphate going forward, those two raw materials, to manufacture that, are sulfuric acid and ammonia. With the sulfur challenges we are now—

Senator MARSHALL. We understand all that. We understand there is a shortage of sulfur. We need the sulfur to mine the phosphate. That is pretty elementary chemistry. I am just going to ask you directly. Does The Fertilizer Institute support or oppose removing the 16 percent countervailing duties on Moroccan phosphate? The farmers in Kansas deserve an answer.

Mr. ROSENBUSCH. Senator, I understand how challenging that is for farmers because we have member companies that are on both sides of that case. We do not take a position on that particular case at the ITC right now.

Senator MARSHALL. The American farmers paid almost \$7 billion in excess costs over five years because of that 16 percent countervailing duty. Does The Fertilizer Institute believe American farm-

ers should pay above market prices to protect a single company's market position?

Mr. ROSENBUSCH. Senator, we definitely believe that farmers need access, and TFI member companies are committed to ensuring they have supply, and that that supply is in line with what global markets are. In many cases we have seen that the U.S. market is actually traded at a bit of a discount right now, almost \$150 cheaper than what Brazil pays for their phosphates. That commitment that I think the U.S. fertilizer suppliers have is to the farmer, to get an affordable and abundant supply of—

Senator MARSHALL. Mr. Rosenbusch, would you agree that the American farmers deserve access to the lowest cost, highest quality fertilizers available, regardless of where it is produced?

Mr. ROSENBUSCH. Thank you, Senator. We 100 percent agree that fertilizer manufactured and bolstering domestic supply of fertilizer is incredibly important to deliver to U.S. growers the fertilizer they need in order to be profitable.

Senator MARSHALL. I just want to reiterate that the number one challenge for the American farmer today is input costs, and fertilizers now account for up to 40 percent of those input costs. Look, trade exports are up. We went from 2.3 to 2.8 billion bushels of corn last year. We are going to have a 20 percent increase in corn and ethanol exports again this year. The problem are the input costs, and the fertilizer is the biggest chunk of those that we need to address. I appreciate again the Chairman and Ranking Member for giving us this opportunity to discuss these. We have been working on these, again, since Russia invaded Ukraine, and we need to give the American farmers some relief now. Getting rid of those countervailing duties would be the quickest, most immediate impact that the American farmer could see in their real world today.

Thank you, Mr. Chairman.

Chairman BOOZMAN. Thank you. Senator Smith.

Senator SMITH. Thank you, Mr. Chair and Ranking Member, and thanks to all of our panelists today. I want to actually maybe follow up a little bit on Senator Marshall's questions, because I think he is touching on something that everyone on this Committee cares about.

You have got these skyrocketing input costs, and we also have what we know to be really significant market concentration, and on the input side we are talking about fertilizer today. I think, actually, Mr. Kubik, you put it really clearly. You said basically the fertilizer companies raise their prices because they can. That is the market power that they have.

You know, I was just looking at some data, which gets at this, and I am going to just come to you first, Mr. Kubik, because I think this is really interesting. This data is a few years old, so it is maybe prices that were in global markets were more affected by what is going on in Ukraine, but I would ask everyone, do we really think it is different now than it was? This is from the Institute for Ag and Trade Policy in Minnesota.

They said that in the 2021–2022 time period the nine largest fertilizer companies made an estimated \$84 billion in profits. In 2022, major fertilizer companies saw profits increase by somewhere be-

tween 100 and 200 percent. Their input costs did not go up by that much.

Think about that, Mr. Kubik. Their profits are going up between 100 and 200 percent. How much do you think the profits of the average farmer in South Dakota was going up during that time period?

Mr. KUBIK. Thank you for that question, Senator, and bringing light to it. I can tell you personally——

Senator SMITH. Yes.

Mr. KUBIK [continuing]. they have not gone up by 100 or 200 percent. That is why we struggle with it. I look at my cost of production. When I look at marketing my corn or my soybeans or my cattle, and that is how I determine my marketing points. That is why we kind of feel taken advantage of. They can look at their cost of production and throw it out the window and just look at a price to set it at.

Senator SMITH. Yes, that is the price that they can charge because, as you said, they have the market power. Mosaic's profits in that time period went up 120 percent. Nutrien's profits went up 142 percent. I mean, that looks like excess profit to me. Did you want to add?

Mr. KUBIK. If I may. I believe that there is a copy of the article at all of your desks. This is not just two, three and four years ago. This is like in the last week we have similar reports of massive profits. That is the thing that we feel the worst about, is during this last 75 days a lot of money was being made, but it was not by farmers.

Senator SMITH. I always say when I am talking to Minnesota farmers there is plenty of money in agriculture. The question is who is getting it. It is not farmers right now.

Now, I am fully in support of the excellent transparency bills that have been put forth, bipartisan by my colleagues. I am wondering, Mr. Melton or Mr. Kubik, or anybody who wants to comment, do you think that those transparency laws, if they were in place right now, do you think that would change the behavior of these companies? Because that is what we are talking about. We are talking about the behavior that they have of being able to raise prices so exorbitantly.

Mr. MELTON. Well, thank you, Senator. I think we need all the tools in the toolbox that we can use, anything that we can do to help us get back to profitability. I go back to we have seen four years of decline in our balance sheets. This cannot continue on. You cannot keep losing money and continue with the things that we are doing. I think we need every tool in the toolbox that we can use. I think transparency in markets will give us one tool there that we can use.

What we do right now, and I talked to my partner this morning about it, we get a lot of our information from the retailer. That is where we get our information on fertilizer right now. I mean, there are things on the internet you can go look to, but actual fertilizer pricing——

Senator SMITH. To be able to actually see.

Mr. MELTON [continuing]. we have to go to the retailer right now to see where we can price that fertilizer. I think it would be a good tool in the toolbox.

Senator SMITH. Mr. Green, would you like to comment on this issue that I raised about the exorbitant profits that we are seeing? I know you work a lot on the question of how we can have fair markets in agriculture to the benefit of the folks that are actually growing things.

Mr. GREEN. I mean, I want to agree with my colleagues here. You need a lot of toolkits. There is no one toolkit that will bring those down. When you do have those supernormal profits, you need to go back and look at the mergers and look at the other conduct and bring enforcement cases. You have to think about the transparency toolkit. You have to think about the investment toolkit of supporting the new competition, the new choices, which is what we did in the previous administration, \$778 million of investments.

Every single one of those is part of bringing down those supernormal profits, which are an indication of a broken market.

Senator SMITH. That is exactly right. I agree with that completely. I know my time is up, Mr. Chair. I think the question is, what can we do to change the behavior of companies that are in a position where they can charge such high prices and get such exorbitant profits? I mean, in some sectors we look at things, I know it would be radical, but things like a windfall profits tax, something to change the behavior so that we can make the market more fair, particularly for the folks that are doing the work. Thank you.

Chairman BOOZMAN. Thank you. Senator Grassley.

Senator GRASSLEY. Before I ask Mr. Kubik the first question, I want people to know that there is at least one other Senator who agrees with the questioning that Senator Marshall put forward. In 2021, countervailing duties were first applied to Moroccan phosphate. A study published at Texas A&M in January found that farmers paid nearly \$7 billion in additional costs between 2021 and 2025 growing seasons because of countervailing duties. One company, Mosaic, has 80 percent of the market in the United States, yet they feel like they need protection from 18 percent tariffs on Moroccan phosphate coming into this country.

Trump has tried to help with dollars from the U.S. Treasury, but what I hear, even last week, in 12 different counties in Iowa that I toured, farmers want to get their money from the marketplace, not from the U.S. Treasury.

I think this administration ought to get rid of that 18 percent tariff on Morocco phosphate. Lowering production costs would be as much help as increasing prices for farmers or getting money for the Federal Treasury.

Now, Mr. Kubik, for many years now, farmers have felt that when commodity prices increase, input prices are bound to increase with them. Since 2020, even as the price of corn has decreased, fertilizer prices have remained elevated. We know the talking points of the fertilizer industry. The cause would be Ukraine, Chinese export controls on fertilizers, all contributing to prices farmers are facing and increased prices those are. However, farmers have also been seeing increased consolidation of the fertilizer industry. Farmers want to know exactly why they are paying the price that they

have for fertilizers, and I think we need more transparency on that.

For you, Mr. Kubik, as a consumer of fertilizer, how much insight do you have into the price of the fertilizer you use?

Mr. KUBIK. Yes, thank you for the question, Senator, and I will echo what Eddie said. We get a lot of that from our retailer, and our retailer gets a lot of that from the wholesaler, and we are just kind of going off of things we hear in the news and then coming to them. We are still big on the fertilizer transparency, the Fertilizer Research Act that you introduced. We just need to see more data and see more trends.

We like to typically purchase our fertilizer in the summer prior to the growing season, so this summer, a lot of farmers will be purchasing fertilizer in June and July for the next growing season. Now we have a lot of uncertainty. Is that trend going to remain the same? We just do not have a lot of that data to look at.

If we can just see a lot more of that. Even if it is too high and we think it is too high, at least we know how and why, and predict a little more what it is going to do.

Senator GRASSLEY. My second question, I think you just addressed, but more transparency, and knowledge, and data on fertilizer prices would be very beneficial to you.

Mr. KUBIK. It would be huge, yes. As one piece that was mentioned before, it is one piece of the puzzle trying to figure out this market.

Senator GRASSLEY. Yes. Maybe this next question is difficult for you to answer, but is there any reason you can think of that the fertilizer industry may not want a study to be published by the U.S. Department of Agriculture?

Mr. KUBIK. Not one that I can think of, and I actually heard comments today they are very supportive of transparency, which is nice to hear that they support that. It sounds like, well, you know, with their support and our support, hopefully we can get these bills across the finish line and start getting and collecting this data.

Senator GRASSLEY. Mr. Rosenbusch, does The Fertilizer Institute support a report that provides insight to farmers on why they have paid certain prices for fertilizers, including factors such as market concentration?

Mr. ROSENBUSCH. Senator Grassley, thank you for that question. Good to see you again. We had some of these conversations a few months ago when you chaired the Committee. Yes, we do support transparency. We think farmers need more information to understand markets and prices, and we believe that USDA can play a very important role in being able to explain that.

I was at a farm on Friday, talking to some growers about the dynamics, the global dynamics, what was creating the price structure we have today, and they were very appreciative of that. I am one person, and I think the more we can do to invest in providing that market information, the better it will be for growers to make those decisions.

Senator GRASSLEY. My time is up, Mr. Chairman. I will put the rest of my questions for answers in writing.

Chairman BOOZMAN. Thank you, Senator Grassley. Senator Luján.

Senator LUJÁN. Thank you, Mr. Chairman. Thank you and the Ranking Member for calling this hearing. To all the panelists, thank you all for being here.

Last week, I had the opportunity to sit down with some farmers and ranchers in southern New Mexico and just ask them what is working, what is not working, what is happening to your bottom lines. A host of issues they shared with me—increased farm input costs, shortage of farm labor, concern with an aging farming population, loss of expertise at USDA. Someone said that it is hindering their ability to get timely assistance from the United States Department of Agriculture.

Now, many of the issues are larger than one administration. I recognize that. However, some of the issues can be directly attributed to policies advanced by this President and by this Administration. President Trump began by implementing sweeping tariffs that have closed off entire markets to American farmers, markets, and relationships that we spent decades building, driving down prices just as farmers across the country are headed to the field to harvest their crops.

President Trump then started a war in Iran, I would argue an illegal war, without seeking congressional approval. As a result, the Strait of Hormuz is now closed, which has caused fertilizer prices around the world to skyrocket. While all of this was happening, President Trump's Department of Agriculture implemented sweeping reduction-in-force efforts. It is hard to find inspectors anymore to go in, if you are able to get approval or a stamp to sell your stuff, and we cannot seem to agree that empower colleges across the country that are ag institutions, that when there is not a USDA inspector available there should be someone from the state available, whether they are going to look at crop yields or they are going to look at what is happening with drought for insurance. We are just going to get a stamp so that they can sell their products. I really do not understand that.

With the loss in institutional knowledge and talent at the agency, it creates more of a backlog, on top of all the pressures that I was just sharing.

Mr. Rosenbusch, I guess a yes-or-no question. Let me just start with this one. Yes or no, is President Trump's war in Iran directly related to the spike in fertilizer prices we have seen since February 2026?

Mr. ROSENBUSCH. Senator, thank you for that question, and we have seen significant impact on the global fertilizer markets because of the events in Iran. There are many, many factors right now that are at play on a global scale that are really driving what these markets are, whether that be what India is doing with their purchasing power right now or what China is doing to restrict exports.

Senator LUJÁN. I am not a lawyer, but is that a yes?

Mr. ROSENBUSCH. Senator, I—

Senator LUJÁN. If you are not going to say yes or no, I will just point to the first bullet on your filed testimony. The answer is yes, and you justify it on the first bullet on page 10 of your testimony. It is not a gotcha question.

What is harder on Congress these days is stipulating to a set of facts. You bring yours, I bring mine, and then we fight about them, and there are no facts. What this war in Iran is doing to the cost of fertilizer is bullshit. Maybe we should just be talking about the kind of fertilizer that comes out of cows and sheep. Maybe we should be using some more of that in America. Figure it out.

You all do not come in here and tell me that the people back home are full of shit. I do not understand that, man. The cost is the cost. Implements are more expensive because of tariffs. I am not going to ask the Republican witnesses that because I am going to get some academic justification on why it is just my imagination. When I went to put in diesel this week, I guess it was just my imagination that I was paying over \$5.50 a gallon. I am one of the few Senators here that probably puts diesel in a truck and a tractor.

I have a lot of questions to file, Mr. Chairman. I am sorry I got distracted here. We just want a straight answer, man. Farmers and ranchers across the country are hurting. You know this. Whether it is a Democrat or a Republican, whenever an administration is doing something that is punitive to the folks that we have a responsibility to fight for, then let's speak up. I will call out Dem Presidents the same way I am going to call out a Republican President.

I grew up as a self-sustenance farmer. I did not know we were poor when I was growing up because we always had good food. We had lamb chops, fresh chile, tomatoes, and apples. Sometimes Mom even made an apple pie. I am still one of the Senators that shakes the milk when I buy it, because we had milk delivered when I was a kid, and it is the way that you got the cream from the top into the rest of the milk. My buddies laugh at me, and they say what the hell am I doing.

I am sorry for vernacular that I am using, Mr. Chairman, but sometimes when you grow up on a little farm, and you have to shovel shit in the morning to keep the barns clean, we need to talk that way over here so we can connect. We can do better here, and I certainly hope that we can get a farm bill, that we can work together, that we do not let basic arithmetic get in the way of what it means, because it takes 60 votes to get it done. Let's work together to get things done here.

All that I would ask for the panelists, whether we meet individually or not, let's just be straight with each other, you all. We do not need to sugarcoat stuff. People are hurting today. Let's recognize that, and then let's agree to find some solutions to make things better.

Thank you for the indulgence.

Chairman BOOZMAN. Thank you. Senator Fischer.

Senator FISCHER. Thank you, Mr. Chairman. Mr. Westling, can you take just a minute to discuss the project that you are doing in Gothenburg and maybe highlight some of the challenges that you face.

Mr. WESTLING. Yes. Thank you, Senator Fischer, for the question. The project that we are doing is to make a fertilizer type that is utilized in that region or geography in the State of Nebraska,

born from the shortage that exists there and the difficulty of transporting product there over sometimes huge distances.

In terms of the challenges faced, like every large project that is not done by an incumbent or somebody with a big balance sheet it is upfront capital and raising capital to get those projects off the ground. I am fortunate and thankful for the mostly farmers who stepped up to the plate to fund this project and/or to fund the early stages of the project.

Senator FISCHER. You know, we are hearing some discussions around federal investments. What types of safeguards do you believe should be put into place to ensure that new infrastructure projects that happen, that they are not going to be resold, which Senator McConnell talked about that he was able to work on, or contribute to consolidation, which is what I hear from producers. I am sure you do out in the western part of the state, too, hear from producers. They are worried about that consolidation and what it does to price. Do you have any thoughts on that?

Mr. WESTLING. Senator Fischer, I am certainly not an attorney and I will not pretend to know how to write bills. I will leave that to all of you, much smarter than I am. I would like to think that there is a way, through whatever form potential assistance comes in, for you to be able to create those exclusions or prohibitions from trading or consolidating or putting these types of projects in the hands of whomever you do not wish for them to be in.

Senator FISCHER. Do you worry about regulations, federal regulations, local regulations? Have you had to deal with any of that?

Mr. WESTLING. Senator Fischer, we have had some regulations that we have had to deal with, not any different from most projects of this scale. We have been relatively fortunate in that in our state, the folks who are in charge of administering those regulations or enforcing those regulations have all been very reasonable to work with. To the extent at the federal level where we needed them to weigh in, again, blessed by the fact that those folks have all been very reasonable to work with, as well.

Senator FISCHER. That is good to hear. Thank you.

Mr. Rosenbusch, as many of my colleagues have shared, fertilizer availability and the prices are the forefront of every farmer's mind across the country, and that includes my friends in Nebraska. For years the United States has been reliant on foreign fertilizer production to meet that domestic demand. With a lot of talk around the need to increase that domestic production, can you share the current regulatory challenges existing companies face when they tried to onboard a new fertilizer facility in the U.S.?

Mr. ROSENBUSCH. Thanks, Senator, for that question. Josh did an outstanding job of explaining that.

Senator FISCHER. Do you feel that it is pretty good to be able to deal with?

Mr. ROSENBUSCH. It is really hard to build new capacity in this country. One recent ammonia plant took seven years to permit and over \$25 million, just to permit it, not even to start construction. We are talking \$4 to \$5 billion dollars of capital. A phosphate mine took over a decade and \$32 million just to permit. That is all about the federal permitting process across multiple agencies. When you think about actual production itself, once you get into production,

the regulatory challenges that add the cost to manufacturing, you have got phosphogypsum, which is a byproduct of phosphate fertilizer that has to be stacked and costs over \$1 billion a year just to maintain those stacks.

There are a long list of regulations that we would be happy to share with you, of things that can be done to help bolster domestic supply.

Senator FISCHER. Thank you. Mr. Kubik, so nice to see you here. Can you take a minute to discuss the role that precision agriculture has, that new technology that is out there, and the increased approval we are seeing in the bio-based products that they can have in providing additional options to growers, to ag producers, that are faced with the uncertainty they have now with fertilizer.

Mr. KUBIK. Yes, thank you, Senator, for that question. This is something I am very, very passionate about.

Senator FISCHER. Me too.

Mr. KUBIK. Yes, coming out of college with an agronomy degree and always looking to better ourselves. I think that could be said for all farmers. We are all trying to do what is best for the land because we want our kids and our grandkids to farm on that land. This fertilizer costs a lot, so we cannot just throw it on and waste it and kind of hope it got there right.

We are very precisely applying it. We are variable rate applying it, so parts of the field are getting more than others, based on our soil testing, to make sure we are doing everything exactly like we should.

The biological space has definitely garnered a lot of attention over the past couple of years with the increase in fertilizer. I will be trying a couple of different ones on my farm. I have tested multiple different ones on our farm. The problem with that, unfortunately, though, Senator, we live in reality, and there are not enough right now to rely on. We still need fertilizer to grow our crops, and we are hopeful. I dream of a day where I do not need commercial fertilizer anymore. That would be the best thing ever. I do not know if my grandkids will experience that. If we can put on less, put it on accurately, I think it does good for both sides.

Senator FISCHER. Thank you. Thank you, Mr. Chairman.

Chairman BOOZMAN. Thank you. Senator Warnock.

Senator WARNOCK. Thank you very much, Brother Chair. Brother Chair, I'm sure you know that the top state for farm bankruptcies last year was your home State of Arkansas. The number two state was Georgia, so we are dealing with this same issue. I am sure the Chair and I agree that while we like to see our states leading, we do not want to be leading in this way.

In fact, farm bankruptcies increased by 46 percent last year, due largely to the President's trade war, and I wonder how many more farmers may go bankrupt by the end of this year because of President Trump's war in Iran, a war that is raising fertilizer and fuel costs, as we all know, due to the closure of the Strait of Hormuz, which anyone paying attention could have predicted.

Mr. Rosenbusch, the President's war in Iran has further increased fertilizer prices for farmers in the United States. You are the CEO of The Fertilizer Institute, the trade association rep-

resenting the companies that provide farmers with fertilizer. Has the White House presented you with a viable plan for bringing down fertilizer prices this year?

Mr. ROSENBUSCH. Senator, thank you for that question, and we have been very engaged with discussions on Capitol Hill, with the Administration, on really an all-government approach to solutions to help mitigate the impacts of the closure of the Strait, what we can do to prioritize domestic supply, what we can do to incentivize projects like Josh's, to bolster more domestic supply, so these supply shocks will not hurt the farmer in the future when we are so reliant on some of these foreign supply sources around the world.

Senator WARNOCK. Do you expect fertilizer prices to go down this year?

Mr. ROSENBUSCH. Senator, that is a really interesting question. I do not know that I can comment or legally predict what is going to happen to the price of fertilizer. I will tell you that we are very concerned about particularly phosphate, with a \$1,000-plus sulfur right now due to the restriction of sulfur coming through the Strait. We are now at a point where sulfur costs alone are significantly higher than the cost of phosphate. You have seen around the world right now phosphate mines around the world starting to curtail production because of some of that price impact.

Senator WARNOCK. Same question for the rest of the panel. Has anyone seen a viable plan from the White House that gives them confidence that fertilizer prices will decrease in the near term? No takers. Fertilizer prices are increasing. Diesel costs have also increased by over \$2 a gallon compared to this time last year, and there is no end in sight.

Mr. Melton, you are the President of the Kentucky Farm Bureau, so you know farmers in the South typically do not pre-purchase their fertilizer and are more subject to price volatility. What are you hearing from your members? Are they able to afford fertilizer this planting season?

Mr. MELTON. In Kentucky we got an early start this year, and most of the crop has already been planted this year in Kentucky, Senator. I can tell you that, and especially on our farm, we did more intensive soil testing and applying fertilizer where we had to, without trying to reduce yields. I think that is across the South. I think a lot of people are doing those things, trying to get more creative to where we can try to pencil out a profit with where current prices are for our commodities.

Senator WARNOCK. People are feeling the affordability pinch, obviously, right?

Mr. MELTON. People are cutting back usage on fertilizer on their farms. Yes, sir.

Senator WARNOCK. Dealing with the uncertainty as best they can. This uncertainty hits farmers at the worst possible time, planting season. It is not a good time to be dealing with this. I am not hearing from anyone here that the White House has a plan that will solve this crisis for farmers. Dialogue is one thing. A plan is another. At this point, the best-case scenario for farmers is the reopening of the Strait of Hormuz, which was opened before the war started. Even then, the fertilizer market will not bounce back

overnight if it were to open tomorrow. You will still be dealing with these prices.

Between the war in Iran, spiking fuel and fertilizer prices, and the illegal trade wars increasing the cost of equipment and limiting market access, it is no wonder that farmers in Georgia I talk to say that they cannot take much more, and we are dealing with this farm foreclosure crisis. As a Member of this Committee, I will continue to fight for farmers and doing everything I can to end this illegal war in Iran and unfreeze our fertilizer and fuel markets.

Thank you very much to the panelists. Thank you, Mr. Chair.

Chairman BOOZMAN. Thank you. Senator Hoeven.

Senator HOEVEN. Recently, I had an opportunity to get together with Secretary Rollins as well as our Chairman, Senator Boozman, and talk about both short-term and long-term efforts to reduce fertilizer prices. One of the ways we are doing that is with precision agriculture. As a matter of fact, Brian Carroll is here with us today from Grand Farm, in the audience, along with Greg Tavine. Grand Farm in North Dakota was recently named as the manager for the National Proving Grounds and the actual first proving ground, or test site, for ag technology to develop precision ag in a way that helps us actually accomplish the same by using less inputs, meaning less chemical, less fertilizer for our crops.

That is exactly the kind of work Grand Farm is doing in conjunction with ARS, and North Dakota State University, and NIFA funding. That has an impact both in the short term and the long term because basically you get the same result with less fertilizer. I would like to hear from both Mr. Kubik and Mr. Melton on how that can make a difference for farmers and what kind of things need to happen so that farmers can utilize that technology both now and in the future. Starting with you, Mr. Kubik.

Mr. KUBIK. Thank you, Senator, for that question. I think in terms of what we can do, a lot of farmers are already using it, especially in fertilizer application. Many of us get our fertilizer applied by our retailer, and those retailers are using state-of-the-art machines, they are using, again, like I said, variable rate technology, and it is all a goal of ours to use less fertilizer, or to maximize the efficiency of our fertilizer use, something my farm did last year, where we learned that with a little bit of rain we can lower the amount of nitrogen we need to grow a bushel of corn. I think that is key.

I do not know if we are necessarily using, on whole, a lot less nitrogen. We are just more precisely placing it where it needs to be. Ultimately, that is our goal, and a lot of that equipment, precision technology, is in the field today.

Senator HOEVEN. Mr. Melton?

Mr. MELTON. Thank you, Senator. I think research and development is probably one thing, and you brought up your university. I think our university does an outstanding job of doing research on projects, like they are talking about in your state. I think that we have to continue to do research and development into these technologies, and while I am thankful that I have some younger folks on my farm that can help apply these technologies, because some days I have trouble starting a tractor sometimes now. I am thankful that we do have the research and development from the univer-

sities and the land grants that can do these projects and work on technologies that can be brought to us, to where we can get more efficient into the future.

Senator HOEVEN. Yes. Well, Mr. Melton, you may have a little trouble with some new technology, but they like the fact that your labor, and they probably do not have to pay too much for it. I am guessing you volunteer.

Mr. MELTON. No, I do not volunteer, but they do tell me sometimes when I am there, I think some of the jobs I get are not the most prestigious jobs anymore. Yes, it is good to do it.

Senator HOEVEN. Mr. Westling, in North Dakota, we also have the Dakota Degasification Company that now takes coal, converts it to natural gas, and then converts it to fertilizers like ammonia and urea. How do we get more of that going so we get our fertilizer here at home, and we have more competition and lower prices rather than getting it from Indonesia or Russia or someplace where it is high-priced and a lot of transportation costs?

Mr. WESTLING. Yes. I think the question was asked earlier about the plan from whomever, be it the White House, the USDA, or whichever agency wants to take it on. Maybe I am just simple, but I think the plan, in my brain, is if the demand is going to be there, and it is, increasing supply, right, because that should lower the costs.

Senator HOEVEN. Demand is there.

Mr. WESTLING. Demand is there. I think some of the ideas that I alluded to earlier with incentivizing these projects on the front end of this process, helping bring capital, to bring additional certainty, certainly when the government leans in, everybody else leans in too. Those types of things could and should incentivize folks to build more of these projects, no doubt.

Senator HOEVEN. You would agree we need to do more of it.

Mr. WESTLING. I absolutely agree we need more of them. The farmers have invested in my project do, as well.

Senator HOEVEN. We appreciate your project, as well, in Nebraska. Mr. Rosenbusch, what do we do in the short term to get more competition and fertilizer prices down?

Mr. ROSENBUSCH. Thank you, Senator, and it is an excellent question. It is really difficult right now when you have got countries all over the world that are driving up the price by subsidizing and paying high prices. I do agree with Mr. Westling, the Administration has done some things to incentivize bolstering domestic supply, and we need that, whether it is permitting reform. Some of the equipment that is required to build plants, such as his in Nebraska, has to be imported, so there are currently tariffs on some of those pieces of equipment that have to come in, driving up the cost of construction. Then the little things like hours of service exemptions, to make sure that we can get fertilizer delivered, prioritizing fertilizer for domestic supply, which is also on the back of delaying some of the plant turnarounds, to make sure we are optimizing supply coming out of the existing plants.

Senator HOEVEN. Thank you.

Chairman BOOZMAN. Senator Welch.

Senator WELCH. Thank you very much for this excellent hearing. I just want to compliment the witnesses. It is very instructive, and I appreciate the information you are providing to us.

We are in a crisis in American agriculture. There is an immense amount of wealth that is being created by the farmers. They are just not getting any. Let me just illustrate that point by a report from our Department. The average loss for rice is \$220 an acre, for cotton, \$202 an acre, for oat, \$159 an acre, for peanuts, \$131 an acre, for sorghum, \$91 an acre, for corn, \$87 an acre. This is not sustainable.

Doing some of the things that Governor Hoeven was talking about, precision agriculture, things that are within the control of the farmers, they are doing that every single day and figuring out ways to do it. If we have this inability to do any control over what the input costs are, and they march up, step by step, as the price of corn goes up or the price of oats goes up, the farmer is totally at the mercy of a market that is consolidated.

Mr. KUBIK, you talked about consolidation, and I was impressed, with all of you, really, how long and how specific you are. That is an issue that we have got to deal with. You can deal with precision agriculture and try to figure out the best practices, and you have got your own incentive to spend as little as possible. What about consolidation, where it would take some federal action to deal with the impact of consolidation? You see that as a real impact on your pricing, right?

Mr. KUBIK. Yes. Thank you for that question, Senator, and 100 percent, and that is one thing I wanted to emphasize, is that the Federal Government is the one that has the ability to go in and look at this. We do not as the South Dakota Corn Growers Association. We do not as individual states. I think the Federal Government has the most power.

Senator WELCH. Do you see that as beneficial to farmers, and it does not matter whether they are Republican farmers, or Democratic farmers, or independent farmers. They like to do the work they do. That is what they are about, right?

Mr. KUBIK. Correct. All we ask for is just to purchase our inputs in a competitive market.

Senator WELCH. All right. What about transparency? Mr. Chairman, why don't we pass the Thune bill? I mean, the transparency seems to be something all of you believe, including you, Mr. Rosenbusch, that transparency is good. Does anybody have a problem with us moving out and passing the Thune-Klobuchar bill? All right, good. I would like us to do it, and like right away. We have got to help these guys.

Now, on small-scale farmers, it is really, really brutal, as well. We are seeing consolidation among farmers, as well, but that is not to drive profit. It is because of the smaller farmers cannot sustain themselves when they are losing this much per acre. Mr. Green, just talk to me about that. You know, I was on the Nitty Gritty Farm in Charlotte, Vermont, eighth generation, and they have got two kids, hoping for the ninth generation. By the way, all the farmers I know, they just love the idea of passing that farm on to their kids. Tell me about that issue.

Mr. GREEN. Well, the challenge is that a lot of farmers and ranchers face, whether it be farmers in your state or farmers in other places, is no matter how big they are, they are still much smaller than the processors and the retailers that are downstream from them. Their ability to negotiate fair prices is very limited. They are price takers. In fact, some of the processors themselves are price takers versus the retailers. We have got a system where the consumer is paying more, the farmer is getting less, and the folks in the middle are getting the benefits of all the hard work that are being done. That is where the focus needs to be.

Senator WELCH. I want to go back. I believe the Iran war, it is not me believing it, it is incontestable that it has raised prices. Diesel is way up, and that is a big use on the farm. Fertilizer is way up. What I have heard from you is that has intensified what is a preexisting problem with the consolidation, the high prices, and the really tight margins that our farmers are facing. Is that correct?

Mr. GREEN. Yes. Absolutely, sir.

Senator WELCH. All right. Well, I just want to thank you for your persistence and advocacy on behalf of the people that are close and near and dear to you. Rural America is really critical to the well-being of all of America, Mr. Chairman, and I think we have to act. This Congress has to act. You run a bipartisan Committee, and everything I have heard from this affects farmers, regardless of what their political affiliation is. I hope we move that Thune bill and Klobuchar bill, and I hope we do everything we can on consolidation and transparency.

Chairman BOOZMAN. I hope we can act with this and several other things and get a farm bill passed.

Senator WELCH. Thank you. Thank you all.

Chairman BOOZMAN. Senator Moran.

Senator MORAN. Chairman, thank you. Please know that I join you in your efforts to combine maybe a few things, but get a farm bill done. It is hugely important, and another opportunity for us to provide some certainty to our farmers at home.

Gentlemen, thank you for your testimony. I have been chairing my own subcommittee while this has been ongoing, but it is a hugely important issue. I have represented Kansas farmers and producers for a while. I see this as the most challenging time that my farmers in Kansas have faced since I have been a public official. It is, in part, due to five years of drought, that is not over yet, and so we begin the financial circumstances of most farmers at home in very difficult circumstances without the financial capability to weather another storm. I am very interested in trying to determine if there is a legislative fix to lots of market forces that go on that are bigger than just this one issue.

Mr. Rosenbusch, I read your testimony and noted that you talked about rural fertilizer and fertilizer components. There is a science that goes into understanding fertilizer, which this hearing has helped me better understand. It is not just one component. It is related to so many other items that are necessary. The closure of the Strait of Hormuz was probably not a circumstance that my farmers predicted, and as a significant result related, as I understood your testimony, to the world's sulfur supply, and 20 percent of the world's supply of liquified natural gas.

As sulfur is a key component of phosphate production, would it be fair to say that global phosphate access has been affected by the closure of the Strait? That is true, Mr. Rosenbusch?

Mr. ROSENBUSCH. Senator, thank you for that question. I appreciate your understanding of the complexity of the markets, which is one of the reasons why we support transparency, because it is really difficult to track all of these different commodities and the markets for them. Without a doubt, sulfur is a big issue right now. We have the spot market trading as much as \$1,300 a metric ton, and a lot of that is getting bought by Chinese for mining. When you look at copper that might be \$16,000 a metric ton to sell, that is where the free market is going to take a lot of that product, as opposed to into fertilizer production. This is going to continue to be a challenge going into the 2027 crop year.

It is a bit of a double-edged sword in that we need supply. We definitely support the idea of bringing more supply to the U.S. farmer. I was looking at some of the numbers. We have 108 companies that supply nitrogen to the United States. We have 38 companies that supply phosphorus to the United States, 16 companies that supply potash. The double-edged sword is that you then expose yourself to some of these geopolitical events. We need to boost domestic production but also find opportunities to continue to find reliable global sources.

Senator MORAN. One of the things that would be useful, I suppose, in theory, is a tariff to encourage domestic production, but a tariff also then increases the price of the inputs, and have we seen any increase in domestic production?

Mr. ROSENBUSCH. Yes, it is a difficult question, Senator. I appreciate you raising what is a very challenging topic, because long-term, when you start to put non-free market measures in place from a policy perspective, we understand that is going to actually have a worse consequence on supply for the United States. We saw that just with Venezuela recently, where we now have opened up that market, but that product is going to go to wherever the farmer is going to pay the most, which is Brazil right now. If we artificially impact the U.S. market, we are not going to be able to track supply here in the future.

Senator MORAN. Why are we being outcompeted? Why is somebody else more capable of paying the higher price?

Mr. ROSENBUSCH. That is a good question, Senator. It is one, because you have foreign governments that are driving up the price of that through subsidies. I just heard recently Ethiopia is bidding for a very limited supply right now, and India is paying nearly \$1,000 a metric ton that they subsidize to farmers. There is your floor price. That sets the global market price right there.

Senator MORAN. While I focused a moment on tariffs, there is also this other distortion of moral markets in which foreign governments are subsidizing their farmers in a way that then disadvantages U.S. farmers.

Mr. ROSENBUSCH. That is going to attract global supply at that particular price to those foreign suppliers we need, as well.

Senator MORAN. If the Strait was open tomorrow, what would happen?

Mr. ROSENBUSCH. Obviously, you are going to see an impact, and we need those vessels that are behind the Strait to come. I think it is going to take a while for that market to work itself out because, as I mentioned in my testimony, 40 plants there have been either curtailed because of no natural gas or they were hit by missiles or drones.

Senator MORAN. I understand. Thank you all very much.

Chairman BOOZMAN. Senator Justice.

Senator JUSTICE. Well, you all waited a long time to hear from me, haven't you? You will find me to be this guy. I will be the guy with logic and reason, and I appreciate our Chairman like you cannot imagine. I appreciate all these great Committee Members right here, and they do a great job. They really do.

There is a real, real, real problem here, and I have heard lots and lots and lots of stuff from lots of people here just today, and they say things like, "What do we do to get fertilizer prices down?" Is the Iranian war killing farmers? Plenty of dollars in ag, but farmers are not getting those dollars.

You know, Trent Kubik says many things, but the one thing that absolutely just beams from him is he loves what he is doing, and he does not want to give it up.

You know, I started our farming operation in, well, 50 years ago, and we grew it. At one point in time we were the biggest cash grain farmers, I think, east of the Mississippi River. We were seven or eight times National Corn Growers—and, you know, Trent, I know you are in the National Corn Growers and everything—but we were seven or eight times National Corn Growers winners.

I know a lot about this. I really do know a lot about it. I am a business guy. You know, I have got an MBA, and I am a business guy, and I would tell you just this. You have a colossal problem, because you have got a lot of people here that would really like to help, but I do not know that they will. At the end of the day, you have got frustration, and to be perfectly honest, it is probably going to get worse.

We have to move. Mr. Chairman, you know, and I know too, that we have to move. We are losing folks every day, and the tragedy is beyond teetotal belief. You know, I think about Eddie Melton there, and I have known him forever and a day, at least known of him forever and a day, and now I am getting the opportunity to meet him and everything. Eddie, I would say to you just this. Did you ever know Ken Wells, Dr. Kenneth Wells, at the University of Kentucky? Dr. Kenneth Wells came to our operation when I was just a kid, and really basically I owe just almost everything I know about agriculture, and it is a boatful, to Kenneth Wells.

You know, there is so much goodness in this room it is unfathomable. When you think about questions of, well, does the fertilizer industry really want transparency, are you kidding me? Really? Do we really believe that? Sure, it is easy for us to say, but do we really believe? I mean, what we have here is a monopoly. We do. I mean, if we look back at ag prices, just think just a second about this. In 2022, not very far ago, corn prices were \$7. Today, at harvest time this past year, they probably drifted significantly into the \$3-and-something price. Do you realize that when Harry

Truman was the President of this country, corn prices were \$2.50? Go back and look.

Think about it. How in the world can we possibly, possibly not act? We have got to move now, or we are going to awaken to an agriculture industry that is so different than we could ever think, and it would be bad. It will be bad for all of us. We have got to do something right this minute.

I do not know exactly what all the answers are, but there are all kinds of combinations of lots and lots and lots of things. It can be done. It can really be done. Absolutely, we have got to move, and move today.

You know, from the standpoint of fertilizer prices, it is the most bewildering thing in the world. Just think about this. I am from a state that abounds in coal, as well. Metallurgical coal, is it forever more just this. You let metallurgical coal go from \$100 a ton at the mine site to \$200 a ton, instantaneously, freight costs will go from \$30 a ton to \$53 a ton. Then if the price goes from \$200 to \$300, the freight cost will go from \$53 to \$61 a ton. Nothing has changed. Nothing has changed.

It is all up to us. It is all up to all of on this Committee. It is all up to us as legislators to do something, because these people are really hurting. It is time right now.

Mr. Chairman, I know how much you love these people, and I plead with you, some way, somehow, we have got to solve the riddle, because they are really important.

God bless each and every one of you. Thank you.

Chairman BOOZMAN. Thank you, Senator Justice, and very well said. Senator Schiff.

Senator SCHIFF. Thank you, Mr. Chairman. Mr. Green, last week I was lucky enough to engage with some of the agricultural leaders across Ventura County. These fresh produce growers shared a bit about their challenges being squeezed by retailers, whether that is not being able to sell in the grocery stores because imported produce is cheaper, receiving the same cut even when the input prices change, or essentially subsidizing the remainder of products sold by retailers. Can you elaborate on how specialty crop growers suffer when buyers abuse their market power, especially in a consolidated retail market?

Mr. GREEN. Thank you, Senator. You raise a very big challenge, which is there are dominant power buyers in the retail space that can exercise their power upstream to the farmer, and no matter how fabulous the product they are raising, they do not have the opportunity to meaningfully negotiate when there are so few choices of where they can bring their product. When the largest power buyers have the footprint in the market, so that if they go someplace else, or if they go to USDA and say, can you please inspect instead of dinging me without documentation for not delivering certain amounts or things, or when they change contract terms. You know, these are longer-term contracts. Well, if the price goes up, the power buyer keeps the same low price. If the price goes down, suddenly the farmer has to eat that price drop. Same thing around financing terms that are getting longer and longer. The farmer is floating the retail power buyers' no-interest rate loan.

It is real evidence that there are market power problems in the market you refer to. There are probably violations of the Perishable Agricultural Commodities Act, as well. It is the same type of thing we see in other sectors, as well, of this imbalance of market power that requires USDA, DOJ, FTC, and government to help balance those situations.

Senator SCHIFF. In some of those mass retailers, isn't the produce section really the profit driver for most of the store?

Mr. GREEN. I do not know that per se, but I think it is the one thing that pulls people into the door. When it is pulling people into the door, and it is the most attractive part of the store, that is something that is really important. Making sure that the farmer is sharing in the benefits is precisely why there are rules around making sure that volume discounts are available to every retailer, making sure that when a product comes, there is a USDA inspector that can make sure that the farmer is protected against being dinged without documentation by the retailer, et cetera.

Senator SCHIFF. You mentioned that some of these practices might violate a certain statute. Can you explain that?

Mr. GREEN. The Perishable Agricultural Commodities Act goes back to 1935, I think. It prohibits unfair, deceptive practices. It is similar to the Packers and Stockyards Act. It is similar to certainly the Federal Trade Commission Act. It basically says if you are doing business, you have got to do business in a fair way transparent way. These are well-established principles, and USDA has enforced it for a very long time. I do worry about staffing at the Agricultural Marketing Service and other places, but it is very important statute for the efficiency and competitiveness of the specialty crop industry.

Senator SCHIFF. Any other ideas you can share about how to equalize, even a little, the incredible disparity between the market power of these mass retailers and farmers?

Mr. GREEN. You have got to rein in the market power of the retailers. That is one of the reasons why the Robinson-Patman Act sets prohibitions against discriminatory, predatory, and other types of pricing differences, so that you can have a competitive retail sector, so that the dominant power buyer is not able to be so dominant that the farmer does not have a choice. If there is a competitive retail market and a retailer is not playing fairly, they can go someplace else and sell their product. If you do not deal with the concentration of power at the retail level, it is going to flow up to the farmer.

Senator SCHIFF. Thank you very much. Thank you, Mr. Chairman.

Chairman BOOZMAN. Thank you. Senator Slotkin.

Senator SLOTKIN. I apologize for being late. I had another hearing that just finished up. Sorry, gentlemen, and I know you have gone through a lot of this. If you are getting me, you are at the very end, so you can rest easy.

I have a question. I come from Michigan, so specialty crop state. Obviously, we do have row crops, but specialty crops are what we specialize in. That tends to be small- and medium-sized farms. We are not the megafarms of some other states. I was actually hoping to ask a question of Mr. Melton. Just can you talk about what the

pinch on fertilizer is really doing, particularly in your state, to some of the specialty croppers, you know, the fruit and vegetable folks? I feel like they are already on their heels because of all the uncertainty going on in ag generally, and they are smaller. Can you talk to me about what you are seeing in Kentucky?

Mr. MELTON. Sure, Senator, thank you. You know, we all know what fertilizer is. It is plant food. I do not care if you are growing specialty crops, if you are growing row crops, if you are growing forage for your livestock animals, fertilizer is an important key to that. When you bring it down to that level, that is what we all are dealing with right now, so it is the cost of those fertilizers. In our specialty crop markets, it is very much noted that it is affecting them on their farms, just like it is all the other aspects of when we are purchasing fertilizer.

Senator SLOTKIN. Yes. It feels like there are so many variables in ag right now. Obviously, the weather you cannot control, but there are all these other factors that are just making it really hard for small- and medium-sized farmers, at least in my state, to keep farming. I mean, I think there are real existential questions going on for folks. I live on my family farm. I lease the land out to a soybean farmer, so I see those things very clearly.

Does anyone on the panel have a sense, you know, we have this chokepoint right now in the Persian Gulf, traffic is not getting back and forth. Let's say the Persian Gulf opened up tomorrow. How long do we understand it would be until that fertilizer actually gets through, comes back to the United States, and we can see this market regulating? I know the oil and gas people say it will be a year even if the Strait of Hormuz open up today. Does anyone have a sense on fertilizer? Sir, go ahead, please.

Mr. ROSENBUSCH. I guess that is my question, Senator Slotkin. Thank you for the question. Thank you for your knowledge of potash, too.

Senator SLOTKIN. I am a big fan of potash.

Mr. ROSENBUSCH. You have become the expert of potash, so we appreciate all you do there.

Yes, once the Strait is open, it would obviously take a good month for those vessels to clear and to get to the market destinations. What is still unclear is what the damage has been to those manufacturing sites in that region. We estimate that there are about 40 plants that have been shuttered or closed down because either they no longer can produce or they were actually damaged because of the conflict. It could be months, or it could be years, for those plants to come back online.

Senator SLOTKIN. Can we stay on potash for just one second, because look, we have discovered potash in Michigan. We are very excited about it. I am supportive of us mining that potash. What do you see as the challenge of getting that off the ground? I do not know, again, if there are others who also want to answer that.

I am a big believer in permitting reform and making it easier to make good economic decisions that affect economic security and national security. I think having access to critical minerals is part of that. Tell me what the constraints and the situation is.

Mr. ROSENBUSCH. I would say that, as you know, we need our farmers to have as much supply as possible so they can be success-

ful. Permitting is a huge issue. It takes decades to get these mines up and running. Capital is a huge challenge, as well, when you are talking about billions of dollars of capital that it takes to run, and the return that is required. That is another issue. I am sure Mr. Westling can comment a little bit from a nitrogen perspective. Really, it is permitting and capital that are probably the two biggest challenges.

Senator SLOTKIN. Yes. I am a big believer. I mean, again, the answer can be no when you are asking for a permit. It just should not take 15 years to get a yes or no, right? Just get to decision faster.

Mr. ROSENBUSCH. Certainty. If people are putting the investment into these facilities, in five years, what is the market going to look like, and can you still justify it?

Senator SLOTKIN. I think that is fair. I do not want to abuse my time, Mr. Chairman, but I see there are other folks on the panel, if it is okay to just finish up.

Mr. GREEN. I just want to add, Senator, that you also need a competitive market, and you want to talk about getting new fertilizer. If the market is constrained and is shut, and the dominant powers are going to ice anybody that enters it out by lowering the price or squeezing them, there is really no incentive to invest.

There have been a series of mergers that go back to 2010, 2013, 2015, and 2018. All of those mergers can be reviewed by the FTC and the Department of Justice. Under a retrospective review, they can all be undone. The price of fertilizer, even if the Strait of Hormuz opens back up, we saw the price of fertilizer in 2022 drop back, but not basically to where it was prior to the Ukraine war. It has stayed high.

The issue of these longstanding trends toward concentration show that the underlying competitive dynamics of the market really do need to be addressed.

Senator SLOTKIN. Great. Thank you, Chairman. I yield back.

Senator BOOZMAN: Thank you. I have just a couple of things, since I gave my time away to Senator Thune.

We talked a lot about transparency today and access to more information. I guess the question I would have for you, Mr. Kubik and Mr. Melton, as producers, what information do you have access to that helps you better understand the input markets, and what additional information would be helpful? Have you got anything specific that we can actually sink our teeth into?

Mr. KUBIK. Thank you, Senator, for that question. I think right now, again, as I said before, a lot of our information comes from our retailers and the information they are getting.

Chairman BOOZMAN. Can you understand it?

Mr. KUBIK. Somewhat. A little bit. It is hard to fathom how a corn price can be here, and a fertilizer price can be here, even when corn was here, and fertilizer was here. It is hard to understand it.

Chairman BOOZMAN. Sometimes it is so complex, too. There is so much information.

Mr. KUBIK. Yes. I would just say if we can see ports of where fertilizer is coming from, like for us, Minneapolis, Sioux City, NOLA down in the Gulf, just to kind of get our heads wrapped around

where that market is at, and just see the margin built in, see what the supply chain is like from manufacturer to processor to distributor to retail. Like I said, just to help us plan and mitigate our risk a little bit more.

Mr. MELTON. We know the demand is there. We have talked about that several times today. I think knowing what the supply is that we are dealing with ahead of time, what is the supply going to be moving forward. Because that is what basic economics is, is supply and demand, and it sets price. If we do not know what the supply is, and we know the demand is there, and the supply changes all the time on us. If we had some way to know and predict kind of what the supply is, moving forward, and we have access to that information, I think it helps me, as a producer, and I think it would help Trent, too, knowing where that supply is, and if we are going to be able to get it when we need it.

Chairman BOOZMAN. Thank you. Mr. Westling, you are in the process of building your new facility in Nebraska. Give us a thing, like I say, you are experiencing this, give us a thing that Congress or the Administration could do to spur increased domestic fertilizer production. What would have helped you?

Mr. WESTLING. Well, I think the FPEP program—

Chairman BOOZMAN. Besides money.

Mr. WESTLING. Thank you for that question, Senator. I think the FPEP program, the construct was good, and what it wanted to do, and incentivizing these types of projects was a good thing, and ultimately could be distributed in a way that could have a big impact on bringing more of these to the marketplace. I do not think there are 20 or 30 projects that need to be built. I think it is a handful of places to augment the larger production. Bringing dollars to those projects would absolutely be impactful.

Chairman BOOZMAN. Very good. Finally, and then we are going to give you all a break, we have seen military conflict, trade disputes, all that is going on in the world right now. We live in a dangerous world. This is for anybody who just wants to jump in. What else should we be doing to reduce our exposure to foreign disruptions? We have seen what blocking the Strait has done. This is national security. Do we need to consider, like we have an oil reserve? Do we need some sort of reserve of fertilizer? Has anybody got any ideas?

Mr. GREEN. I want to underscore the importance of seeds here, where seed resiliency and the seed bank at the National Plant Germplasm System is really a national security resource, so that we have the genetics to be able to adapt to regional varieties, and the research and the access. The Department of Justice filed, just yesterday, a very important statement in a private case around the ability to read the genetics.

I think fertilizer has to be thought of in context of these other tools that can keep us nimble, flexible, resilient, and self-reliant, really, across these markets.

Mr. ROSENBUSCH. Yes, Senator, thank you for that question. We have talked a lot about strategic reserves recently. Fertilizer is very different than oil and gas. It would be an honor to take you to some of these massive facilities and warehouses where some of

these products are stored, and you will see the capital and complexity of how large these facilities are.

Fertilizer, as well, if kept for a long period of time, the quality can deteriorate fast. You get clumping. You start to see it really kind of form a big old block of concrete. It is not something that can be stored for long periods of time. The answer is let's bolster our domestic supply with projects like Mr. Westling's.

Chairman BOOZMAN. Very good.

Mr. KUBIK. I would add to that just simply by saying make the stuff where you use the stuff.

Chairman BOOZMAN. Great. Thank you all very much. This has really been a good discussion. I think everyone on the panel has learned a great deal as a result of this. As you can see, this Committee is very serious and really does just a good job. We have got a great group of Members on both sides, that work hard. As was mentioned, agriculture, farmers are not about Republican farmers or Democrat farmers or Republican small towns or Democrat small towns. This is about trying to help out and trying to stabilize just a tremendous asset of this country.

With that, again, thank you for being here. The record will remain open for five business days, and we are adjourned.

[Whereupon, at 5:05 p.m., the hearing was adjourned.]

A P P E N D I X

MAY 12, 2026



Towards Fairer and More Competitive Fertilizer Markets

*For the Hearing "Perspectives on the Fertilizer Industry: Ensuring a Stable and Affordable Supply for American Producers"
before the U.S. Senate Committee on Agriculture, Nutrition, and Forestry*

Tuesday, May 12, 2026

Andy Green

Thank you for the opportunity to testify this afternoon. Center Market Strategies is a bipartisan advocacy and legal strategy firm dedicated to keeping markets fair and ensuring businesses of all sizes have a seat at the table.¹

I. Why we are here

We are here because the American farmer is hurting. According to an American Farm Bureau survey, fertilizer is so expensive that 70 percent of respondents say "they will not be able to buy all the fertilizer they need."² The same survey noted worsening finances for nearly six in 10 farmers, driven by rising fertilizer and fuel costs during spring planting.³ Even farmers who booked fertilizer long before the cost spikes of the

¹ This testimony reflects the personal opinion of the author, and not necessarily that of Center Market Strategies or its clients.

² American Farm Bureau, "Fertilizer Supply and Affordability," <https://www.fb.org/issue/fertilizer> (accessed May 8, 2026).

³ American Farm Bureau, "Farm Bureau Survey Reveals Real Impact of Fertilizer Availability and Price," April 14, 2026, <https://www.fb.org/market-intel/farm-bureau-survey-reveals-real-impact-of-fertilizer-availability-and-price>.

last few months bemoan the cost and lack of options. For more than five years, farmers have endured both price spikes and sustained higher prices, squeezing their margins and affecting their planting choices.⁴ The reasons seem largely unconnected to the key underlying input prices or changes in demand. For example, from the end of 2020 to October 2021, anhydrous ammonia prices (AA) increased by \$688, with only 15 percent owing to the cost of embedded natural gas.⁵ A similar spike occurred from April 2021 to 2022 (118 percent for AA)⁶ and again recently (e.g., 52 percent for urea between February and April 2026⁷).

It is well known that fertilizer markets are highly concentrated. In nitrogen in the U.S., the four-firm concentration ratio was 77 percent as of 2018-2019, while for potash and phosphate it was 100 percent.⁸ Fertilizer markets' tendency towards anticompetitive behavior is not a new problem,⁹ and competition concerns were heightened before the most recent war.¹⁰ In recent years, fertilizer prices increasingly

⁴ Joe L. Outlaw, Joe L. Outlaw, Bart L. Fischer, Henry L. Bryant, J. Marc Raulston, "Economic Impact of Nitrogen Prices on U.S. Corn Producers," Texas A&M University Agricultural and Food Policy Center, Dec. 2021, <https://fi-corp-pub.s3.us-east-2.amazonaws.com/inline-files/Economic%20Impact%20of%20Nitrogen%20Markets%20on%20U%20HB-1.pdf>.

⁵ Outlaw, Fischer et al, 2021 at 10.

⁶ Bart L. Fischer, Joe L. Outlaw, Henry L. Bryant, J. Marc Raulston, and George M. Knapek, "Concentration and Competition in the U.S. Fertilizer Industry," Texas A&M University, Agricultural and Food Policy Center, Briefing Paper 24-1, p. 5, Mar. 2024.

⁷ Emily Gee, Kyle Ross, and Akshay Thyagarjan, "Trump's War May Be Over But the Economic Damage Is Not," Center for American Progress, April 8, 2026, Table 1, <https://www.americanprogress.org/article/trumps-war-may-be-over-but-the-economic-damage-is-not/>.

⁸ Fischer, Outlaw et al, 2024 at 10.

⁹ C. Robert Taylor and Diana L. Moss, "The Fertilizer Oligopoly: The Case for Global Antitrust Enforcement," AAI Working Paper No. 13-05, September 4, 2013, https://www.competitivemarkets.com/wp-content/uploads/2013/09/WP13-5_Fertilizer_Body.pdf.

¹⁰ See Dr. Diana Moss, "Pressure Cooker: Competition Issues in the Seed & Fertilizer Industries," Progressive Policy Institute, Testimony Before the United States Senate Committee on the Judiciary, October 28, 2025, https://www.progressivepolicy.org/wp-content/uploads/2025/10/Moss_SJC-Hearing_Seeds-Fertilizer_10.28.25.pdf.

track corn prices. While there may be some reasons for that owing to a reach for yield or opportunities to switch crops or otherwise lower fertilizer use, the trend is so pronounced as to raise significant questions about prices more reflect the exercise of fertilizer companies' market power, rather than the supply and demand for fertilizer and the costs of inputs.¹¹

Farmers are suffering from concentration bottlenecks across the sectors that serve them. Whether it's high prices and few choices for farm equipment or seeds, or limited choices and low prices for markets they sell into, farmers big and small are acutely aware of how a forty-year trend towards concentration and the maximization of short-term efficiency targets leaves them increasingly powerless. In commodity markets where margins are thin and additional revenue streams are less available today than even a few years ago, bringing the next generation back to the farm is harder and harder to pencil out, an economic impact which verberates across rural America.¹²

Fair and competitive markets are an important part of ensuring a stable and affordable supply of fertilizer for America's agricultural producers. Unfortunately, market competition requires marketcraft—the work of legislators, regulators, and enforcers to balance against the asymmetries, distortions, risks, abuses, and, sometimes, criminality and reinforce markets in favor of openness, fairness, and effective competition.¹³

¹¹ Fischer, Outlaw, et al, 2024.

¹² See remarks by Secretary Thomas Vilsack, "Increasing Competition and Fairness in Food and Agriculture," Center for American Progress, June 25, 2024, <https://www.americanprogress.org/events/increasing-competition-and-fairness-in-agricultural-markets/>.

¹³ Steven K. Vogel, *Marketcraft: How Government Makes Markets Work* (2018). See also <https://www.law.nyu.edu/sites/default/files/Vogel%20Steven%20-%20The%20Marketcraft%20Solution.pdf>.

To illustrate pathways for this Committee to achieve that goal, first, I will offer some pillars of marketcraft as it relates to fair and competitive markets generally. For each, I will apply those principles to some of the challenges in fertilizer.

II. Competition Marketcraft for Fertilizer Markets

So what are pillars of marketcraft in favor of fair and competitive fertilizer markets? In my view, they would be (i) policing abusive conduct and remedying problematic market structures, (ii) transparency, (iii) investing in competition and resiliency, (iv) aligning consumer markets with farmers' interests in competition, and (v) research. Acknowledging that fertilizer is different from other concentrated sectors of agriculture, such as livestock and poultry, seeds, or tractors, still there are principles to be recognized from past experience in other parts of the agricultural sector, as well as other markets. Since my background is in financial regulation, I will draw some examples from there.

A. Police abusive conduct and remedy problematic market structures

First, antitrust and unfair practices laws are needed to police the exercise of market power and other marketplace abuses. Enforcement is vital to ensuring that market structures are open for competitive entry and to prevent abuses against other market participants. Whether these are horizontal forms of conduct that stifle competition and new business opportunity, or vertical conduct that takes advantage of power asymmetries that unfairly extract from consumers (downstream) or from producers (upstream), or some combination of the two, fair and competitive markets need to be policed. When problematic conduct or market structures emerge, remedies appropriate to preventing the recurrence of the violations need to be applied.

Illegal conduct is easier to execute in highly concentrated markets. I am pleased to see this Administration has prioritized investigations in agricultural competition around both agricultural inputs¹⁴ and cattle markets.¹⁵ I hope the efforts yield fruit, and would be pleased if they were building on the groundwork laid out previously in fertilizer,¹⁶ seeds,¹⁷ and cattle.¹⁸ These efforts benefit from the enforcement efforts in 2022¹⁹ and 2023²⁰ to address problematic practices in the poultry industry and the

¹⁴ Department of Justice, "Justice Department and USDA Coordinate to Protect Competition in Agricultural Inputs," Sept. 29, 2025, <https://www.justice.gov/opa/pr/justice-department-and-usda-coordinate-protect-competition-agricultural-inputs>.

¹⁵ C-SPAN, "Acting Attorney General and Administration Officials Announce Antitrust Investigation of Meat Packers," May 4, 2026, <https://www.c-span.org/program/news-conference/acting-attorney-general-and-administration-officials-announce-antitrust-investigation-of-meat-packers/678528>.

¹⁶ USDA, Agricultural Marketing Service, Access to Fertilizer: Competition and Supply Chain Concerns, January 2022, 87 FR 15191.

¹⁷ USDA, Agricultural Marketing Service, "Competition and the Intellectual Property System: Seeds and Other Agricultural Inputs," Jan. 2022, 87 FR 15198; USDA, Agricultural Marketing Service, "USDA Launches Interagency Working Group on Competition and Intellectual Property in Seeds," March 23, 2023, <https://www.ams.usda.gov/press-release/usda-launches-interagency-working-group-competition-and-intellectual-property-seeds>.

¹⁸ USDA, Agricultural Marketing Service, "Price Discovery and Competition in Markets for Fed Cattle," Oct. 2024, 89 FR 82519, <https://www.federalregister.gov/documents/2024/10/11/2024-23528/price-discovery-and-competition-in-markets-for-fed-cattle>.

¹⁹ Then, the Department of Justice's (DOJ) Antitrust Division (ATR), in partnership with USDA's Agricultural Marketing Service, settled cases against several poultry processors. In *Wayne-Sanderson*, growers secured relief from deceptive practices associated with the "tournament system," which pits chicken growers against each other to determine their compensation. U.S. Department of Justice, "Justice Department Files Lawsuit and Proposed Consent Decrees to End Long-Running Conspiracy to Suppress Worker Pay at Poultry Processing Plants and Address Deceptive Abuses Against Poultry Growers," July 2022, <https://www.justice.gov/archives/opa/pr/justice-department-files-lawsuit-and-proposed-consent-decrees-end-long-running-conspiracy>.

²⁰ In *Koch Foods*, the government established deterrence against poultry processors' anticompetitively and unfairly requiring chicken growers to pay a termination penalty to switch to a rival chicken processor. U.S. Department of Justice, "Justice Department Files Lawsuit and Proposed Consent Decree to Prohibit Koch Foods from Imposing Unfair and Anticompetitive Termination Penalties in Contracts with Chicken Growers," Nov. 2023, <https://www.justice.gov/archives/opa/pr/justice-department-files-lawsuit-and-proposed-consent-decree-prohibit-koch-foods-imposing>.

rulemaking efforts to ensure consistency and clarity across the relevant sector.^{21 22} The recent settlement of the agricultural data provider case is an important case in point.²³ Fully and effectively enforcing the law is, of course, essential, and that should include the fullest range of antitrust and unfair, deceptive, and unjustly discriminatory authorities. If and when a case proceeds, the remedy must be vigorous enough to address the underlying market power and incentives for abusive conduct.

To that end, it may be appropriate to reconsider recent mergers that have helped form this highly concentrated sector. While the trend towards concentration began forty years ago, several important fertilizer mergers occurred within the last 15 or so years which deserve careful scrutiny. In particular, the 2018 merger of Agricultural Fertilizer Manufacturers Agrium and PotashCorp resulted in a company that controlled 60 percent of potash capacity and 30 percent of nitrogen and phosphate. Antitrust agencies can unwind mergers at any time, and retrospective reviews are useful tools to establish the economic evidence for doing so.²⁴

²¹ The legal principles in the *Wayne-Sanderson* case was reflected in the rulemaking that applied across the broiler chicken industry to protect growers from excessive variability in compensation, as well as in inputs and production practices and additional capital investments. Poultry Grower Payment Systems and Capital Improvement Systems, Jan. 2025, <https://www.federalregister.gov/documents/2025/01/16/2025-00508/poultry-grower-payment-systems-and-capital-improvement-systems>.

²² The principle of *Koch Foods* against poultry noncompete penalties was reflected, along with other non-discrimination and anti-retaliation principles, in an earlier rulemaking. Inclusive Competition and Market Integrity under the Packers and Stockyards Act, March 2024, 89 FR 16092.

²³ U.S. Department of Justice, "Justice Department Requires Agri Stats to End Exchange of Competitively Sensitive Information Among Nation's Largest Meat Processors that Suppressed Competition and Increased Prices for Decades," May 7, 2026, <https://www.justice.gov/opa/pr/justice-department-requires-agri-stats-end-exchange-competitively-sensitive-information>.

²⁴ John Kwoka and Marc Jarsulic, "Evidence-Based Policy in Antitrust: The Need for Ongoing Merger Retrospectives," *Promarket*, April 20, 2017, <https://www.promarket.org/2017/04/20/evidence-based-policy-antitrust-need-ongoing-merger-retrospectives/>.

Interestingly, the Federal Trade Commission conducted a retrospective analysis in 2020 and found that the merger did not result in higher prices.²⁵ That puzzling conclusion occurred before the extraordinary price spikes which characterized pandemic-driven inflation, the Ukraine War, and more recent turmoil in the Middle East. It would seem appropriate for the FTC to carefully reevaluate that merger, as farmers have reported, at least anecdotally, that they felt a shift in pricing in the market beginning in 2018. Data from the combined company's gross margin potash segment shows a 31 percent increase from 2024 to 2025 and a 34 percent increase for nitrogen.²⁶

Other companies show jumps in gross margin in recent years, for example one company went from an average gross margin of approximately 23 percent between 2015 and 2017²⁷ to an average gross margin closer to 45 percent between 2022 and 2025.²⁸ Profits across multiple companies have shown strong increases for years—in several cases, reportedly upwards of 1500 percent, 1000 percent, and 400 percent for

²⁵ Nicholas Kreisle, "Price Effects from the Merger of Agricultural Fertilizer Manufacturers Agrium and PotashCorp," Federal Trade Commission, WORKING PAPER NO. 345, July 2020, https://www.ftc.gov/system/files/documents/reports/price-effects-merger-agricultural-fertilizer-manufacturers-agrium-potashcorp/working_paper_345.pdf.

²⁶ Nutrien, 2025 Management's Discussion and Analysis, Ex. 99-2 to Securities and Exchange Commission Form 40-F, for year ending Dec. 31, 2025, p. 37, 39, <https://www.sec.gov/Archives/edgar/data/1725964/000119312526081326/d56746dex992.htm> (Note, other segments, such as retail and phosphate, showed no change, or a modestly negative change, in gross margin year on year.).

²⁷ CF Holdings, Form 10-K, Securities and Exchange Commission, for year ending Dec. 31, 2017, p. 40 <https://d18m0p25nwr6d.cloudfront.net/CIK-0001324404/065fec71-1fd6-4eef-8962-2900418dbe89.pdf>;

²⁸ CF Holdings, Form 10-K, Securities and Exchange Commission, for year ending Dec. 31, 2023, p. 39, <https://d18m0p25nwr6d.cloudfront.net/CIK-0001324404/3376e88f-d1f4-4fb9-8187-376109919f03.pdf>.

three companies from 2020 to 2022.²⁹ Where there is smoke, particularly in supranormal profits, antitrust enforcers should look for fire.³⁰

Several other industry mergers occurred in 2010, 2013, and 2015, among other years. More recently, the acquisition of a publicly supported fertilizer option by one of four largest companies is especially troubling.³¹ Companies themselves have to acknowledge the risks of concentration in the sector, and the reliance of the industry on this troubling trend.³²

Countering those pressures will be challenging but important. Depending on what the DOJ finds in its investigation, it may be appropriate to consider concentration caps or other tools to bring the market structure more in line with competitive principles. President Trump has criticized price gouging in the fertilizer sector.³³ Tools such as the

²⁹ Noah Zahn, "The cost of growth: Fertilizer companies cash in while farmers and communities struggle," *Investigate Midwest*, June 26, 2023, <https://investigatemitwest.org/2023/06/26/the-cost-of-growth-fertilizer-companies-cash-in-while-farmers-and-communities-struggle/>; Sarah Carden, "Big Fertilizer: Measuring the Impacts of Food and Farm System Concentration," *Farm Action*, Jan. 19, 2022, <https://farmaction.us/wp-content/uploads/2022/01/Big-Fertilizer-Measuring-the-Impacts-of-Food-and-Farm-System-Concentration.pdf>.

³⁰ Marc Jarsulic, Andrew Schwarz, Ethan Gurwitz, "Toward a Robust Competition Policy," Center for American Progress, 2019, <https://www.americanprogress.org/article/toward-robust-competition-policy/> (highlighting heightened Tobin's Q returns on equity as indications of the existence of competitive moats preventing the competing away of supranormal profits).

³¹ Donnelle Eller, "OCI Global sells Iowa Fertilizer Co. plant to Koch Industries for \$3.6 billion," *Des Moines Register*, Dec. 19, 2023, <https://www.desmoinesregister.com/story/money/agriculture/2023/12/19/oci-global-sells-iowa-fertilizer-to-koch-industries-for-3-6-billion-wever-plan/71970202007/?gnt-cfr=1&qca-cat=p&qca-uir=false&qca-epti=z116647u116547e113050v116647&qca-ft=164&qca-ds=sophi>; see also "Iowa Fertilizer Deal," *Politico*, Jan. 16, 2024, <https://www.politico.com/newsletters/weekly-agriculture/2024/01/16/march-cr-plan-puts-farm-bill-at-risk-00135696>.

³² The Mosaic Company, Form 10-K, Securities and Exchange Commission, for year ending Dec. 31, 2025, p. 25, https://s1.q4cdn.com/823038994/files/doc_downloads/2026/04/MOS-2025-12-31-10K-Updated.pdf.

³³ "The United States will not accept PRICE GOUGING from the fertilizer monopoly! American Farmers, we have your back!", posted on Truth Social, as reported in Marcia Brown, "Rollins weighs reviving Biden-era domestic fertilizer program," *Politico*, April 22, 2026,

ability to reject prices unless they are “just, reasonable, and nondiscriminatory” could be a way to effectuate the goal and limit the divergence of prices from supply and demand for the product and its inputs.³⁴ Additionally, I have long been in favor of simple concentration limits, such as those which have been utilized in the financial markets.³⁵

Effective enforcement of the law requires funding and staffing at agencies, including lawyers and economists. I fear that the recent loss of honest, hardworking, often farm-kid civil servants hurts poultry farmers when, for example, investigators are needed to examine whether growers’ investments in poultry houses are fully recouped if processing plants close.³⁶

B. Transparency

As described by Louis Brandeis – the architect of the Federal Trade Commission and later the Securities and Exchange Commission – sunlight is the best disinfectant and the electric light the most efficient policeman.³⁷ Frequent information reporting is the lifeblood of the capital markets and enables investors to allocate capital efficiently, delivering growth for the economy and returns for savers. Public company transparency also benefits the public at large, including farmers and farm risk analysts. The capital markets have all sorts of other examples of how transparency is a powerful tool for changing problematic behavior: from the inspections reports and disclosures that the

<https://www.politico.com/news/2026/04/23/rollins-weighs-reviving-biden-era-domestic-fertilizer-program-00887993?shem=dsdf.sharefoc.agadiscoversdl,,sh/x/discover/m1/4>.

³⁴ See, e.g., 7 USC 206.

³⁵ See a concentration cap proposal as applied to meat processing, at C.Z. Willingham and A. Green, “A Fair Deal for Farmers,” Center for American Progress, (2019), <https://www.americanprogress.org/article/fair-deal-farmers/>.

³⁶ See, e.g., John McCracken, “USDA’s Tyson Foods investigation collected thousands of documents”, *Missouri Independent*, Dec. 20, 2024, <https://missouriindependent.com/2024/12/20/usdas-investigation-into-tyson-foods-has-collected-thousands-of-documents-would-donald-trump-end-it/>.

³⁷ Louis Brandeis, *Other People’s Money and How Bankers Use it* (1914).

PCAOB has used to uphold audit quality expectations of auditors since the Sarbanes-Oxley Act reforms, to the bond market trading disclosures under what's called the TRACE system at FINRA that brought down high fees for bond trading.

Transparency is also a fundamental tenet for competitive marketplace design in agriculture. USDA deployed this principle in its transparency rulemaking to enhance poultry growers' decision-making power and address deceptive practices in their contracting and tournaments, as well as around tournament base prices, additional capital investments, and other aspects.³⁸ This committee is familiar with the benefits of the Livestock Mandatory Reporting Act's Market News reporting, as provided by the USDA Agricultural Marketing Service. It helps ordinary producers have a much better grasp of the entire market, which otherwise would be locked up by the biggest industry players and high-cost data providers.

More specifically, only a couple of years ago, the Cattle Contract Library pilot required reporting by covered packers of any financing, risk-sharing, or profit-sharing terms in their long-term contracts. This has long been the focus of concern for smaller players in the industry. AMS publicly confirmed in October 2024 that upon launch in January 2023 and to that date – no contracts have been reported with those specifications.³⁹ As those specifications continue not to be listed, transparency either

³⁸ USDA, Agricultural Marketing Service, "Transparency in Poultry Grower Contracting and Tournaments," Nov. 2023, 88 FR 83210, <https://www.federalregister.gov/documents/2023/11/28/2023-24922/transparency-in-poultry-grower-contracting-and-tournaments>; Agricultural Marketing Service, "Poultry Grower Payment Systems and Capital Improvement Systems," Jan. 2025, 90 FR 5146, <https://www.federalregister.gov/documents/2025/01/16/2025-00508/poultry-grower-payment-systems-and-capital-improvement-systems>.

³⁹ 89 FR 82519, 82522. The term would be reported in the "Contract Specs" list in the Summary Dashboard, available here: https://mymarketnews.ams.usda.gov/visualizations/lpgmn/cattle_contract_library.

has helped clean up the market or has helped clarify that those terms are not relevant to the debate over undue preferential pricing.⁴⁰

More transparency would be beneficial for a more accountable fertilizer market. First, public company disclosure is an important tool. Disclosure of gross margin percentages, for example, and capacity utilization rates are valuable for both investors and farmers. Robust disclosure in the public company markets should be retained, enhanced, and expanded, for the benefit of both investors and risk management overall in the economy.

Second, kudos to the bipartisan sponsors of legislation to enhance USDA's role in providing additional transparency through its toolkit, in particular S. 4152, the Fertilizer Transparency Act of 2026.⁴¹ The legislation looks to build on the Agricultural Marketing Service's track record of success under the Livestock Mandatory Reporting Act and the Cattle Contract Library Pilot. It offers a pathway, carefully designed, that can help level the playing field between farmers managing their risks and the larger fertilizer market participants, which already have access to expensive data providers. Also, public reporting can highlight, and in some cases deter, trends—for example, where there is a disconnect between price and underlying supply and demand. In that way, transparency can lead to beneficial outcomes for farmers even beyond their use of the information itself. I commend the legislation for its use of modern dashboards. The bill also appropriately preserves the ability for the data to be used for enforcement purposes.⁴² This is important, as regulators will need to keep an eye both on data

⁴⁰ To uphold the integrity of reporting, AMS maintains an audit function over its LMR Act Market News program.

⁴¹ <https://www.congress.gov/bills/119/congress/senate/bills/4152>

⁴² On the importance of that, see Government Accountability Office, "U.S. Department of Agriculture: Additional Data Analysis Could Enhance Monitoring of U.S. Cattle Market,"

inputs into the benchmark and the use of the benchmark to guard against manipulation.⁴³

C. Invest in Competition and Resiliency

Third, investment is an important tool for enhancing competitive markets. Investing in competition is integral to ensuring critical supply chains, such as chips production or vital prescription drugs, are present domestically. That was also the principle behind the range of industrial policy investments USDA made post-pandemic to enhance the resiliency and competitiveness of agricultural supply chains, thanks to the American Rescue Plan and in some cases the Commodity Credit Corporation.⁴⁴ Investment should be designed to bring the private sector into the area. Where there is insufficient competition, tools can limit downside risks and fill critical capital stack holes so as to enable the private sector to overcome hurdles to investing. The reality is that investors and entrepreneurs often have horizons for returns or risk tolerances that can be too short and too low, respectively, especially in already highly concentrated markets where economic retaliation is a risk.⁴⁵

GAO-18-296, Apr 10, 2018, <https://www.gao.gov/products/gao-18-296>.

⁴³ Gina-Gail S. Fletcher, "Benchmark Regulation," 102 *Iowa Law Review* 1929-1982 (2017), https://scholarship.law.duke.edu/faculty_scholarship/4014/.

⁴⁴ USDA, "Agri-Food Supply Chains Assessment," 2022, <https://www.ams.usda.gov/sites/default/files/media/USDAAgriFoodSupplyChainReport.pdf>; USDA, "USDA Announces Framework for Shoring Up the Food Supply Chain and Transforming the Food System to Be Fairer, More Competitive, More Resilient, Jun. 2022, <https://www.usda.gov/about-usda/news/press-releases/2022/06/01/usda-announces-framework-shoring-food-supply-chain-and-transforming-food-system-be-fairer-more>; see also Jeff Stein and Laura Reiley, "In latest effort to combat rising prices, White House to offer \$1 billion in aid for smaller meat-industry producers," *The Washington Post*, Jan. 2022, <https://www.washingtonpost.com/us-policy/2022/01/03/white-house-beef-supply/>.

⁴⁵ See, e.g., Nadia Schadlow, "Reindustrialization: A Strategy for American Sovereignty and Security," Hudson Institute, Dec. 2024, <https://www.hudson.org/national-security-defense/reindustrialization-strategy-american-sovereignty-security-nadia-schadlow>; Todd Tucker, "Industrial Policy and Planning: What It Is and How to Do It Better," Roosevelt Institute, July 30, 2019, <https://rooseveltinstitute.org/publications/industrial-policy-and-planning/>.

The Fertilizer Production Expansion Program (FPEP) was USDA's investment program to support American-made, sustainable fertilizer capacity in the face of sharply rising prices and long-term trends towards high levels of concentration. The Administration committed \$900 million from the Commodity Credit Corporation (CCC) in a program intentionally designed to promote competitive alternatives to the existing suppliers, and thus to expand choice for farmers and support rural economic development in places that needed it.⁴⁶ Specifically, the program prohibited any of the four largest companies in a sector by market share from participating, including in manufacturing, processing, or distribution, for any of the nitrogen, phosphate, or potash, or any combination of the three.⁴⁷

Over the course of three years, FPEP invested over \$778 million in more than 100 projects across 39 states.⁴⁸ That adds up to an estimated 12 million tons of new production online and more than 1,500 jobs.⁴⁹ Examples of specific projects are available here.⁵⁰ More than \$100 million remains available to the program. According to

⁴⁶ USDA, "Biden-Harris Administration Makes \$500 Million Available to Increase Innovative American-Made Fertilizer Production," Sept. 27, 2022, <https://www.usda.gov/about-usda/news/press-releases/2022/09/27/biden-harris-administration-makes-500-million-available-increase-innovative-american-made-fertilizer>; USDA, "USDA Makes Investments to Strengthen American Farms and Businesses, Increase Competition and Lower Costs," Dec. 18, 2024, <https://www.usda.gov/about-usda/news/press-releases/2024/12/18/usda-makes-investments-strengthen-american-farms-and-businesses-increase-competition-and-lower-costs>.

⁴⁷ USDA, Rural Development, Fertilizer Production Expansion Program (FPEP) Grant Application Requirements, presentation on October 6, 2022, https://www.rd.usda.gov/sites/default/files/Training_FPEPApplicationRequirements.pdf (funding opportunity RD-RBS-22-01-FPEP).

⁴⁸ <https://www.usaspending.gov/>

⁴⁹ Calculations based on total from <https://www.usaspending.gov/> and data cited in USDA, "USDA Makes Investments to Strengthen American Farms and Businesses, Increase Competition and Lower Costs," Dec. 18, 2024, <https://www.usda.gov/about-usda/news/press-releases/2024/12/18/usda-makes-investments-strengthen-american-farms-and-businesses-increase-competition-and-lower-costs>.

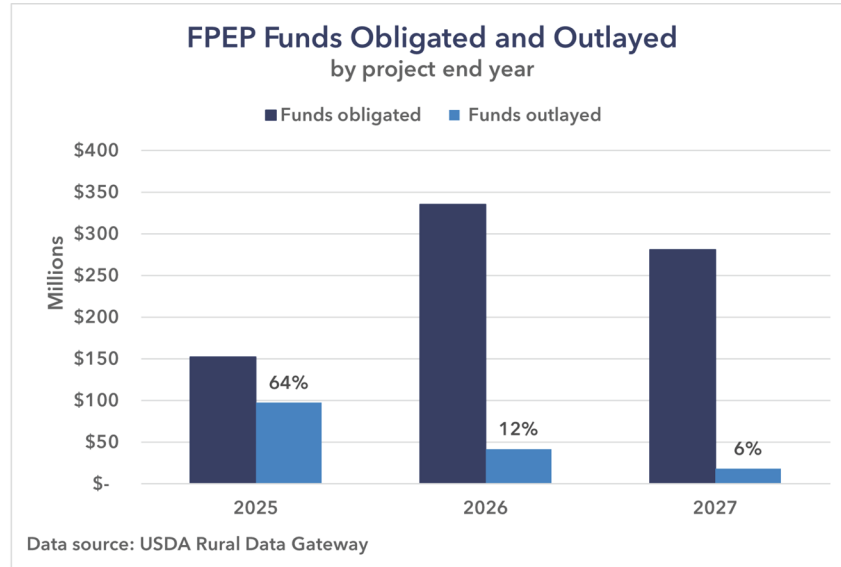
⁵⁰ For example, <https://www.rd.usda.gov/media/file/download/usda-rd-fpep-fy25-12172024.pdf>. Also, Rural Development's Rural Data Gateway, <https://www.rd.usda.gov/rural-data-gateway>.

Treasury Department data, there is more than \$10 billion in the CCC (even keeping a reserve) from which the Administration could use even a modest amount to restart and expand the FPEP program.⁵¹

Some FPEP projects have spent all or most of their funds.⁵² For projects that have spent 90 percent or more, those obligations totaled approximately \$88 million. For projects that have spent 50 to 90 percent, those obligations totaled nearly \$70 million. However, many projects have not seen large amounts of outlays (actual payments against obligated grant dollars). For projects that have only drawn outlays between 10 percent and 50 percent, their obligations totaled slightly more than \$70 million. Projects where zero dollars have been outlaid reflect obligations of over \$460 million. The following chart shows outlays organized by the target end year for the project.

⁵¹ Treasury Direct, Commodity Credit Corporation, 012X4336, <https://www.treasurydirect.gov/govt/reports/tbp/borrowings-transaction-query/report.html>.

⁵² Rural Development's Rural Data Gateway, <https://www.rd.usda.gov/rural-data-gateway>



At a minimum, expanding capacity is important. Larger fertilizer companies, as with other capital intensive businesses, face often financial market pressures to run at or near capacity. This can leave little space in the system to adjust in the face of shocks.⁵³

As a corollary, it is important to enhance institutional resources that support investment in supply chain resiliency and rural economic vitality, such as FPEP. For many years, USDA Rural Development's Rural Cooperative and Business Services has provided the know-how for investments that require Federal lending and loan guarantee authority, as well as support for farmers seeking to operate cooperatives. The Agricultural Marketing Service is also a vital resource in partnering with local institutions

⁵³ See, e.g., CF Industries, "Key Questions About Fertilizer and Its Price Answered," March 27, 2026, Q4.

to provide grants, technical assistance, and data that support competitive local agricultural markets and rural economic vitality.

D. Align the Consumer Market with Competition

Fourth, consumers can support pro-competition incentives upstream for farmers. The starting point is to serve the consumer with truth. Clear labels for consumers also help producers because producers that actually do the hard work of consumer-desirable practices should get their rewards. That was the principle behind the Biden Administration's alignment of "Product of USA" as born, raised, harvested, and processed in the USA, with the work begun under the first Trump Administration's Federal Trade Commission around "Made in USA."⁵⁴ The same principle applied to efforts to enhance sustainability and no-antibiotics labels.⁵⁵

In fertilizer, opportunities exist to align America's desire for healthy food and a clean environment, with competition and resiliency in fertilizer. Expanding the options for farmers can also be useful. For example, greater reliance on biofertilizer, livestock on the land, and other practices to shift towards profitability maximization, may be appropriate for many farmers.⁵⁶ One study suggests that nutrient recycling is capable of

⁵⁴ USDA, "USDA Finalizes Voluntary "Product of USA" Label Claim to Enhance Consumer Protection," March 2024, <https://www.usda.gov/about-usda/news/press-releases/2024/03/11/usda-finalizes-voluntary-product-usa-label-claim-enhance-consumer-protection>.

⁵⁵ USDA, "USDA Releases Updated Guideline to Strengthen Substantiation of Animal-Raising and Environment-Related Claims on Meat and Poultry Labels," Aug. 2024, <https://www.usda.gov/about-usda/news/press-releases/2024/08/28/usda-releases-updated-guideline-strengthen-substantiation-animal-raising-and-environment-related>.

⁵⁶ Devault, M., Woolf, D. & Lehmann, J., "Nutrient recycling potential of excreta for global crop and grassland production," *Nat Sustain*, 8, 99–111 (2025). <https://doi.org/10.1038/s41893-024-01467-8>. See also, National Farmers Union, "Nitrogen Fertilizer: Critical Nutrient, Key Farm Input, and Major Environmental Problem," Aug. 30, 2022, <https://www.nfu.ca/wp-content/uploads/2022/08/nitrogen-fertilizer-report-nfu-2022-en.pdf>.

meeting approximately 13 percent of crop nutrient needs.⁵⁷ Enforcing the truthfulness of label claims is important to prevent fraud that takes money out of the pockets of farmers who have invested in enhanced production practices.

E. Research

Economic research and academic legal analysis are foundational aspects of building and maintaining effective market competition. They are vital for enforcement matters and rulemaking, and also serve critical functions in helping market participants and policymakers identify trends and design remedies to restore market competitiveness. Government investments in objective, unbiased research, such as through the Land Grant University system, and through other institutes and studies, are only more important, as many academic and research institutions increasingly rely on either corporate sponsorships or philanthropic foundations which can have slants to their research agendas. The AMS Transportation Division is a fantastic example of how investments in research and market expertise can yield information and regulatory benefits for farmers and agricultural shippers generally.

One underappreciated aspect of the USDA Agricultural Competition Partnership with the State Attorneys General, since cancelled, was how those funds were designed to enable more than 30 bipartisan state attorneys general offices to engage academics, often at their local research universities. Those studies can undergird more effective state-led antitrust enforcement and also analyze the feasibility of innovative, market-driven pilot programs. The Biden USDA also directly invested in competition studies—for example, a study through a Land Grant university in a major cattle state of

⁵⁷ See, e.g., National Farmers Union, “Nitrogen Fertilizer: Critical Nutrient, Key Farm Input, and Major Environmental Problem,” Aug. 30, 2022, <https://www.nfu.ca/wp-content/uploads/2022/08/nitrogen-fertilizer-report-nfu-2022-en.pdf>.

the possibility of exchange trading to help set base prices for certain grades of cattle in markets where cash negotiation was otherwise constrained and where producers could maintain access to their preferred grid.

Research into seed resiliency is also important to improve fertilizer efficiency. To that end, the Agricultural Research Service's National Plant Germplasm System (NPGS) seed bank undergirds public *and* private company research, for example on adaptable varieties that can grow in different regions and changing climates. Congress should invest in revitalizing the NPGS, which is in need of infrastructure upgrades and staff to avoid the loss of irreplaceable heirloom seed, including in corn.⁵⁸ Congress has been sensible to fund agricultural economic research centers, and should expand and enhance their and other research institutions' ability to focus on key competition challenges. The AMS Seed Liaison project emerged out of a similar partnership with Land Grant university expertise.

III. Conclusion

Farmers and rural communities deserve the chance to compete based on hard work, smart investments, and nature's abundance. Market competition is a vital pillar to allow that to occur. But sustaining fair and competitive markets takes hard work by policymakers too. I am pleased to see the seriousness with which this Committee approaches the topic before us and also the continuing bipartisan dedication across multiple Administrations. More can and should be done.

⁵⁸ See, generally, USDA, Agricultural Research Service, National Plant Germplasm System (NPGS) Plan, <https://www.ars.usda.gov/crop-production-and-protection/plant-genetic-resources-genomics-and-genetic-improvement/docs/npgs-plan/> (accessed May 8, 2026).

United States Senate Committee on Agriculture, Nutrition, & Forestry

Hearing on

Perspectives on the Fertilizer Industry: Ensuring a Stable and Affordable Supply for
American Producers

Tuesday, May 12, 2026

Written Testimony of

Trent Kubik

President, South Dakota Corn Growers Association

Chairman Boozman, Ranking Member Klobuchar and Members of the Senate Agriculture Committee, thank you for the opportunity to speak here today. My name is Trent Kubik and I'm a farmer from Hamill, South Dakota and President of the South Dakota Corn Growers Association.

I. Impact on Corn Farmer as the Individual Customer

When farmers start to make decisions on purchasing fertilizer, it's important to note that everyone's situation varies greatly, even within the same region. My experience is unique but I also want to add some perspective on other growers from my region to give you a glimpse of the challenges we face, and how increased costs have changed how we make decisions. For our operation, we are diversified both in the types of crops we plant, and the products we produce, for example, livestock. We also farm in an area of the country where the weather varies much more than normal, and more often than not we are threatened by the lack of rainfall. Due to this, we try and limit the amount of fertilizer we purchase and apply at the start of the year and determine if we need more while the crop is growing, which in turn, does not allow us to early book and/or prepay for all of our fertilizer needs. We also cannot write our crop planting intentions in stone as we may need to make changes to the crops we plant to sustain our feed supply for our cattle herd. Those crops require different fertilizer amounts than traditional crops like corn, soybeans or wheat. As an added layer of complexity to the 2026 growing year, we had some organizational changes to our operation in the first few months of the year, and were not in position to book/prepay for any fertilizer. We expected that our costs could be higher as we would be purchasing closer to peak demand season, but are now left with costs almost doubling after the unforeseen circumstances that occurred in the Middle East. As I speak today, much of our fertility is still not purchased as we wait until we absolutely need it in hopes of market stabilization bringing the cost down. It is important to remember that in this instance, I, and thousands of other farmers like me, including producers of almost every

other commodity, are the customers, and as such, the impacts that I've illustrated in my testimony are unique to that position.

II. U.S. Fertilizer Pricing—Different than Before

As the increase in fertilizer prices that began in 2020 has already been well documented, it is more important to note in addition that the fertilizer price increase we are presently facing is not the same as those that occurred prior. The 2020 price increase did not track with an increase in natural gas prices.

A late 2021 study conducted by the Texas A&M University Agricultural and Food Policy Center that examined nitrogen pricing concluded that, "The suggestion that recent increases in the price of natural gas are the primary reason for recent increases in the prices of nitrogen products is highly suspect. For example, the price of Anhydrous Ammonia [sic] increased \$688 per ton from the end of 2020 through the end of October 2021. However, the increase in the value of the embedded natural gas accounts for only \$102 (or 15%) of that increase.... [O]nce the value of natural gas in a ton of AA has been subtracted from the AA price, the residual tends to closely track the price of corn, albeit on different scales."¹ We believe the difference can be explained by undue concentration levels and associated anticompetitive exclusionary practices, highlighting the need for increased market transparency and antitrust enforcement to increase competition.

In addition, despite the cost of natural gas in the U.S. being relatively cheaper than many fertilizer-producing areas of the world, the price of nitrogen fertilizer in the U.S. has continued to rise in concert with prices in areas with higher cost natural gas. A resulting rise in margins for U.S. manufacturers should, in theory, encourage expansion of production and higher capacity utilization for the industry. Instead, market power has allowed manufacturers to maintain higher prices while also limiting efforts to use existing manufacturing capacity, at the expense of U.S. farmers. If, as the manufacturers suggest, the rise in prices in the U.S. market reflect other contributing factors, we request that they submit information to this Committee on current and historic capacity utilization rates. This would allow us to answer the question of whether manufacturers have indeed increased their production and how that compares with their total available output.

III. U.S. Fertilizer Marketplace

¹ Economic Impact of Nitrogen Prices on U.S. Corn Producers, Joe Outlaw, Bart Fischer, Henry Bryant, J. Marc Raulston, Agricultural and Food Policy Center, Texas A&M University, December 20, 2021, prepared for Texas, Missouri, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Minnesota, Nebraska, New York, North Carolina, North Dakota, Ohio, South Carolina, South Dakota, Tennessee and Wisconsin Corn Producers Associations and Checkoffs.

a. Concentration is High

Over the past 40 years, fewer and fewer fertilizer firms serve the U.S. farmer due in no small part to industry mergers. For nitrogen fertilizer—CF Industries, Nutrien, Koch, and Yara US have a combined 75% market share in the United States. For phosphate fertilizer—The Mosaic Company (Mosaic) controls 70% - 80% of the market in the United States as well as 60% of phosphate rock production. For potash fertilizer—Nutrien and Mosaic are the only two major potash suppliers and control 90% - 100% of the U.S. market. By almost any measure these are highly concentrated markets.

b. Vertical Integration is Prevalent

All of the large fertilizer companies have a vertically integrated business model covering most if not all business segments from raw material extraction to logistics and the distribution of final products. As examples, CF Industries controls 42% of ammonia production, Mosaic produces around 60% U.S. phosphate rock, and Nutrien around 25%.

Additionally, the large manufacturers appear to have developed and to own distribution networks. For instance, Nutrien operates the largest direct-to-grower distribution network with distribution points and retail locations. Unfortunately, there is limited publicly available information regarding distributors.

There are three types of distributors—national, regional and buying groups. The “big four” national wholesalers are Tenkoz, Nutrien Ag Solutions, WinField United and Helena Agri-Enterprises. Though information on this type of wholesaler is scarce, one example of a regional distributor is New Century Ag.

Vertical integration has not led to efficiency gains passed on to growers and consumers. Instead, our experience is that this integration has resulted in the largest fertilizer companies locking up and leveraging distribution channels, entrenching their dominant position, and extracting excessive, supracompetitive profits from farmers and consumers. Prices have not yet decreased from their most recent run-up in this concentrated market. With time, it may become apparent again that these integrated companies in highly concentrated markets have successfully insulated themselves from market shock at the expense of farmers and consumers.

c. Exclusionary Practices and Market Power

From my experience, the market power of fertilizer companies gives them the ability to control the price we pay and restrict supply when it suits their financial needs and without regard to competitive pressure.

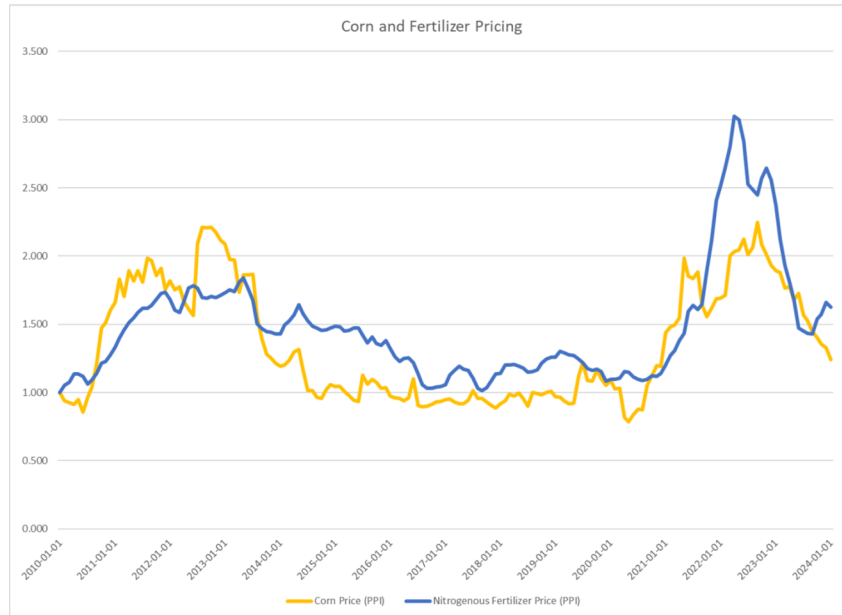
As a farmer, I am aware of credible examples of practices that are endured when trying to secure fertilizer. These experiences are likely not unique to the past 75 days, nor corn farmers only. As an example, a corn farmer recently had a fertilizer contract cancelled not once, but twice after signing a new, second agreement. In this instance, the third time was not the charm. While the product was offered again, it was priced at approximately \$200/ton more. As a practical matter, farmers do not have a choice but to accept these practices. When it benefits those upstream to honor a contract, it is honored. When it does not, it is easily broken. Put differently, we, as farmers, cannot unilaterally alter a fertilizer contract when the circumstances change in our favor. Nor can we shop around for better contract terms with other suppliers.

Who is responsible for this type of occurrence? Anti-competitive vertical integration must be closely examined to address these questions. It is unclear whether a retailer has a meaningful way to lock in future product at a price premium that is not cost prohibitive. While farmers can't be completely sure of the answers to these questions, we strongly suspect that years of consolidation and the resulting market power in the hands of these companies lies at the root cause that aids and abets these practices that are pushing producers' margins past the breaking point.

Are there other indications of the use of market power to directly impact fertilizer pricing? In an analysis conducted in 2024, nitrogen fertilizer showed elevated prices when tested with indicator variables for years going back to 2018 and for any block during the years 2018-2023.² Table 1 below illustrates the producer price index measuring the change in the price of goods sold, both for corn and nitrogen—indicating that nitrogen fertilizer prices nearly precisely track increases in corn prices.

² Fertilizer Preliminary Analysis, April 1, 2024, McClave + Associates, Statistical and Economic Consulting.

Table 1.



IV. Market Transparency is Needed

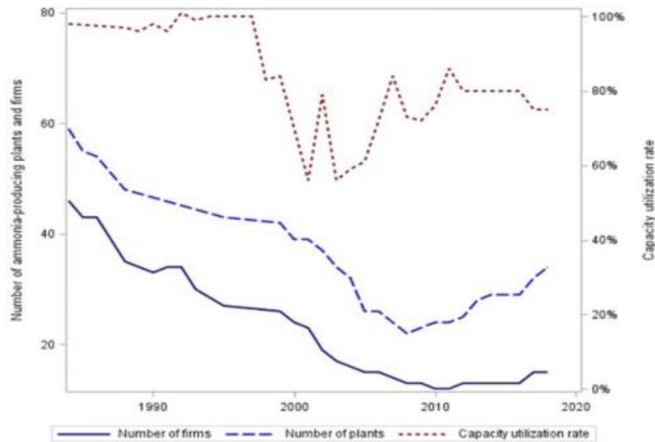
Publicly available information suggests lower capacity utilization. For instance, a past Mosaic Market Position document stated, “Mosaic production has averaged around [sic] 73% utilization since the CVD filing vs. historical run-rates of around [sic] 87%”. U.S. Geological Survey mineral reports also include annual capacity production figures. For example, a 2018 mineral report states, “CF Industries Holdings, Inc.; Nutrien Ltd.; Koch Nitrogen Co., LLC; and Dyno Nobel Inc., in descending order of production capacity, accounted for 72% of total U.S. ammonia production capacity.”

Table 2 illustrates that as the number of plants decreased, so did capacity utilization.³ Information on pricing and margin data would be required to definitively determine whether market control was used to limit supply. All of this evidence that points to dangerous levels of concentration and control by just a few players in the fertilizer industry and also points to

³ Fertilizer Preliminary Analysis, April 1, 2024, McClave + Associates, Statistical and Economic Consulting.

the need to level the playing field by ensuring that the industry provides greater transparency to reduce the chances of manipulation and noncompetitive practices.

Table 2. Fertilizer Production Firm Numbers, Plant Numbers, and Capacity Utilization, 1980-2018.



Two key pieces of legislation would be helpful to begin to provide the type of data needed to assess the use of market output control. S. 4152, the Fertilizer Transparency Act of 2026, would increase the data available to help improve market signals by providing public access to meaningful pricing data and give farmers a tool to help plan for these costs. Ultimately, this legislation will make the market for key farm inputs more transparent and therefore represent a step toward making the market more competitive. We greatly appreciate Senators John Thune and Amy Klobuchar for introducing this much-needed step towards market transparency.

In addition, S. 2808, the Fertilizer Research Act, authorizes a study on fertilizer competition, trends and pricing. This bill also increases transparency and would provide much needed information to better assess the marketplace and we thank Senators Chuck Grassley and Tammy Baldwin for introducing the bill.

V. Increased Competition is Needed

Simply put, farmers need more competition in this marketplace. We thank U.S. Department of Agriculture Deputy Secretary Stephen Vaden for his significant interest in

this arena and call upon the federal agencies that signed the September 2025 Memorandum of Understanding (MOU) to take meaningful steps towards solutions to concentration in this subsector. The MOU illustrated those agencies' "shared commitment to ensuring effective antitrust enforcement that promotes free market competition, lowering input costs and benefitting farmers, ranchers and consumers." The federal antitrust laws exist for precisely this reason—to promote/sustain competition, the lifeblood of our economy.

While we appreciate the recent actions and announcements by the Administration to help facilitate increased fertilizer production and supply by current industry players, it is imperative to have increased competition in the fertilizer production marketplace. Only through more market participants in this space can farmers expect to see true competition for their business. Increased competition from more participants in the fertilizer manufacturing space is the only thing that can deliver meaningful and durable price relief.

In addition, S. 4148, the Homegrown Fertilizer Act, would help to expand domestic fertilizer production and storage capacity. We thank Senators Amy Klobuchar and Roger Marshall for introducing legislation that would improve the existing fertilizer supply chain.

Finally, new entrants into the marketplace could be facilitated by removing import barriers to imports. An extremely relevant example is the countervailing duty (CVD) currently imposed by the Commerce Department on imports of phosphate fertilizer from Morocco. A recent report by the Agricultural and Food Policy Center at Texas A&M University found that the CVD increased the price of diammonium phosphate (DAP), a common phosphorus fertilizer, by 28.6% during the period when the CVD was imposed at its full initial level of 19.97%.⁴ The Texas A&M study also found that the CVD has increased the cost of phosphorus fertilizers for U.S. producers of a subset of major crops by an estimated \$6.9 billion for the 2021 through 2025 growing seasons.⁵ A CVD would make sense if the domestic industry were competitive and if those foreign imports were harming that industry. Instead, the CVD in this scenario is just increasing costs for American farmers.

VI. 2026 and 2027 Corn Crops

Finally, I would be remiss without highlighting some impact to the 2026 and 2027 corn crops because of the price of fertilizer. As an example, according to recent nationwide surveys conducted by the National Corn Growers Association, 36% of corn farmers had not fully purchased or secured their 2026 phosphate fertilizer, illustrating the significant

⁴ Increased Costs of Phosphate Fertilizers in the United States due to Countervailing Duty on Imports from Morocco, Agricultural and Food Policy Center, Texas A&M University, January 14, 2026.

⁵ Id.

potential negative impact on corn farmers that is yet to be determined for this year. The potential negative impact for the 2027 crop has been acknowledged across agribusiness and farmers alike. In August, South Dakota farmers will begin to seriously plan and make decisions regarding the 2027 corn crop, however it is nearly impossible for them to know what will these market conditions will look like at that time. The majority of corn farmers are therefore concerned about fertilizer price and availability as they look forward.

Thank you again for the opportunity to be here and thank you to Chairman Boozman and Ranking Member Klobuchar for taking up the critical issue of fertilizer. I look forward to answering any questions.

Markets

Fertilizer Makers See Earnings Windfall as War Disrupts Supplies



A tractor drips nitrogen fertilizer onto rows of romaine lettuce at a farm near Gonzales, California, in April. *Photographer: Nic Coury/Bloomberg*

By [Ilena Peng](#)

May 6, 2026 at 5:54 PM EDT



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✦ Takeaways by Bloomberg AI



- CF Industries Holdings Inc. and Nutrien Ltd. each reported nearly 20% jumps in sales for the latest quarter due to the Iran war's upheaval on supply chains for key crop nutrients.
- The North American producers have benefited from higher prices for nitrogen fertilizers, which are applied across US corn and soy fields to support crop yields.

- Nitrogen-based fertilizers faced the most dramatic price increase following the closure of the Strait of Hormuz, a key passageway for the nutrients.

Fertilizer makers CF Industries Holdings Inc. and Nutrien Ltd. each reported nearly 20% jumps in sales for the latest quarter, showing the extent of the Iran war's upheaval on supply chains for the key crop nutrients.

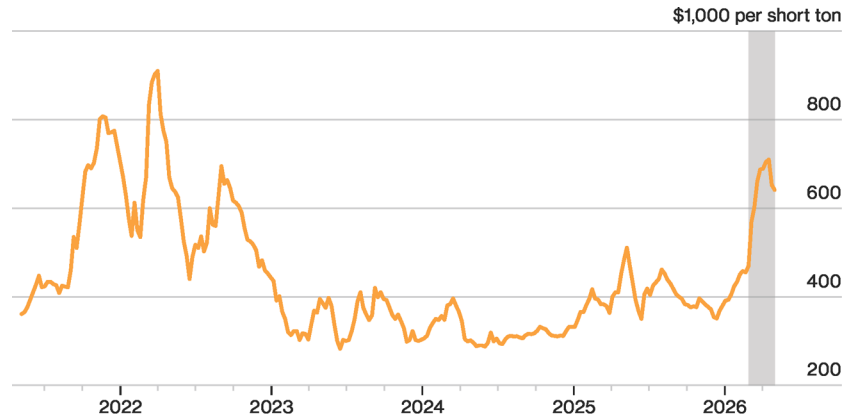
The windfall comes as the North American producers have benefited from higher prices for nitrogen fertilizers, which are applied across US corn and soy fields to support crop yields. Illinois-based CF Industries  reported earnings per share that more than doubled from a year ago. Canada-based Nutrien's  adjusted per-share earnings more than quadrupled, though they fell short of analyst estimates.

Prices for the inputs were already elevated prior to the start of the war due to a tight supply balance, prompting concerns from farmers and antitrust scrutiny from the Trump administration.

CF Industries's performance comes "against a backdrop of strong global nitrogen demand and tight global nitrogen supply as we entered the year," Chief Executive Officer Chris Bohn said in a statement. "The conflict with Iran has further constrained global nitrogen supply and exposed the fragile nature of the global nitrogen supply chain."

US Urea Prices Elevated as Middle East Conflict Continues

US Gulf granular urea spot price



Source: Bloomberg Green Markets

Nitrogen-based fertilizers faced the most dramatic price increase following the closure of the Strait of Hormuz, a key passageway for the nutrients.

Nitrogen can't be skipped, so farmers who delayed its use will likely buy the nutrient once supply is available, according to a [note](#) from Bloomberg Intelligence senior analyst Alexis Maxwell. Meanwhile, prices for natural gas – which is a necessary input – have not surged as much in the US as in other markets, positioning the producers to capture higher [ammonia margins](#), Maxwell said.

Read More: [Subzero Gas Prices Show US Energy Edge as Iran War Chokes Supply](#)

CF primarily produces nitrogen fertilizers, while Nutrien also manufactures phosphate and potash crop nutrients. [Phosphate prices](#) have increased as the strait is a route for both the nutrients and the sulfur needed to manufacture it.

[Granular urea](#) prices in New Orleans are up about 36% since the conflict began in late February, while prices in [Egypt](#) have jumped more than 70%, according to Bloomberg Green Markets data as of May 1.



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**TO THE UNITED STATES SENATE COMMITTEE ON
AGRICULTURE, NUTRITION, & FORESTRY**

**“Perspectives on the Fertilizer Industry: Ensuring a Stable and
Affordable Supply for American Producers”**

May 12, 2026

Presented By:

Eddie Melton

President, Kentucky Farm Bureau

Chairman Boozman, Ranking Member Klobuchar, and Members of the Senate Agriculture Committee,

My name is Eddie Melton. I am a fifth-generation row crop and beef cattle farmer from Webster County, Kentucky, and I currently serve as president of Kentucky Farm Bureau. It is an honor to be with you today to speak on behalf of the farmers of Kentucky, as well as the more than 470,000 Kentucky Farm Bureau member families.

My family has been farming in Webster County since 1900 when my great-great-grandfather purchased our farm. I graduated from Murray State University in 1980 with a Bachelor of Science in agriculture. During my college years, I had to take a break from my studies to help run our farm when my father's health began to decline. In 1990, the entire operation became my responsibility. During my lifetime, I have helped bring in more than 50 years of crops. We typically raise corn, soybeans, canola, wheat, and beef cattle. This year, due to fertilizer prices, we made the decision not to plant wheat and canola. This is the kind of decision farmers across the country have had to make this crop year.

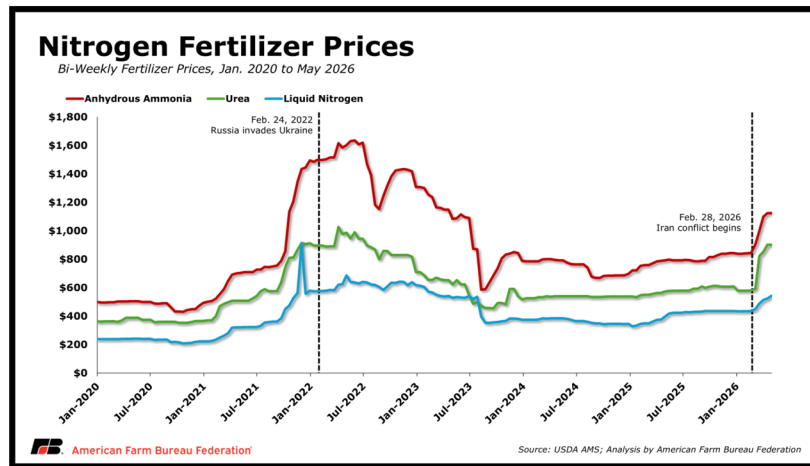
This hearing comes at a critical time as we assess the current state of the farm economy and the ongoing challenges facing American agriculture. Against this backdrop, I want to focus on one of the most pressing and persistent issues confronting producers: the sustained rise in fertilizer and input costs, and the broader financial strain it is placing on the agricultural sector.

A Crisis Years in the Making

One point that must be clearly understood is that today's fertilizer price challenges did not begin with the recent conflict in Iran. While global tensions often draw attention to input markets, prices for inputs like fertilizer and fuel have been elevated for several years. USDA forecasts that production expenses will reach a record \$478 billion in 2026, and that was before the surge in fuel and fertilizer prices.¹ The current situation is not a temporary disruption, it is the continuation of a longer trend that has steadily increased the cost of doing business in agriculture.

¹ American Farm Bureau Federation, Market Intel, "USDA Cuts 2025 Farm Income as Weakness Persists into 2026," available at: <https://www.fb.org/market-intel/usda-cuts-2025-farm-income-as-weakness-persists-into-2026>

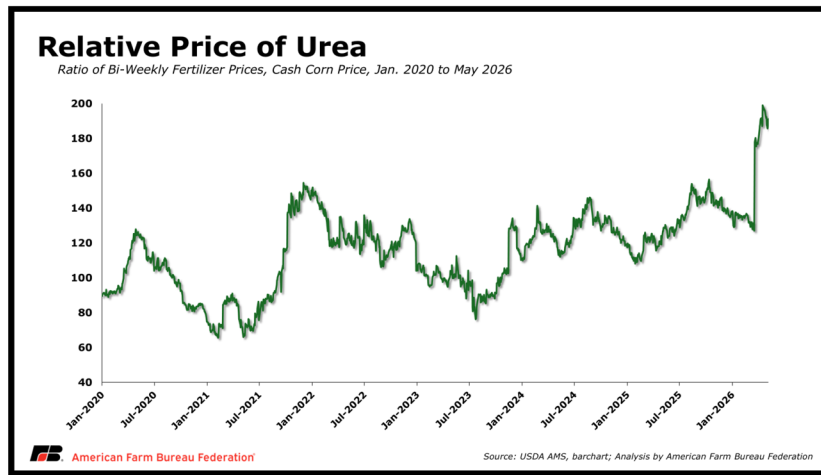
While the current crisis is not new, disruptions at the Strait of Hormuz have beyond a doubt exacerbated the problem. The University of Kentucky's Department of Agricultural Economics recently published an article on this very issue. According to their data, prior to the closure, more than 20 million barrels of oil moved through the Strait daily, along with most of the liquefied natural gas from Qatar and the UAE.² The shipping disruptions contributed to an increase in the price of nitrogen fertilizer, which has natural gas as its primary feedstock. The analysis also points out that one-third of fertilizer carried by cargo ships, particularly urea and phosphate, must pass through the Strait. The unpredictability in the region has led to concerns about availability for not just the current crop year, but for next year as well. The chart below shows nitrogen fertilizer prices since January 2020 along with the accompanying spikes.



One common way to measure fertilizer affordability is to compare how many bushels of corn are required to purchase a ton of fertilizer. In 2022, farmers saw record-high grain prices, with corn averaging approximately \$6.50 to \$7.00 per bushel. Today, USDA's latest WASDE places corn closer to \$4.15 per bushel. As prices have declined, the number of bushels required to purchase a

² University of Kentucky Department of Agricultural Economics, "Global Shipping Disruptions and the Recent Increase in Nitrogen Fertilizer Prices," available at: <https://agecon.mgcafe.uky.edu/articles/global-shipping-disruptions-and-recent-increase-nitrogen-fertilizer-prices>

ton of fertilizer has increased significantly, meaning fertilizer is effectively more expensive in real terms. For example, the current cost of urea is near the record high seen in 2022 during the peak of the conflict between Russia and Ukraine.³



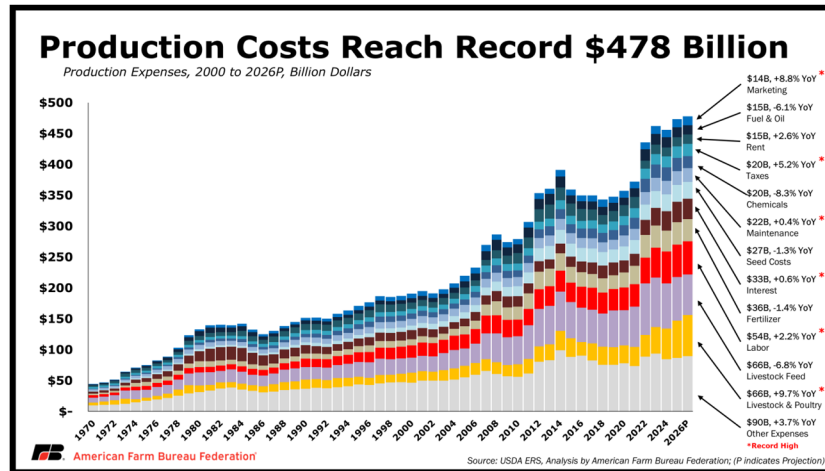
Sustained Economic Pressure's Impact on the Farm

At the same time fertilizer prices are rising, the broader farm economy has been under sustained pressure. This year marks the fourth consecutive year of decline, driven by a combination of persistently low commodity prices and elevated fertilizer costs, as evidenced in the chart “Production Costs Reach Record \$478 Billion.” Unlike previous cycles, producers are not benefiting from strong crop prices to offset higher expenses. Instead, they are being squeezed from both sides.

That margin compression is having real consequences on the ground. Many farmers are operating with little to no working capital, limiting their ability to manage risk or invest in future

³ Federal Reserve Bank of Kansas City – Center for Agriculture and the Economy, “Disruptions in the Strait of Hormuz Pressure Fertilizer Prices Ahead of the U.S. Growing Season,” available at: <https://www.kansascityfed.org/center-for-agriculture-and-the-economy/insights-on-agricultural-and-rural-economics/>

production. Over time, that kind of financial strain compounds. It is reflected in rising farm bankruptcies and reinforced by producer surveys showing that input costs are directly influencing planting decisions. In the first quarter of 2026, 86 farms have already filed for Chapter 12 bankruptcy, including 25 in the Southeastern region.⁴



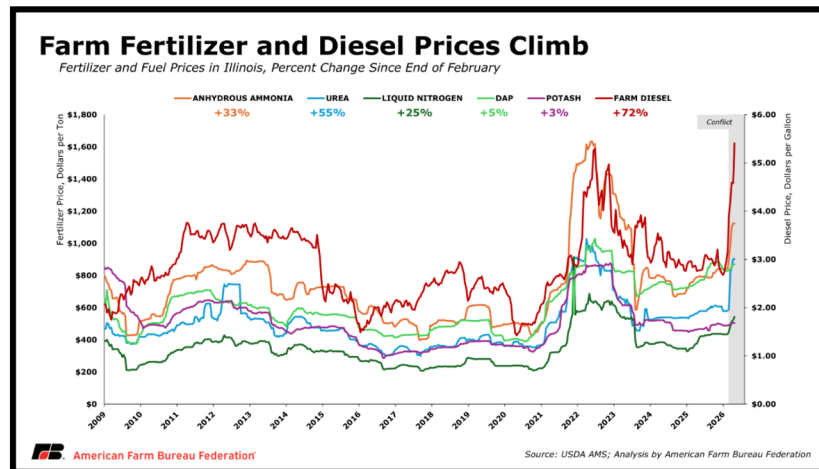
To better understand how global fertilizer market disruptions are affecting producers during spring planting, the American Farm Bureau Federation (AFBF) conducted a Fertilizer Availability Survey of more than 5,700 farmers and ranchers nationwide between April 3 and April 11.⁵ The results highlight significant challenges in fertilizer access, with just 19% of Southern producers reporting that they had pre-booked fertilizer, compared to 30% in the Northeast, 31% in the West, and 67% in the Midwest—reflecting variations in planting timelines and exposure to recent price increases.

⁴ Administrative Office of the U.S. Courts, “Bankruptcy Filings Statistics,” available at: <https://www.uscourts.gov/data-news/reports/statistical-reports/bankruptcy-filings-statistics>

⁵ American Farm Bureau Federation, Market Intel, “Farm Bureau Survey Reveals Real Impact of Fertilizer Availability and Price,” available at: <https://www.fb.org/market-intel/farm-bureau-survey-reveals-real-impact-of-fertilizer-availability-and-price>

Affordability challenges are especially acute in the South with roughly 78% of respondents indicating they were unable to afford all the fertilizer they need. In my home state of Kentucky, just 29% of farmers reported being able to pre-book fertilizer with almost 72% stating they could not afford all the fertilizer they needed for this growing season. Roughly 90% of Kentucky farmers who responded to the survey said they were financially in the same or a worse position than they were last year, while nationwide roughly 60% reported being in a worse position. We know this is a direct result of rising fertilizer costs.

Since February, we have seen a 33% rise in anhydrous prices, a 55% rise in urea prices, a 25% increase in liquid nitrogen, a 5% increase in DAP, and a 3% increase in potash. At the same time, farm diesel prices have surged 72% since the end of February, increasing the cost of fieldwork, fertilizer transportation, and irrigation. Taken together, these pressures are weighing heavily on farm finances, with nearly six in ten farmers reporting worsening financial conditions, underscoring the urgent need for near-term economic relief to keep farm operations viable.



Policy Solutions

Addressing these challenges requires both immediate and long-term action. In the near term, greater transparency in the fertilizer market and ensuring farmers have access to the fertilizer

they need to get through this growing season is essential. This includes the temporary suspension of the countervailing duties on imported fertilizer products to moderate price increases. AFBF sent a letter to President Trump on March 9, 2026, shortly after the impacts of the disruptions in maritime travel in the Strait of Hormuz were felt in the global fertilizer market.⁶ We appreciate the efforts by the Administration so far, including the suspension of the Jones Act and increased resources to build domestic capacity. We continue, however, to call on the President and Congress to do everything in their power to increase availability of fertilizer and ease the price burden on farmers this growing season. In an October 2025 letter to the President and Congressional leadership, AFBF highlighted the need for fairness and transparency in input markets.⁷ Agriculture depends on well-functioning markets, but when pricing is opaque and options are limited, producers are left without the ability to respond effectively. Improving research into pricing would provide farmers with more certainty as they make critical input decisions.

Over the longer term, the United States must strengthen its domestic fertilizer production capacity. We are grateful to the Administration, especially Secretary Rollins and the team at USDA, for their work on this issue. Reliance on global supply chains for such a vital input leaves producers vulnerable to disruptions well beyond their control. Expanding domestic production would improve supply reliability and help moderate price volatility over time. Achieving that goal will require a regulatory environment that allows investment and development to move forward in a timely and predictable manner. Additionally, the U.S. must continue research and development of agricultural biologicals that can help improve plant growth and nutrition. These tools can help provide additional fertilizer options to farmers.

Call to Action

The challenges facing agriculture today are the result of sustained economic pressure that is reshaping the farm economy. According to USDA, we lost more than 20 million acres of farmland between 2017 and 2022, along with more than 199,000 farms since 2017.⁸ If farm

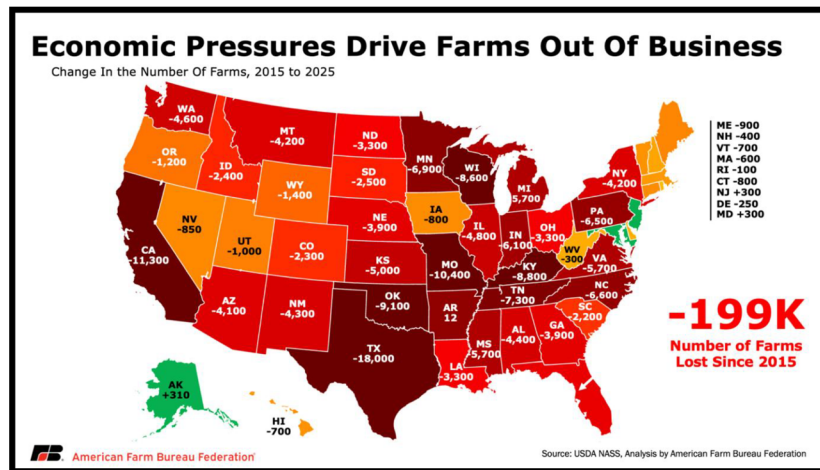
⁶ American Farm Bureau Federation. (2026). *Letter to the President of the United States: Fertilizer*. <https://www.fb.org/files/AFBF-Letter-to-POTUS-Fertilizer.pdf>

⁷ American Farm Bureau Federation. (2026). *AFBF letter to Congress: Farm economy*. <https://www.fb.org/files/backgrounder/AFBF-Letter-to-Congress-Farm-Economy.pdf>

⁸ American Farm Bureau Federation, Market Intel, "Farm Bankruptcies Continued to Climb in 2025," available at: <https://www.fb.org/market-intel/farm-bankruptcies-continued-to-climb-in-2025>

closures, farmland loss, and consolidation continue, the long-term structure of American agriculture will begin to change. That change poses a risk to our national security by weakening domestic food production capacity and increasing reliance on foreign, less resilient supply chains. Ensuring that producers have access to affordable inputs and fair, transparent markets is critical, not only for their operations, but for the long-term stability of American agriculture and national food security.

For producers operating on thin margins, there is no flexibility to wait for longer-term solutions. That is why near-term support matters. Congress should act now with additional economic assistance to help farmers manage today's cost pressures, prevent further financial strain, and stabilize operations while longer-term fixes are put in place.



Chairman Boozman, Ranking Member Klobuchar, and members of the Committee, thank you for the opportunity to speak today as both a farmer and as president of the Kentucky Farm Bureau.

This hearing is an important step toward advancing lasting solutions to the rising input cost challenges facing agriculture. I look forward to working with the Committee to strengthen the farm economy and ensure that America's farmers and ranchers can continue to provide a safe, reliable supply of food, fiber, and fuel for generations to come.

Thank you.



Written Remarks of

Corey Rosenbusch

President and CEO

The Fertilizer Institute

Senate Agriculture Committee

Hearing on

***"Perspectives on the Fertilizer Industry: Ensuring a Stable and
Affordable Supply for American Producers."***

May 12, 2026

Chairman Boozman, Ranking Member Klobuchar, and members of the Committee:

Thank you for holding this hearing. Thank you also for the opportunity to testify on behalf of The Fertilizer Institute (TFI), the trade association which represents the companies that supply the plant nutrients essential to American agriculture. We come before you not just as fertilizer producers and agribusiness retailers, but as partners to the nation's farmers who power the world's finest food production system.

The key thing to take away from this testimony is that the U.S. fertilizer industry supports market transparency. As an example of this ongoing support, TFI Stats offers members and subscribers access to historical aggregated datasets and insights, helping users understand the fertilizer industry; for more information, visit the TFI Stats web page. Similarly, TFI seeks to establish a federal means of accessing, aggregating, and reporting data on fertilizer industry trends to aid farmers, policymakers, and the public on a timely and consistent basis. Importantly, that analysis must be global in scope. As the ongoing events in the Middle East make clear, disruptions to the global market directly impact American farmers. We believe that establishing this function would aid farmers in their planning and budgeting, while serving as an impartial resource for Congress and the public.

For several years, the U.S. fertilizer industry has pushed legislatively in both chambers and administratively at the U.S. Department of Agriculture (USDA) for the establishment of an economist position within the USDA's Office of the Chief Economist. The position will study and report on crop inputs, particularly fertilizer, across the complex global market in which these inputs are produced, traded, and applied.

Fertilizers sit at the center of a global system, and the past few years – especially the last few months - have exposed both just how interconnected and interdependent that system is. All market participants would benefit from knowing more about the market itself and the factors that impact it. Given the global complexities of the fertilizer market, better understanding will

further supply chain resiliency, limiting vulnerabilities by empowering market participants to make informed decisions.

Who We Are

TFI represents more than 250 companies throughout the entire fertilizer supply chain. This spans the fertilizer manufacturers and producers to retailers that serve farmers to ensure that precise nutrient prescriptions are delivered and applied in a timely manner. It additionally includes importers, wholesalers, technology developers, and others. In the United States, fertilizer production occurs in 30 states – Alabama, Arizona, Arkansas, California, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Mississippi, Nebraska, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, and Wyoming.

TFI's members support more than 100,000 direct jobs and more than 450,000 indirect jobs across the country.¹ Each year our members pay \$36.5 billion dollars in wages to U.S. workers who are often among the most highly paid individuals in rural communities.²

The U.S. fertilizer industry operates in a highly competitive global market where the United States is a major producer, consumer, and trader. The U. S. is one of only three nations with 20 or more unique companies that produce fertilizer. With robust domestic production, the U.S. is the fourth largest ammonia producer (9% of global production) and fifth largest processed phosphate producer in the world (8% of global production). At the same time, our country operates as a major importer and consumer of fertilizer products with one of the world's most sophisticated logistics systems – integrating rail, barge, pipeline (ammonia), and trucking – to enable large-scale delivery to all key agriculture consuming regions. These conditions support strong competition and have helped ensure that the U.S. has experienced less severe physical

¹ "2024 Fertilizer Industry Economic Impact Study," The Fertilizer Institute, December 12, 2024. <https://www.tfi.org/insights/economic-impact>.

² "2024 Fertilizer Industry Economic Impact Study."

supply disruption than have regions that lack domestic production capacity, significant trade flexibility, or logistical scale.

What are Fertilizers?

Fertilizer is food for plants. It provides the nutrients necessary to nourish crops, increasing crop yields for farmers while also sustaining the soil for future crop production.

Plants need 17 elements, or nutrients, to complete their life cycle; 14 come from the soil, and the remaining three come from air and water. The nutrients most commonly needed as fertilizer to supplement soil supply are nitrogen (N), phosphorus (P), and potassium (K), which are referred to as primary macronutrients. N, P, and K are frequently combined into individual fertilizer products to suit specific crop and soil needs. For example, it is common practice to combine nitrogen (as ammonium) and phosphorus (as phosphate) into monoammonium phosphate (MAP) or diammonium phosphate (DAP). However, there are also distinct differences in production, supply, use, and other conditions of competition between the primary nutrient fertilizers:

- Nitrogen fertilizers are manufactured products, reliant on natural gas as the primary feedstock. The various nitrogen fertilizers are produced in more than 60 countries by more than 100 producers. Due to the advantage of today's reliable and abundant supply of domestic natural gas, the U.S. is the fourth largest nitrogen producing nation.
- The United States is also a large producer of phosphate, which is mined from geologic deposits of phosphate rock. Thirty countries around the world produce phosphate fertilizers (MAP, DAP, or triple super phosphate, commonly called TSP), but the top five countries account for over 80% of production: China (43%), Morocco (13%), Russia (9%), Saudi Arabia (8%), and the United States (8%).
- While the United States has some domestic production of potash (potassium deposits), it imported most of its domestic potash supply in 2025, as it has for decades. Only 15 countries produce potash, which is mined from geologic deposits. Canada (33%), Russia (19%), and Belarus (15%) are the dominant producers. Unlike the nitrogen and

processed phosphate markets, the top exporting nations closely follow the shares of global production.

TFI has provided additional information on these three essential plant nutrients at the end of this testimony in Addendum A. All three of these elements play essential roles in allowing plants to access the free energy of the sun through photosynthesis, and all three must be present in adequate amounts to ensure healthy crop growth and farmer productivity.

Today, it would be impossible to feed the planet without fertilizers.³ Indeed, about half of all food, fiber, and fuel from crops grown around the world is only made possible through the responsible use of fertilizers.

Supporting Farmers

Without farmers, there would be no fertilizer industry. Every day, farmers face mounting pressures— unpredictable weather, labor shortages, and global market disruptions. For many, those challenges seem to increase every year, despite the essential nature of farms and agriculture to our nation's way of life and the economic vitality of rural America.

Fertilizer is one of a farmer's most critical tools to promote plant growth and improve crop yield and productivity and to ensure farm profitability. When reliable supply of fertilizers is threatened, the ripple effects are felt in every corner of rural America. For that reason, we believe that a resilient and growing U.S. fertilizer industry is vital to support the American farmer. We live in these rural communities and share in the success and challenges that America's growers experience.

Fertilizer is a Global Market, and it is Extremely Competitive

³ The nitrogen produced by the Haber-Bosch synthesis process for mineral fertilizers is vital for producing large crop yields. Scientific research published in 2008 estimated that the lives of nearly half of the world's population (48%) are only made possible by Haber-Bosch produced nitrogen. ([Erisman et al., 2008](#)).

As explained by the USDA's Economic Research Service last year, "U.S. fertilizer production and consumption—crucial for the productivity of U.S. agriculture—take place within a global fertilizer market."⁴ Additionally, as stated in a 2022 Iowa State University study entitled *An Examination of Recent Fertilizer Price Changes*, "in the case of a homogeneous product, such as fertilizer where branding and product differentiation is not strong, firms compete more fiercely than in the case where customers show loyalty to one brand or another."⁵ This highly competitive market with global supply and demand factors has been long been acknowledged through USDA research⁶ and multiple academic studies.⁷

The U.S. relies on a mix of domestic production and imported product to supply U.S. growers, with the relative share dependent on the product and the year. Currently, 65% of overall U.S. farmers' fertilizer needs for nitrogen, phosphate, and potash are met by domestic fertilizer

⁴ See, e.g., Williams, Angelica, Collins, LaPorchia A., and Boline, Amy, "Drivers of Fertilizer Markets: Supply, Demand, and Prices," U.S. Department of Agriculture (USDA) Economic Research Report Number 354 (Sept. 2025), accessed at https://ers.usda.gov/sites/default/files/_laserfiche/publications/113324/ERR-354.pdf?v=42889.

⁵

Crespi, John, et al. "An Examination of Recent Fertilizer Price Changes," Staff Report 22-SR 117 June 2022 Center for Agricultural and Rural Development Iowa State University Ames, Iowa 50011-1070 www.card.iastate.edu, <https://www.card.iastate.edu/files/publications/pdf/22SR117.pdf>, p. 15.

⁶ See, e.g., Huang, Wen-yuan, USDA Outlook Report from Economic Research Service, "Factors Contributing to the Recent Increase in U.S. Fertilizer Prices, 2002-2008," (Feb. 2009), accessed at https://www.ers.usda.gov/webdocs/outlooks/35824/10935_ar33.pdf?v=9996 ("In an increasingly globalized market, changes in global supply and demand of fertilizer can lead directly to the rise and fall of U.S. fertilizer prices."); Nti, Frank, "Impacts and Repercussions of Price Increases on the Global Fertilizer Market," USDA Foreign Agricultural Service (June 2022), accessed at <https://www.fas.usda.gov/data/impacts-and-repercussions-price-increases-global-fertilizer-market> ("Russia and Belarus play critical roles in the global fertilizer market, accounting for nearly 20 percent of global exports.").

⁷ See, e.g., Monaco, Henrique, Schnitkey, Gary, and Paulson, Nick, "U.S. Fertilizer Industry in Global Markets: Structure and Supply Risks" Department of Agricultural and Consumer Economics University of Illinois, accessed at <https://farmdocdaily.illinois.edu/2025/07/us-fertilizer-industry-in-global-markets-structure-and-supply-risks.html> ("Global trade in fertilizers is significant, accounting for 10-15% of total production of nitrogen and phosphorus ... as a global commodity, U.S. farmers still face significant price volatility. Price spikes—like those in 2022 []—remain possible since production and global trade can be impacted by policy uncertainty."); Monaco, Henrique, Schnitkey, Gary, and Paulson, Nick, and Zulauf, Carl, "Fertilizer Prices Continue Decline and May Impact Farmers' Nitrogen Decisions," Department of Agricultural and Consumer Economics University of Illinois and Department of Agricultural, Environmental and Development Economics Ohio State University (Aug. 2023) accessed at <https://farmdocdaily.illinois.edu/2023/08/fertilizer-prices-continue-decline-and-may-impact-farmers-nitrogen-decisions.html> ("Much of the narrowing in premiums on urea and liquid relative to anhydrous in the first half of 2022 is linked to the Russia-Ukraine conflict, as there were significant disruptions and displacement of global fertilizer trade flows.").

production. Additionally, the operating rates of U.S. fertilizer plants exceed global averages, meaning U.S. producers are supplying more fertilizer than if they operated at the lower rates of our global peers. Fertilizer demand is highly seasonal, while production is continuous, necessitating year-round trade. But on a net basis, the United States is an overall fertilizer importer. The U.S. is presently the fourth largest consumer and the fifth largest producer of fertilizer in the world.

American fertilizer companies compete fiercely with each other and with hundreds of global players in a robust, worldwide fertilizer market, which is dominated by countries such as China, India, and Russia. According to the International Fertilizer Association, in 2024, these countries accounted for 50 percent of global ammonia production (and 54 percent of urea production); China, Morocco and Russia combined for 65 percent of global processed phosphate (MAP, DAP & TSP) production; and, Canada, Russia, and Belarus combined for 67 percent of global potash production. Supply-side analysis is further complicated by the fact that major fertilizer producers are not always current major exporters, since countries with large agricultural sectors absorb more of their domestic output, but could export if conditions warrant. As the world's two largest consumers, China and India combine for 40% of global fertilizer use. This dynamic strongly influences trade volumes and global export shares, especially in nitrogen and phosphate markets. Even where major producers overseas are not exporting, their substantial production, starting with China and Russia with respect to ammonia and phosphate fertilizers, creates a chill on investments in new U.S. production.

Many foreign producers are state-owned, and foreign fertilizer production and consumption in many countries is shown to have received government subsidies and policies that challenge the market-based operations of the U.S. fertilizer industry.

When one looks at this graphic of fertilizer shipping routes, it's not hard to see the complexity of the global fertilizer market:



(source: IFA)

Fertilizer is a commodity sold in bulk, so farmers are largely unaware of its geographic source once it reaches their field. The nitrogen, phosphate, and potash made in the United States are physically indistinguishable from fertilizer that comes from Qatar, Russia or elsewhere in the world. As the previously mentioned 2022 Iowa State University study noted, buyers do not possess brand loyalty where nitrogen fertilizer is perceived simply as nitrogen fertilizer or phosphate fertilizer is perceived simply as phosphate fertilizer.⁸

Fertilizers and related plant nutrients are typically sold by domestic or foreign manufacturers to traders, wholesalers, co-operatives and independent fertilizer retailers, other fertilizer manufacturers, and industrial users. Wholesalers are firms that take large positions, *i.e.*, hundreds of thousands of short tons, and buy and sell fertilizers to other wholesalers, to retailers and sometimes to fertilizer producers. Retailers are firms that sell fertilizers primarily to farmers as end users. Retailers may be co-operatives or independent retail outlets and sell a host of products including fertilizer, seed, soil amendments, and crop protection chemicals.

⁸ Crespi, "An Examination of Recent Fertilizer Price Changes", <https://www.card.iastate.edu/files/publications/pdf/22SR117.pdf>, p.15

Current Geopolitical Impacts on the Global Fertilizer Market

While fertilizer is a global commodity, there are distinct differences in production, supply, use, and trade between the primary fertilizer products. Meanwhile, supply shocks have impacted global supply and demand for fertilizers over the last several years. Described below are a range of geopolitical events such as ongoing global conflicts across the Middle East and in Europe, government controls and/or subsidies, and other government policies affecting production, exports, and consumption along with the evolving nature of global trade policy.

Geopolitical events have been the biggest cause of disruption to the global fertilizer market in recent years.

- In addition to serving as another important fertilizer, sulfur is key for blending with phosphate rock to make phosphoric acid, which is the primary ingredient in all phosphorus fertilizers. Roughly 90% of global sulfur is used to produce sulfuric acid, of which, 60% is used for production of phosphate fertilizers. Ultimately, without sulfur, you don't have phosphorus fertilizer. Sulfur is also an important additive for combining with nitrogen to develop specialized fertilizers such as ammonium sulfate. However, costs to fertilizer companies for sulfur and sulfuric acid have risen more than 1,000% since early 2025. At the outset of 2026, the global sulfur market was already foreseeably suffering from constraints related to bullish global phosphate fertilizer production demand from China, Morocco, the United States, Brazil, and India. A growing factor was spiking demand from Indonesia where it is used to support the nickel and cobalt extraction industries. Compounding this constraint was limited supply growth in Russia and North America (U.S. & Canada), as major production and export areas. Going into this year, the exception was the Middle East. Now, in the second quarter of 2026, the ongoing ban on exports from Russia coupled with transportation-limited exports of sulfur from the Middle East have crippled the global sulfur market; these two areas combine to account for approximately 80% of global sulfur exports.

- The conflict in Iran has led to the nearly entire closure of the Strait of Hormuz, a narrow shipping channel through which approximately one-third of the world's exported fertilizers pass. The impact is especially felt on ammonia, urea, and processed phosphates. According to the International Fertilizer Association, in 2024, the share of exports from countries in the region that are either directly involved in the conflict or depend on the Strait as their primary shipping route accounted for 23% of global ammonia exports, 34% of global urea exports, 12% of global MAP exports, 14% of global TSP exports and 23% of global DAP exports. Further, about half of the world's sulfur supply passes through the Strait of Hormuz, which as noted above already faced significant supply pressures.
- Closure of the Strait of Hormuz has also impeded an estimated 20%⁹ of the world's supply of liquefied natural gas (LNG), the critical fuel and feedstock for nitrogen fertilizer production. This has important implications for fertilizer development in countries such as Pakistan, India, and Bangladesh. More than 40 ammonia plants in these countries have curtailed production by 10-30% over the last two months due to limited gas supplies, and another four have shut down altogether. The resulting inability to develop their own products forces those countries to further strain global availability of nitrogen fertilizers as they look elsewhere. Likewise, Iranian retaliatory missile strikes against neighboring countries have damaged natural gas transmission infrastructure and nitrogen fertilizer manufacturing facilities in countries such as Qatar.
- The war in Gaza has similarly limited sale of Israeli natural gas to Egypt that had gone into production of nitrogen fertilizers.
- China is the world's largest producer of fertilizers, producing 31% of the world's ammonia, 32% of the world's urea and 43% of the world's processed phosphates. China's growth as a fertilizer producer has developed over decades through a combination of factors, including resource advantages, high fertilizer tariffs, and government support. Prior to 2021, China was the world's largest exporter of MAP and

⁹ [The Iran war's impacts on global fertilizer markets and food production | IFPRI](#)

DAP and had been among the top three exporters of nitrogen globally.¹⁰ In 2021, however, China began imposing export restrictions on its fertilizer products. China's state-supported, non-market driven buildup of substantial capacity and their subsequent government mandated export restraints have been highly disruptive to the global market, while chilling the growth of market-based capacity expansions elsewhere. These disruptions continue in 2026. In December 2025, China announced that it would not export MAP, DAP and TSP fertilizers until at least August 2026. In mid-May, as a major exporter of sulfuric acid, China announced that it would halt exports through the end of 2026.

- India subsidizes its farmers, procuring fertilizer through a centralized government buying tender and then making it available to Indian farmers. The government issues a tender for a specific volume of product, on behalf of major phosphate and potash fertilizer companies of India under a consortium-based approach to imports. Suppliers, who must be manufacturers or traders/suppliers holding a mandate from manufacturers, then supply quotes to supply that tender at specific volumes. On April 21st, the government booked 2.5 million tons of urea via a tender issued on April 15th. On April 24th, India announced an import tender for 1.2 million tons of DAP and 0.4 million tons of TSP. Similarly, India now also has an outstanding tender for 0.3 million tons of Ammonium Sulfate. The scale of these orders dramatically exceeds the buying power of individuals throughout the rest of the world.
- The Russian war in Ukraine has also been highly disruptive. Russia is the largest global supplier of fertilizers (about 16% of global supply), and that supply chain was significantly impacted at the onset of the war due to sanctions many nations imposed on Russia. Russia retaliated by restricting Europe's natural gas supply, which Europeans relied upon for their fertilizer production. This resulted in approximately 70% of Eastern and Central European nitrogen fertilizer production shutting down in 2022 due to high natural gas costs. As described earlier where the decline in natural gas availability has

¹⁰ For example, Chinese nitrogen exports represented nearly 30% of all nitrogen trade in 2014-2015 (reaching 14 MMT out of 47 MMT). Further, Chinese phosphate exports represented 30% of all phosphate trade in 2014-2015 (reaching 8 MMT of 26 MMT).

caused growers in Pakistan, India, and Bangladesh to look to the global market for fertilizer purchasing, Europe similarly has been forced to do so. More recently, since September of last year, Ukraine has damaged Russian fertilizer production facilities in the Krasnodar, Smolensk, and Volgoda regions.

- Natural gas prices in Europe, shipping challenges, and natural gas shortages in Trinidad and Tobago are among other factors impacting the supply of fertilizers globally and in the United States.

Going forward in a very complex and ever-changing market situation as U.S. farmers complete their Spring fertilizer applications, TFI foresees that continued global conflicts, geopolitics, and government interventions are likely to impact the fill and application periods this Fall. TFI maintains this further demonstrates the benefits of establishing a Crop Inputs Economist at the USDA to provide transparency.

Fertilizer Supply and Demand Dynamics

Both imported and domestically produced fertilizer are subject to global market dynamics. American farmers utilize a mix of domestic production and imported fertilizer where the relative share is dependent on the product and the year. Currently, 65% of overall U.S. farmers' nitrogen, phosphate, and potash needs are met by domestic fertilizer production. The rest comes from imports. Especially due to the peak demand of fertilizer application seasons, the U.S. is a net importer of fertilizers.

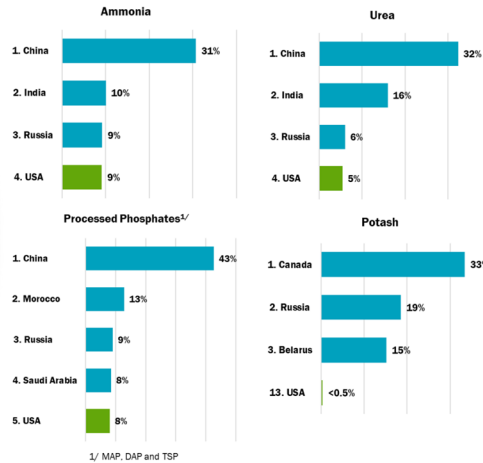
For two of the three macronutrients, nitrogen and phosphorus, the U.S. has significant resources and abundant production capacity. While U.S. reserves of the third macronutrient – potassium, supplied as potash – are limited, Canada has reserves that are the largest in the world. Nitrogen fertilizer in the form of ammonia was produced by 18 companies at 38 plants in 19 states across the U.S. during 2025.¹¹ In 2025, phosphate rock ore was mined by five

¹¹ <https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-nitrogen.pdf>

companies at 10 mines in four states. In 2025, potash products were produced by three companies at five sites in two states.

Top Global Fertilizer Producers, 2024

Data Source:
International Fertilizer Association



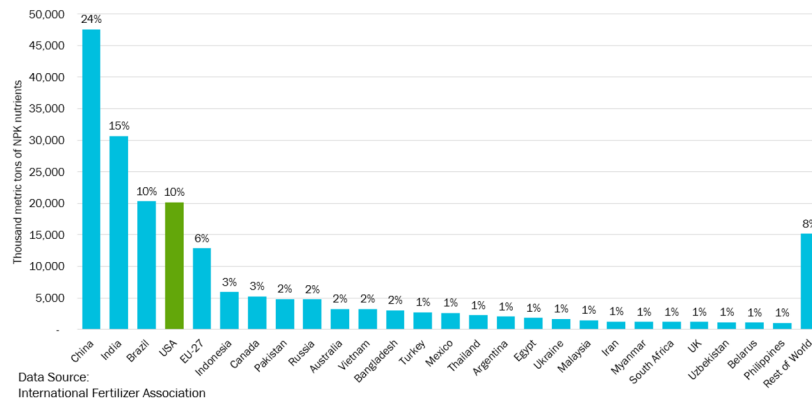
Since different crops require different nutrients in differing amounts, shifts in U.S. acreage between individual crops year-over-year can alter overall U.S. fertilizer demand, as well as relative demand between nutrients and specific fertilizer products. Sizable shifts towards crops with higher average nutrient demand per acre, like corn, and away from crops with lower average nutrient demand per acre like soybeans, have led to significant increases in U.S. fertilizer demand. Corn (~50%), soybeans (~11%), wheat (~10%) and cotton (4%) combined account for approximately 75% of U.S. fertilizer use.

Due to improvements in standards of living, worldwide crop production has dramatically increased significantly over the course of several decades.¹² Ninety percent of global fertilizer consumption now occurs outside of the United States. As noted earlier the two largest consumers, China and India, combine for nearly 40% of global use. High prices for globally

¹² Crespi, "An Examination of Recent Fertilizer Price Changes", <https://www.card.iastate.edu/files/publications/pdf/22SR117.pdf>, p. 2

traded agricultural commodities not grown at scale in the United States are giving farmers in other parts of the world significant purchasing power in the global fertilizer market.

Global Fertilizer Consumption, 2023



Building Production: What the Fertilizer Industry is Doing

TFI's members have a deep commitment to meeting the needs of America's farmers and America's food supply that can be seen in our investments in fertilizer production and distribution throughout the United States. Just as U.S. farmers are among the most efficient and innovative in the world, so is the U.S. fertilizer sector.

Fertilizer production is highly capital-intensive. Every year, U.S. fertilizer producers are investing billions of dollars to maintain and upgrade their facilities; that investment has helped foster the reliability and strong capacity utilization of the U.S. industry and has, in many cases, expanded U.S. production over nameplate capacity, all of which is making more fertilizer available to America's farmers. Over the past decade, billions of dollars have also been invested to expand U.S. production capacity of fertilizers and beneficial plant nutrients, including in states

represented on the Agriculture Committee such as Arkansas, Minnesota, Alabama, California, Georgia, Illinois, Iowa, Kansas, Kentucky, Michigan, Mississippi, North Dakota, Pennsylvania, and West Virginia.

Even just since the beginning of 2025, billions of dollars of fertilizer industry investment in new U.S. greenfield production have also been announced with additional production capacity coming online by 2029. Further production expansions are in earlier stages of development although several may face legal challenges as they move through the painstaking permitting process.

These major investments are made for the long term, with U.S. production sites operating for decades due to significant capital spending on maintenance and improvements. The fertilizer industry's investment and commitment to strong and safe operations means that U.S. farmers have access to more critical crop nutrients in a timely manner.

Beyond Production: Our Ongoing Partnership, American Farmers, and the 4Rs

The U.S. fertilizer industry has a long history of problem solving, and we're regularly innovating to build and improve systems that help farmers get the most out of every dollar they spend on fertilizer and to promote the commercial and environmental sustainability of our products and the broader agricultural sector. TFI and its members invest in agronomic research aimed at helping to identify and fine-tune the products and field practices that maximize farmers' investment in our products, while also reducing environmental impacts.

Farmers work closely with their agricultural retailer's advisors to determine the source, rate, timing, and placement of fertilizers. These decisions have real financial impacts for growers, and as such, the relationships between farmer and advisor are deeply rooted in trust. These ties define our presence in thousands of rural communities, and our identity as an industry.

Our commitment to scientific research has benefited American farmers' agricultural productivity and environmental stewardship. Decades of scientific investment, supported by industry, led to the development of the "4R Nutrient Stewardship Framework"—applying the right nutrient source, at the right rate, at the right time, and in the right place. During the span of 2013 to 2020, TFI members invested \$13 million in the 4R Fund for public research.

This approach, rigorously validated through research, is now widely accepted by farmers, industry, policymakers, and federal agencies (including USDA-NRCS) as an effective conservation practice. The tangible outcomes of 4R research are clear: these principles help farmers increase crop yields, use resources more efficiently, reduce costs, and lower environmental impacts. Nearly 65 million acres of U.S. farmland are currently under active management using 4R Nutrient Stewardship practices, and the fertilizer industry and farmers are hard at work continuing to build on this number.¹³

Washington has a Role through Policies to Grow the Industry

Recent supply chain disruptions to fertilizers underscore the need for transparent, timely, independent, and authoritative analysis to better inform farmers, policymakers, and other stakeholders about conditions in the fertilizer market. Accordingly, as noted throughout this testimony, TFI seeks establishment of a full-time Crop Inputs Economist position within the Office of the Chief Economist at the USDA. The position will serve as a liaison to growers, Congress, and other relevant federal agencies and stakeholders. The economist will be able to analyze fertilizer and fertilizer product supply, demand, and price data to provide farmers and market participants with timely, accurate, and reliable market information. Additionally, the economist will develop and schedule market reports addressing supply and demand trends, pricing indicators, and related market research to facilitate more informed decision-making across agriculture stakeholders. Through this work, USDA can promote resilience across the fertilizer supply chains.

¹³ "Sustainable Farming Surging as Growers Drive 4R Adoption," The Fertilizer Institute, June 18, 2025, <https://www.tfi.org/media-center/2025/06/18/sustainable-farming-surging-as-growers-drive-4r-adoption/>.

USDA has long played a critical role in collecting and disseminating fertilizer supply and demand data and should serve as a critical resource for agricultural trends in this critical input. However, over time there has been a significant change in the nature of the data collected, a reduction in the level of detail collected, and a slackening pace of release. These changes have dramatically reduced the usefulness of fertilizer data disseminated by USDA to all users.

Prior to the mid-1980s, USDA collected and published a wealth of information about the fertilizer sector. This information was not provided in one single fertilizer report, but instead fertilizer information was produced across several recurring publications and statistical survey reports. In 1985, USDA began cutting back on its collection and reporting of fertilizer data and a shift toward integration of fertilizer data into general farm input and economic reporting. This began with dropping the Commercial Fertilizer Report, then dropping dedicated outlook/situation reports on fertilizer and finally with eliminating monthly price reporting for 30 different fertilizer products in the Agricultural Prices report. In place of the surveys that collected aggregate data, USDA introduced farm-level reports. These do provide useful metrics. Unfortunately, however, those reports have become increasingly sporadic over time. The result is a significant gap in fertilizer market information that has not been adequately filled elsewhere.

What we are left with is less data released less frequently, leading to less information for all market participants. A return to more dedicated, focused, timely and detailed reporting on the fertilizer market would substantially aid in this effort of increasing transparency. As TFI outlined recently in comments to a USDA Request for Information, this could be achieved through targeted revisions to its existing data products, as well as the development of new tools and datasets designed to better inform stakeholders and improve market visibility.

In addition to our support for enhancing market transparency, TFI has long called for government policies that enable and support the expansion of domestic fertilizer production to

grow our industry, strengthen our domestic supply chains, and support American farmers. TFI has identified a range of policy actions that can be taken in the near term to ease fertilizer supply challenges and constraints. Doing so will help support farmers' access to these critical crop inputs, both as we continue through spring application and planting season and look to the fall application and fall seasons.

Earlier this year, TFI wrote President Trump outlining seven actions the Administration could take to help reduce disruptions to the fertilizer supply chain, both for American farmers and globally:

1. Preferential, safe passage of vessels carrying all kinds of fertilizers through the Strait of Hormuz regardless of vessel flag, vessel ownership, or destination.
2. Use the U.S. International Development Finance Corporation and the Export-Import Bank as appropriate to provide cargo and hull insurance for all vessels carrying fertilizer, as well as, for fertilizer insurance and financing.
3. Collaborate with industry to ensure adequate supplies through reliable import channels of phosphoric acid; ammonia, urea, sulfur, and sulfuric acid products from Venezuela and elsewhere; and, of granular boron and boric acid from countries such as Turkey.
4. Temporarily support movement of LNG exports to Europe, India, Pakistan, Egypt, and Bangladesh from other destinations to limit shutdowns due to gas prices; doing so will enable nitrogen fertilizer producers to continue to produce while limiting supply shocks to large global fertilizer consumers.
5. Temporarily suspend the Jones Act for fertilizer transportation.
6. Provide temporary regulatory flexibility where legally permissible to facilitate U.S. production and transportation of fertilizer, including to allow hours of service exemptions and prioritization of fertilizer shipments on railways and barges during peak weeks.
7. Maintain continued seamless trade between the U.S. and Canada to prevent any fertilizer supply bottlenecks.

TFI appreciates the actions already taken by the Administration, including the now extended waiver of the Jones Act. With the extension in place, more companies can utilize an expanded pool of vessels to move fertilizer and fertilizer inputs between domestic locations.

Other ongoing actions across the Administration can streamline the permitting process for fertilizer projects, all while maintaining important environmental protections. Last year, the Trump administration designated both phosphate and potash as Critical Minerals. Key to establishing this designation was support led by Senators Ernst and Slotkin, and including Chairman Boozman along with Senators Hoeven, Marshall, Justice, Grassley, Moran, Fischer, Hyde-Smith, and many more bipartisan lawmakers from across the Senate and House. We are grateful for this important designation and the support it received across the Congress. Amending the outdated critical minerals list subject to the production tax credit under Section 45X of the Internal Revenue Code to include the new 2025 List of Critical Minerals will provide an important incentive to mining for these fertilizer minerals. With regard to nitrogen manufacturing, TFI supports additional actions, similar to the President's Executive Orders on *Unleashing American Energy* and *Declaring a National Energy Emergency*, to expedite permitting and increase domestic production of nitrogen fertilizers.

Over the longer term, Congressional and Administration efforts at permitting reform will be another important step forward. Enacting durable and broad-based reform this year will have a real impact on the advancement of domestic fertilizer projects and their related infrastructure, moving from plans on paper to producing crop nutrients. The current process to apply for, review, and obtain all the permits needed to begin construction of a phosphate mine took a TFI member more than a decade and cost approximately \$30 million. In other countries, the average time for a phosphate mine to move from concept through construction to production is four to five years. Similarly, the construction of a new nitrogen fertilizer plant can require as many as 30 federal and state permits and the process too often entails legal filings intended to obstruct progress. We are encouraged by legislative progress that has been made, both in the House with passage of the SPEED Act and the PERMIT Act and here in the Senate where

bipartisan negotiations continue across multiple committees. TFI also hopes to see actions to prioritize permits involving the U.S. Army Corps of Engineers and other agencies. Similarly, we seek regulatory certainty to issues such as a final definition of the Waters of the United States. We encourage the Administration to continue important progress in these areas.

Congress has additional opportunities to do more as the industry looks to continue to grow production here in the U.S. The Farm Bill presents an opportunity to modernize USDA programs to help farmers meet the up-front costs of new technologies or to incentivize adoption of nutrient management practices. TFI supports the work of many on this committee who are championing policies that accelerate adoption of 4R nutrient stewardship practices and innovations that help U.S. farmers maximize the value of their fertilizer investments. In this regard, TFI looks forward to continuing to work with the Committee to advance the Farm Bill effort going forward.

TFI also supports a broad range of additional policy actions across several other areas to strengthen the competitiveness and support the growth of the U.S. fertilizer industry.

- Infrastructure is vital to keep fertilizer moving and support fertilizer production, distribution and end-use by farmers. We urge action to accelerate the delivery of U.S. Army Corps lock modernization projects, channel deepening, and maintenance dredging. Our inland waterways are essential to the movement of nitrogen (urea & UAN) and MAP & DAP phosphate fertilizers, with some states seeing 100% of their purchased nitrogen fertilizers delivered by inland waterways. TFI has been a leading voice supporting the enactment of a long-term surface transportation reauthorization that includes investments in weight-limited and capacity-constrained first- and last-mile roads and bridges in farm country. The older infrastructure common in rural areas means delays, increased costs, and safety challenges for farmers, supply chains, and rural communities. We also urge effective action by the Surface Transportation Board to reduce systemic rail delays and provide competitive and affordable rates.

- Fertilizer producers also require access to specialized capital equipment to maintain, modernize, and construct new production facilities on a competitive basis with foreign producers. Fertilizer production—particularly ammonia—operates under extreme temperatures and pressures, and it relies on very large-scale equipment to achieve efficiency and reliability. As a result, many components must meet highly specific technical, safety, and performance standards. Some of the specialized equipment required for ammonia and other fertilizer facilities is not currently manufactured at commercial scale in the United States, nor can it be readily reshored within the timeframes needed to respond to U.S. supply requirements. In addition, technology licensors frequently require fabrication by approved manufacturers to support performance guarantees and warranties. Against that backdrop, section 232 tariffs on steel and aluminum, Section 122 tariffs, and the potential expansion of Section 301 tariffs can materially increase the cost of fertilizer manufacturing investments where domestic alternatives are not commercially available. Given the importance of expanding reliable U.S. fertilizer production, TFI looks forward to working with the Administration and Congress to reduce unnecessary cost burdens and improve the ability of the United States to attract new fertilizer production.

Review of Recent Senate Bills and Additional Suggestions

Several bills aimed at strengthening transparency across fertilizer markets and driving increased domestic production capacity have been introduced in the Senate. These proposals reflect a growing recognition that U.S. fertilizer supply chains face structural and geopolitical risks that require a coordinated policy response. Taken together, these measures represent meaningful efforts toward improving market visibility, reducing reliance on foreign sources, and ensuring long-term supply security for American agriculture. The following section outlines TFI's review of these legislative proposals, along with additional policy options under consideration that could further reinforce domestic production and resilience. With regard to both *The Fertilizer Research Act* and *The Fertilizer Transparency Act*, TFI hopes further discussions can lead to the

establishment of the Crop Inputs Economist position that will enable the transparency and reporting that growers, Congress, and the fertilizer industry each seek.

1. *The Fertilizer Research Act* (S. 2808). As stated throughout this testimony, TFI supports transparency to aid growers, the public, and policymakers. Further, TFI supports efforts to restore USDA reporting, as noted above. Toward that end, TFI appreciates the efforts and the willingness to engage on these matters demonstrated by Senator Grassley and his staff, as well as those of the other cosponsors. Among other requirements, the bill would mandate an Economic Research Service study.

As we have communicated elsewhere, our views of the language involve at a minimum:

- a. TFI believes the focus of this legislation needs to be broadened, as the impact of global events in the Middle East makes clear.
- b. Under §2(a)(1) requirement for USDA reporting, TFI supports returning to increased USDA reporting as noted throughout this testimony, and TFI supports establishment of a USDA Crop Inputs Economist as the most administrable way to do so.
- c. §2(a)(4)(A-C) - Information called for under (A) is currently available from the U.S. Census Bureau; however, some of it under (B) is highly confidential business information (CBI) that would violate the Census Bureau's disclosure requirements. In fact, it would contradict the CBI exclusion clause appearing at the end of the bill. Information under (C) would also violate the current Census Bureau disclosure rules.
- d. §2(a)(5) – This information is currently available from the Census Bureau.
- e. §2(a)(6) – TFI notes the Iowa State University in 2022 that addressed industry concentration, pricing, et al., concluded that excessive concentration in the fertilizer sector was not occurring.
- f. §2(a)(7) – Emerging fertilizers and technologies exist in a nascent and currently fragmented market where field research is often ongoing. Fertilizer efficiency is also dependent on a range of other factors such as weather, soil type, and seed.

It will be very difficult for USDA to provide meaningful reporting where no defined dataset presently exists.

- g. §2(a)(9) -- Requirement for USDA reporting. TFI supports returning to increased USDA reporting as noted throughout this testimony. A USDA Crop Inputs Economist would be the most effective way to address this provision.

2. *The Fertilizer Transparency Act* (S. 4152). TFI similarly thanks Senators Thune, Klobuchar, et al. and each of the respective committee and personal staffs for their efforts at improving market transparency as well as for providing opportunities to engage directly and to offer feedback. TFI reiterates once again its support for transparency and for reporting through the USDA. At the same time, as currently drafted, the bill creates a new mandatory reporting regime that would place differential burdens on the many parts of the fertilizer supply chain, potentially advantaging foreign producers over domestic production and supply, and would not provide accurate price transparency as sought.

Considerable portions of the bill are adapted directly from provisions set forth in the Livestock Mandatory Reporting (LMR) Act. TFI notes these provisions apply to an industry more focused on matters such as negotiated purchases on a spot market, forward contracts, and formula marketing arrangements than on international trade and availability of global supply as is the case in the domestic and global fertilizer markets.

By contrast, fertilizer markets operate across a global supply chain with materially different commercial practices (both across and within the major fertilizer products) and through multiple sales levels as described in detail on page 8. Sales are made both through advance contracting as well as spot sales, with seasonal delivery, and pricing that may be set months before physical movement of product and well before on-farm application. These timing relationships vary across fertilizer products and regions and are influenced by global supply, demand, trade and logistics considerations. For example, some fertilizers can be typically priced at the manufacturer level with a forward shipment date to a wholesaler or retailer that is six months in the future, when spot and retail prices may differ substantially. As drafted, the approach in *The Fertilizer*

Transparency Act would likely result in commingling of prices from different contractual periods, potentially overstating short-term price signals, and creating confusion rather than transparency for farmers.

To the extent industry consolidation is a significant concern, TFI notes that a 2019 Congressional Research Service Report concluded that 20 years after enactment of the LMR, “The LMR study found that the meatpacking industry *has become more concentrated and vertically integrated since LMR was established.*”¹⁴ Where TFI has heard congressional concerns with housing an economist within USDA’s Office of the Chief Economist related to cost and limited staffing availability, TFI notes that USDA’s AMS already issues a tremendous number of weekly LMR reports.¹⁵ Further, the employee count at this agency was significantly affected through the DOGE process. TFI’s research indicates that the LMR Program already consumes 15–20% of USDA’s AMS budget; meanwhile, *The Fertilizer Transparency Act* would establish a similarly complex reporting structure at AMS.

As we have communicated elsewhere, our views of the language involve at a minimum:

- a. Under §2(a), Definitions –
 - i. §2(a)(1) “Affiliate” carries a 5% threshold related to manufacturing. Not only is this standard much lower than exists elsewhere throughout much of federal law, it is lifted directly from the LMR. As noted, TFI is uncertain about the applicability of the LMR framework to crop inputs.
 - ii. §2(a)(3) “Marketed” is defined as “the sale or other disposition” of fertilizer within the U.S. This definition, including the “sale or other disposition” reference is lifted almost verbatim from 7 USC 1635a, which pertains to livestock subject to slaughter.
 - 1. “Sale or other disposition” is not defined.

¹⁴ [Livestock Mandatory Reporting Act: Overview for Reauthorization in the 116th Congress | Congress.gov | Library of Congress](#)

¹⁵ [Livestock Mandatory Reporting Background | Agricultural Marketing Service](#), (“AMS then issues over 300 market reports each week detailing livestock and meat price trends, contracting agreements, and supply and demand conditions.”)

2. "Fertilizer product" is not defined.
- iii. (4) "Retailer" is defined as "a person or entity that primarily sells fertilizer products at retail."
 1. "Retail" itself is undefined.
 2. Later, in a provision that appears to contradict the definition, retailers not engaged in manufacturing are exempted. However, TFI notes that retailers engaged in blending are not addressed. This omission is significant because fertilizer blenders may be treated as manufacturers for reporting purposes under other laws and regulations. For example, under the Emergency Planning and Community Right to Know Act (EPCRA) where fertilizers intended for blending "[are held for the purpose of producing a different fertilizer.](#)"
- iv. "Manufacturer" is not defined.
- v. "Domestic manufacturer" and "foreign manufacturer" are not defined. It is unclear whether a fertilizer manufacturer that has both U.S. and non-U.S. headquarters qualifies as either domestic or as foreign.
- b. §(b)(1) -- The call for "reliable, timely, and transparent market information" is adapted directly from the provisions regarding livestock reporting in [7 USC 1635](#). TFI supports reliable, timely, and transparent market information even while raising concern for the applicability of the LMR template to crop inputs.
- c. §d -- The weekly reporting requirement is modeled on the LMR. This framework is not well suited to a globally traded commodity that growers do not purchase on a weekly basis throughout the year.
- d. §f -- As currently drafted, the weekly dashboard where farmers and market participants could view data reported to the Secretary contains no global pricing context. The dashboard would not provide market participants with the most accurate picture of the market.

3. *The Homegrown Fertilizer Act (S.4148)* --TFI welcomes the objectives of this legislation to expand fertilizer production and supply in the United States. Considering major new fertilizer production typically runs into the billions of dollars, TFI believes the current draft focuses on small dollar amounts that will not be sufficient to serve the intended purpose. The limited success of the Fertilizer Production Expansion Program also demonstrates that exclusion of existing major producers limits the growth of supply. As explained above, it is always necessary to account for global production, where all U.S. producers represent a small percentage. Some of our members have also indicated that given the liquidity of U.S. capital markets, it is not new grants and loans that are required to spur new fertilizer production in the United States, but more policy certainty and a level playing field when it comes to foreign producers. Finally, if the funding levels are to remain low, a possible solution would be to broaden eligibility to include funding for fertilizer storage and transportation infrastructure – such as rail-served ammonia storage hubs and terminal improvements – that directly impact the reliability and seasonal availability of fertilizer for U.S. farmers.
4. *The Plant Biostimulant Act (S. 1907)*. This legislation represents an important and necessary step toward modernizing the U.S. regulatory framework to support innovation, sustainability, and productivity in American agriculture. Plant biostimulants are an emerging and highly promising category of agricultural inputs. As defined in the bill, biostimulants are substances or microorganisms that enhance a plant's natural processes—improving nutrient uptake, increasing tolerance to abiotic stresses such as drought and extreme temperatures, and ultimately supporting plant growth and yield independent of their nutrient content. Their potential to improve nutrient use efficiency and reduce environmental losses makes them a promising tool as farmers face increasing pressure to produce more with fewer resources. However, despite their clear benefits, biostimulants currently lack a consistent federal definition and regulatory pathway in the United States. This ambiguity has created significant barriers to innovation, investment, and commercialization. Without clarity, product developers face uncertainty in bringing new technologies to market, and

growers lack confidence in product consistency and claims. *The Plant Biostimulant Act* directly addresses this gap by directing the U.S. Environmental Protection Agency to establish a uniform definition for plant biostimulants and clarify their regulatory status. Critically, the legislation also amends the Federal Insecticide, Fungicide, and Rodenticide Act to ensure that biostimulants are not inappropriately regulated as pesticides. Biostimulants are not intended to prevent, destroy, or mitigate pests; rather, they enhance natural plant processes. Misclassification under pesticide law imposes unnecessary regulatory burdens that stifle innovation and delay access to beneficial technologies for farmers.

Globally, other major agricultural economies—including Canada, the European Union, Brazil, and India—have already established clear regulatory frameworks for biostimulants under fertilizer or supplemental product laws. The United States risks falling behind in the development and adoption of these technologies if it does not act to provide similar clarity and certainty. The Plant Biostimulant Act ensures that U.S. policy keeps pace with international standards while maintaining strong safety and efficacy oversight.

The benefits of biostimulants extend beyond productivity gains. These products play a vital role in advancing climate-smart and sustainable agriculture practices. They support soil health, enhance microbial activity, and improve plants' ability to utilize nutrients efficiently. This aligns directly with the principles of 4R Nutrient Stewardship—using the right fertilizer source, at the right rate, at the right time, and in the right place—which is widely recognized as a cornerstone of resilient and environmentally responsible farming systems.

Moreover, as growers contend with increasingly volatile weather patterns and environmental stressors, biostimulants provide a practical tool to improve crop resilience and maintain yields under challenging conditions. Their adoption can help stabilize farm productivity while contributing to a reduced environmental footprint of agricultural production—an outcome that benefits farmers, consumers, and the broader ecosystem alike.

The *Plant Biostimulant Act* provides a clear, science-based framework that will unlock innovation, reduce regulatory uncertainty, and accelerate the adoption of sustainable agricultural technologies. By establishing a uniform definition and appropriate regulatory pathway, Congress can ensure that American farmers have access to the tools they need to remain competitive, productive, and environmentally responsible.

5. *Phosphogypsum Reuse*. TFI urges the committee to approve language both authorizing the use of phosphogypsum (PG) in government road construction projects and directing further scientific evaluation of its additional beneficial uses. This kind of legislation represents a commonsense, science-based approach to advancing sustainability, improving resource efficiency, and supporting American agriculture.

Phosphogypsum is an unavoidable byproduct of the phosphate fertilizer production process. For every ton of phosphoric acid produced approximately five tons of PG are generated, making it the highest-volume byproduct of the fertilizer industry. As demand for fertilizer continues to grow alongside global food needs, the volume of PG will likewise increase, making responsible, beneficial reuse not only an environmental opportunity but an operational necessity. In 2020, the U.S. Environmental Protection Agency approved a petition submitted by industry for the use of PG as a road base material, based on a comprehensive and rigorous risk assessment. That assessment was determined by EPA career staff to be highly accurate and demonstrated that the risks associated with using PG in road construction are no greater than those posed by existing management practices, such as stacking or mine placement. Importantly, the subsequent withdrawal of that approval in 2021 was based solely on procedural considerations—not on any new scientific findings or concerns with the underlying risk assessment.

TFI recommends language that would direct the EPA Administrator to reinstate that original approval, consistent with the findings published in the Federal Register (85 Fed. Reg. 66550, October 20, 2020). This action would restore a science-based decision, provide regulatory certainty, and enable the safe and productive reuse of a material that would otherwise remain underutilized.

Beyond its application in road construction, phosphogypsum holds significant promise for agricultural use—particularly as a soil amendment. Farmers across the United States could benefit from access to PG as a tool to improve water retention, address soil acidity, and provide a valuable source of sulfur, an essential nutrient for crop production. These benefits are especially important as growers face increasing pressure to improve soil health, enhance nutrient efficiency, and adapt to more variable weather conditions. However, additional clarity and scientific evaluation are needed to fully unlock these opportunities. That is why the second provision of this legislation—directing EPA to conduct a risk assessment for additional uses, including as a soil amendment—is both prudent and necessary. A thorough, science-driven review will ensure that any expanded uses meet appropriate safety standards while allowing farmers and producers to benefit from innovative, sustainable practices.

This kind of legislation would strike the right balance restoring a previously validated, low-risk use of phosphogypsum in infrastructure while laying the groundwork for future applications that could deliver meaningful environmental and agricultural benefits. It reduces waste, promotes circular resource use, and supports both domestic fertilizer production and farm productivity.

Conclusion

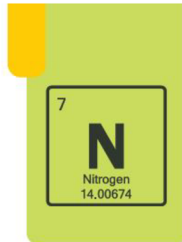
Just like the crops that fertilizers feed, fertilizer is produced, bought, and sold a highly competitive global market as is long recognized by the U.S. Department of Agriculture, international competition bureaus, and leading academic researchers.

TFI appreciates this hearing to spotlight issues that are critical to the American farmer, and we want to be part of the solution. We believe that smart policy can strengthen domestic production and ensure that American farmers have access to the fertilizer necessary for crop production and, ultimately, farm profitability.

If this testimony leaves you with only one final thought, TFI hopes it will be that the U.S. fertilizer industry supports transparency. Through TFI Stats, TFI currently makes data and insights available to market participants. For several years, we have also pushed legislatively in both chambers and administratively at USDA for the establishment of an economist position, within the Office of the Chief Economist, to study and report upon crop inputs, and fertilizer in particular. This position would monitor global trends, engage in data aggregation and reporting, and provide foreseeability to aid farmers in their planning and budgeting, while serving as a resource for Congress and the public.

We appreciate the Committee's attention to these issues and look forward to working together to build greater transparency. I welcome your questions and thank you for the opportunity to speak on behalf of those who serve the backbone of our food system.

Addendum A



NPK: The Building Blocks of Plant Growth
The Three Essential Nutrients Every Plant Needs

NITROGEN (N)

THE GROWTH DRIVER

Core Components of Fertilizer

To grow, stay healthy, and produce food, plants need 17 essential nutrients. Three of those elements—carbon, hydrogen and oxygen—are obtained through the air and water. The remaining 14 have to come from the soil through the plant's roots. Three primary nutrients — Nitrogen (N), Phosphorus (P), and Potassium (K) — often called "macronutrients", are needed in larger amounts than other nutrients and make up the bulk of all fertilizer produced. Together they form the foundation of plant nutrition.

What is Nitrogen (N)?

Nitrogen-based fertilizers are primarily manufactured through the Haber-Bosch process, a method developed over 100 years ago to create ammonia by heating and pressurizing nitrogen from the air over a hydrogen source (typically from natural gas). The resultant ammonia is further processed to create nitrogen fertilizers in solid and liquid forms. (source: IFA)

Why Nitrogen Matters

Nitrogen is a fundamental element in proteins, which make up all plant and animal tissues.

- ✓ Drives leaf and stem growth
- ✓ Fuels plant development
- ✓ Builds proteins and chlorophyll (the green pigment that captures sunlight)
- ✓ Encourages fast, healthy growth and high yields

The nutritional quality of food — from grains to vegetables — depends heavily on an adequate nitrogen supply.



Nitrogen Market Intelligence

Nitrogen is necessary for plant growth, and it helps crops manufacture proteins and boosts crop yields. The U.S. is a large producer of nitrogen, the fourth largest ammonia producer of the 63 countries that produce ammonia, the building block of all nitrogen fertilizers. Most ammonia production is heavily dependent on natural gas as the primary feedstock. Because ammonia is produced in so many countries and regions, the average global import reliance for nitrogen is the lowest of the three major macronutrients, though there is a significant range across countries.

For example, Brazil imports nearly all its nitrogen fertilizer, while China supplies nearly all its nitrogen fertilizer domestically. Among specific nitrogen fertilizers there can be a significant difference between the countries that are top producers of nitrogen and those that are top exporters. Many products are utilized in the United States to deliver nitrogen, but three products account for about 90% of consumption, each roughly accounting for about 30% of consumption: anhydrous ammonia, urea and nitrogen solutions (UAN).

Anhydrous Ammonia (82% nitrogen and the principle building block for all nitrogen fertilizers):

TOP PRODUCERS

China (31%), India (10%), Russia (9%), and U.S. (9%)

TOP EXPORTERS

Trinidad and Tobago (18%), Saudi Arabia (14%), Indonesia (10%), Algeria (7%), and U.S. (6%)

US APPROXIMATE
IMPORT RELIANCE
SHARE: **11%**

TOP U.S. IMPORT SOURCES:

Canada (52%) and Trinidad and Tobago (42%)



Remaining Top 4 Importers Import Reliance Share: China (1%), India (11%), and Brazil (74%)

Urea (45% nitrogen):

TOP PRODUCERS

China (32%), India (16%), Russia (6%), and US (5%)

TOP EXPORTERS

Russia (18%), Iran (11%), Qatar (11%), Saudi Arabia (8%), and Egypt (8%).

The U.S. is the 13th largest exporter

US APPROXIMATE
IMPORT RELIANCE
SHARE: **36%**

TOP U.S. IMPORT SOURCES:

Russia (27%), Qatar (22%), Saudi Arabia (10%), Algeria (10%), and Canada (8%)



Remaining Top 4 Importers Import Reliance Share: China (1%), India (11%), and Brazil (74%)

UAN (between 28% and 32% nitrogen):

TOP PRODUCERS & EXPORTERS

Global data is unavailable for UAN.

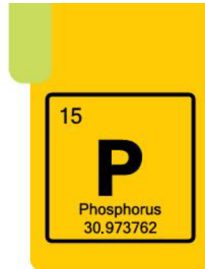
US APPROXIMATE
IMPORT RELIANCE
SHARE: **20%**

TOP U.S. IMPORT SOURCES:

Russia (46%), Trinidad and Tobago (28%), and Canada (22%)



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NPK: The Building Blocks of Plant Growth
The Three Essential Nutrients Every Plant Needs

PHOSPHORUS (P)

ESSENTIAL FOR PLANT ENERGY AND GROWTH

Core Components of Fertilizer

To grow, stay healthy, and produce food, plants need 17 essential nutrients. Three of those elements—carbon, hydrogen and oxygen—are obtained through the air and water. The remaining 14 have to come from the soil through the plant's roots. Three primary nutrients — Nitrogen (N), Phosphorus (P), and Potassium (K) — often called "macronutrients", are needed in larger amounts than other nutrients and make up the bulk of all fertilizer produced. Together they form the foundation of plant nutrition.

What is Phosphorus (P)?

Phosphorus-based fertilizers come from phosphate rock, a naturally occurring mineral mined from geologic deposits. The rock is treated with sulfuric acid to release phosphorus and produce phosphoric acid — a key ingredient that can be combined with ammonia and sulfur to create various fertilizer products, including monoammonium phosphate (MAP), diammonium phosphate (DAP), and triple superphosphate (TSP).

Why Phosphate Matters

Phosphate plays a vital role in how plants convert sunlight into energy and supports:

- ☞ Photosynthesis and energy transfer
- ☞ Root development and seed formation
- ☞ Cell division, cell enlargement, and the transfer of genetic information



Phosphorus Market Intelligence

The U.S. is also a large producer of phosphate, which is mined from geologic deposits. There are 30 countries that produce phosphate fertilizers (MAP, DAP, TSP), but the top five producers account for over 80% of production. The top phosphate producers are China (44%), Morocco (14%), Russia (9%), Saudi Arabia (9%), and the United States (8%). There are 22 countries that export phosphate fertilizers with the leading exporters being Morocco (30%), China (21%), Saudi Arabia (16%), Russia (15%), and the United States (4%).

Since 2021 there has been a significant shift in the global phosphate market when leading producer and exporters, China and Morocco, began delivering fewer nutrient tons of processed phosphates to the global market than in recent years. In 2024, China and Morocco exported 1.9 million fewer metric tons of MAP and DAP to the world than in 2021. Other significant global exporters like Saudi Arabia and Russia have increased exports but have been unable to replace lost exports from China and Morocco.

There have been fewer nutrient tons of processed phosphates exported to the world every year since 2021. More specifically, 2024 exports were 7% below the 2021 level, 2023 exports were 10% below the 2021 level and 2022 exports were 18% below 2021 exports. This is despite the fact that global production in 2024 exceeded 2021 levels by 4%.

In the U.S. growers predominantly use MAP and DAP, though TSP usage is growing. This is relevant because phosphate fertilizer production in some major producing and exporting countries, like Morocco, has increasingly shifted towards TSP. For example, in 2020, 11% of Morocco's processed phosphate exports were TSP. By 2024, that share had grown to 24%. Although the TSP market remains smaller than the market for DAP and MAP, a noticeable shift in production towards TSP is occurring.

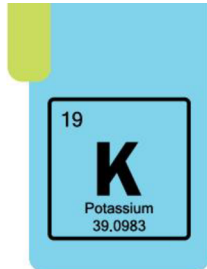
In 2024, the U.S. accounted for approximately 8% of global imports of P₂O₅. Most of the 2024 imports have come from Saudi Arabia (38%), Israel (13%), Mexico (12%), Jordan (9%), and Egypt (6%).

Imports accounted for 41% of the U.S. phosphate supply in 2024.

In Summary

Phosphate fertilizers are essential to modern agriculture — fueling root development, photosynthesis, and energy transfer in plants. But because production is geographically concentrated and global trade is shifting, access and affordability can fluctuate, influencing fertilizer prices worldwide.

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NPK: The Building Blocks of Plant Growth
The Three Essential Nutrients Every Plant Needs

POTASSIUM/POTASH (K)

THE PROTECTOR

Core Components of Fertilizer

To grow, stay healthy, and produce food, plants need 17 essential nutrients. Three of those elements—carbon, hydrogen and oxygen—are obtained through the air and water. The remaining 14 have to come from the soil through the plant's roots. Three primary nutrients — Nitrogen (N), Phosphorus (P), and Potassium (K) — often called "macronutrients", are needed in larger amounts than other nutrients and make up the bulk of all fertilizer produced. Together they form the foundation of plant nutrition.

What is Potash?

Potassium-based fertilizers originate from potassium chloride, also known as **potash**. Potash is mined from geological deposits of evaporite minerals, which were formed when ancient seas and saltwater lakes evaporated millions of years ago — leaving behind layers rich in potassium salts (mainly potassium chloride). After potash is mined, it's refined into different fertilizer products and shaped into small, uniform granules so farmers can apply it easily and plants can absorb the nutrients more efficiently.

Plants Need Potash to:

- ✓ Grow stronger
- ✓ Withstand drought stress
- ✓ Fend off insects and disease
- ✓ Use water more efficiently
- ✓ Improve yield and quality

When plants have adequate potash, they are healthier, more resilient, and more productive.



Potash Market Intelligence

While the United States has some domestic production of potash, it imported most of its domestic potash supply in 2024, as it has for decades. Only 16 countries produce potash, which is mined from geologic deposits, but Canada (33%), Russia (22%) and Belarus (15%) are the dominant producers. Unlike the nitrogen and processed phosphate markets, the top exporting nations closely follow the shares of global production.

THE TOP EXPORTERS OF POTASH IN 2024 WERE:

Canada (39%), Russia (19%), Belarus (18%)



The United States accounted for about 15% of all potash imports globally in 2024, making the U.S. the third largest importer of potash after Brazil (23%) and China (22%). Most U.S. potash imports come from Canada (86%), Russia (11%), and Israel (2%). Globally, reliance on imports as a source of total supply is the highest in potash of the three major macronutrients (NPK). In 2024, the global reliance on imports as a source of total potash consumption was 80%.

For example, potash is the only macronutrient that China, the world's largest fertilizer consuming country, imported as a significant share of supply. To contrast with the other macronutrients, China imported 67% of the nation's total potash supply, but less than 1% of its nitrogen and processed phosphate supplies.

In Summary

Potash ensures **food security and crop resilience** — but global supply concentration makes trade stability essential. Strong partnerships and open markets help keep nutrients available and affordable for farmers everywhere.

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**WRITTEN TESTIMONY OF
JOSHUA WESTLING**

Founder and Chief Executive Officer
J Westling & Co.

**BEFORE THE
UNITED STATES SENATE
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY**

**HEARING ON DOMESTIC FERTILIZER PRODUCTION,
SUPPLY CHAIN SECURITY, AND AGRICULTURAL COMPETITIVENESS**

MAY 12, 2026

Written Testimony

Chairman Boozman, Ranking Member Klobuchar, and members of the Committee, thank you for the opportunity to testify today. My name is Joshua Westling. I am the Founder and Chief Executive Officer of J Westling & Co., a developer of large-scale energy and industrial infrastructure in the United States. I am currently leading the development of Project Meadowlark, a new domestic fertilizer complex in Gothenburg, Nebraska, representing more than \$1 billion in total project investment.

I appear before you today as a developer who has spent the last six years working to bring new domestic nitrogen fertilizer capacity online, in a region of the country where the supply gap is severe and the consequences for our farmers are direct and growing. I am the only developer of new fertilizer capacity testifying today, and I would like to use this opportunity to give the Committee a candid view from the front line. What is working, what is not, and what action would accelerate the projects that the administration has correctly identified as critical to American agricultural and supply chain security. The federal government, in partnership with private investment, can and should commit to critical steps to ensure our nation controls its farm and food security.

The Problem in Plain Terms

Nebraska is consistently one of the top agricultural producing states in the United States, with farm cash receipts approaching \$40 billion annually, and we represent one of the largest markets for UAN and ATS in the country. And yet, local production of nitrogen fertilizer is minimal relative to what we consume. As with most of the country, much of the UAN used in and around Gothenburg is sourced from ports and production throughout the Gulf Coast, with additional facilities scattered throughout the Midwest. Farmers bear the cost of moving fertilizer to where it is needed and are subject to the reliability of that supply including global disruptions over which they have no control.

While in certain years the United States can be a net exporter of UAN nationally, that aggregate picture masks severe regional supply gaps, particularly in the Western Corn Belt, where local production is minimal and farmers depend on supply chains that run through ports and pipelines they have no control over. Roughly three-quarters of the UAN the United States imported in 2024 came from either Russia or Trinidad. Russia continues to weaponize its commodity exports. Trinidad's natural gas reserves have declined nearly 40 percent over the past decade, and a major nitrogen plant in that country shut down last fall and remains offline. The recent conflict with Iran, the world's third-largest urea exporter, has compounded an already-tight market. For example, anhydrous ammonia broke above \$1,100 per ton last month, up 43 percent year-over-year. Farmers across this country are being squeezed by prices they cannot control, on inputs they cannot do without, in markets that are increasingly concentrated and vulnerable to foreign disruption.

This is a national security problem. It is also a food security problem. And it is, fundamentally, a problem that regionally targeted domestic production can solve.

Project Meadowlark

Project Meadowlark is designed to address this gap directly. The fertilizer complex we are building will produce 365,000 tons per year of UAN, 140,000 tons per year of ammonium thiosulfate, and 52,000 tons per year of diesel exhaust fluid. We expect to start civil work in late 2026, with commercial operations targeted for 2029.

The plant is fully integrated. We produce 500 short tons per day of ammonia as an intermediate, but we do not sell merchant ammonia. Every pound is converted on-site into the downstream products that farmers and truckers in our region actually use. That integration is what makes the regional economics work, and it is what differentiates Project Meadowlark from a world-scale merchant nitrogen approach.

The project uses autothermal reforming technology with greater than 98 percent carbon capture, integrated with next-generation urea and UAN production technology and an air separation unit. Our engineering, procurement, and fabrication contract is with a very experienced and well-pedigreed engineering firm. They are providing a parent company guarantee on contract performance. Black & Veatch, with over 90 years of fertilizer construction experience, will serve as our integrated project management team and owner's engineer. We have signed a 15-year offtake agreement for 100 percent of our diesel exhaust fluid production. We have multiple counterparties vying for our UAN and ATS production, exercisable at our discretion.

Our CO₂ will be transported by Tallgrass Energy through their existing Trailblazer pipeline, which means our project does not require a Class VI sequestration permit on the critical path. The State of Nebraska has provided substantial local incentives, including a tax increment financing package approved unanimously by the City of Gothenburg, and Legislative Bill 1317, which among other purposes exempts our project's personal property from tax liability. The site was conveyed to us by the City's economic development agency. The air permit was issued in 2024. The site is fully zoned and entitled.

This is a real project, with real partners, real progress, and a real path to commercial operation. It demonstrates the potential for public commitment and private investment to bring large-scale fertilizer projects from concept to reality. This type of strategic commitment is needed to address decades of inattention so our nation can retake control of its farm and food security.

How We Got Here

Before Project Meadowlark, I led the development, construction, commissioning, and operation of an anhydrous ammonia plant in Geneva, Nebraska that produces up to 100 short tons per day. The plant, which we called Fortigen, has since been renamed Nebraska Nitrogen by the new owners. The plant began commercial operations in 2018 and was sold in 2021. Several members of that team are now part of the Meadowlark team, including our President, Chris Hayhurst, and our Plant Manager, Ram Lackchan. We are not learning how to do this. We have done it before.

To put this in context, only three greenfield nitrogen fertilizer plants of meaningful regional or world scale have been built in the United States since the early 1980s. Project Meadowlark will be the fourth. The Iowa Fertilizer Company plant at Wever, commissioned in 2017, was the first world-scale facility built in this country in over twenty-five years. Two of these four plants are

projects I have developed: Fortigen at Geneva, and Project Meadowlark, which we are working to bring online in 2029.

We have raised over \$50 million in development capital for Project Meadowlark to date, the substantial majority of it from farmer-aligned partners and members of our own farming community in Nebraska. These are the people who understand the supply problem most directly, because they live it every season. These stakeholders believe the federal government must play a critical role in reducing our dependence on imported fertilizer, but they also recognized that government often acts only in response to crisis. They chose not to wait.

I owe these men and women dearly for their courage to commit to our effort. I am honored and humbled by their support. I take very seriously the responsibility of delivering what we said we would deliver to these farmers who are subject to so many factors beyond their control. Their conviction that this project mattered enough to commit their own capital, at a time when institutional capital had not yet arrived, is one of the strongest validations of the commercial thesis behind Project Meadowlark. It is also a reminder of who we are doing this for.

The Federal Framework

The administration's announcement on April 29 of a coordinated, multi-agency strategy to expand domestic fertilizer capacity, lower input costs for farmers, and reduce dependence on foreign supply was a significant moment. Secretary Rollins, Secretary Lutnick, Secretary Burgum, Administrator Zeldin, Director Hassett and others laid out a framework that recognizes domestic fertilizer security as a strategic and national security priority, not just an agricultural priority. Senator Boozman's leadership on this Committee and the bipartisan engagement of members on both sides of the aisle reflect the seriousness with which Congress is treating this issue.

As Congress identifies ways to address this issue, I want to share my experience on the practical realities developers face when building new fertilizer capacity. The framework that has emerged from the administration's recent announcements addresses many of the structural challenges I see on the ground every day. I want to use this testimony to validate, from a developer's perspective, that the framework being constructed is achievable and that projects like Project Meadowlark can deliver on it.

Project Meadowlark represents what the framework being constructed at the Cabinet and congressional levels is intended to support, and I want this Committee to know that the framework is having its intended effect on the ground. Developers are coming to the table with serious projects and serious partners. The federal posture is creating real momentum, not just to address farmers' challenges this planting season but to help us as a nation regain control of our farm and food security in the years to come.

What Is Working

Several elements of current federal policy and recent administrative action should materially help projects like Project Meadowlark move forward.

- Inter-agency coordination. The fact that Commerce, Agriculture, Energy, EPA, and Interior are all moving in the same direction at the same time is meaningful. Director Hassett's role

at the National Economic Council in coordinating across agencies is critical. Without that coordination, individual agency actions would be slower and less effective. With it, the federal posture can accelerate positive outcomes.

- The clean hydrogen production tax credit, as modified. The treatment of 45V under OBBBA preserves the credit for projects like ours that produce low-carbon hydrogen via natural gas reformation with carbon capture. I want to be clear about something, though: 45V is accretive to our economics, but Project Meadowlark is economically viable without it. We are not dependent on the credit. We support its preservation because it improves project economics and signals federal alignment.
- State-level action. Nebraska's passage of LB 1317 is an example of how state and federal action can complement each other. The personal property tax exemption it provides is meaningful to project economics and signals that the state is serious about hosting domestic capacity. To the extent they haven't, other states should consider similar action to benefit their farmers and the nation.
- Permitting modernization. Administrator Zeldin's announcement that EPA will move forward on accelerated permitting for fertilizer projects, and Assistant Secretary Telle's commitment that the Army Corps will work quickly to permit fertilizer projects under the Clean Water Act, are exactly the kind of administrative actions that move project timelines from years to months. We have already benefited from the Conditional Letter of Map Revision approval to raise portions of our site out of the 500-year floodplain and may benefit from the determination that NEPA review is no longer required by DOE.

What Would Help

With the Committee's permission, I would like to be specific about a small number of additional actions that would meaningfully accelerate Project Meadowlark and projects like it.

- Predictability of federal capital deployment timelines. Developers can absorb almost any rule. What we cannot absorb is uncertainty about when capital will be deployed. Federal lending programs have historically had timelines that are difficult to predict and that make business planning a major challenge. New programs being deployed under the announced framework will face the same risk if they are not implemented with clear, published timelines for application review, conditional commitments, and final commitments. I would respectfully suggest that any legislation accompanying the framework include guidance to agencies on transparent timeline standards. Predictability allows developers to align private capital alongside federal capital. Unpredictability forces developers to either hold private capital in reserve at significant cost or pursue capital structures that work without federal participation, which often means these types of projects do not get built at all.
- Coordination of federal capital instruments. Project developers face the practical challenge of stacking capital from multiple federal sources, which is essential for projects of this size and scale. Each federal capital instrument has its own application process, diligence requirements, and timeline. Coordination across these is currently informal at best.

Formalizing inter-agency coordination would substantially reduce friction for developers and accelerate project timelines.

- Congressional legislation that moves the needle. There are many proposals on the table and all of them are well-intentioned in finding solutions to help our nation's farmers. However, Congress needs to take bold action to enact laws that will significantly increase domestic fertilizer production. To do that, we need a clear federal commitment to invest in our nation's fertilizer production infrastructure, which will signal to the private market that these billion-dollar plus projects are worth investing in because they are critical to our national security. Congress needs to ensure that 4 to 8 of these projects get built, not to monopolize the market, but to demonstrate that the United States is committed to ensuring our farmers have the domestically sourced inputs they need to feed our nation for years to come.
- Predictable trade policy on fertilizer inputs. Tariffs and countervailing duties on fertilizer imports affect incumbent producers and new entrants in different ways. New domestic capacity coming online, like Project Meadowlark, needs predictable price signals over a multi-year period to support project financing. Significant trade policy volatility on fertilizer inputs creates underwriting challenges for new projects. I would respectfully suggest that any legislative consideration of trade policy on fertilizer take into account the impact on projects in development as well as projects in operation.
- Recognition of the distinction between supporting incumbents and expanding capacity. The administration's framework correctly identifies both as priorities. Both deserve support. But they are different policy goals, and policy instruments effective for one are not necessarily effective for the other. Helping incumbent producers operate their existing assets profitably reduces the immediate cost pressure on farmers. Expanding domestic capacity through new entrants increases the domestic supply base, reduces our reliance on foreign inputs, creates competition in concentrated markets, and addresses the structural geographic gaps in regions like the Western Corn Belt where local production is minimal. Legislation that addresses both objectives explicitly will be more effective than legislation that conflates them.
- Continued federal support for the broader project ecosystem. Projects like Project Meadowlark do not exist in isolation. We depend on a network of technology providers, engineering firms, construction contractors, and operating partners, many of whom are themselves making investment decisions about whether to grow their U.S. capacity to serve projects like ours. Federal support for the broader ecosystem of fertilizer-related industrial activity, including the workforce that builds and operates these facilities, will determine whether the framework being constructed produces sustained capacity expansion or one-off project announcements.

On the Question of Time

I want to close with a comment about time, because time is the variable that ultimately determines whether the framework being constructed at the Cabinet and congressional levels translates into actual capacity expansion.

Project Meadowlark will reach commercial operation in 2029. That is fast for a project of this scale and complexity. Greenfield nitrogen plants typically take longer. We are moving as fast as we can responsibly move while maintaining the engineering rigor and safety standards that this kind of facility requires. We expect to make a final investment decision later this year if the federal stack and remaining institutional capital come together.

Three years from now, in 2029, this Committee may be holding hearings about why fertilizer prices remain high, why supply chains remain fragile, why the framework announced in 2026 did not produce the capacity expansion that was promised. The answer, if that hearing happens, will likely be that the friction points I have described in this testimony, predictability, coordination, trade policy stability, and recognition of new entrants as distinct from incumbents, were not adequately addressed. Alternatively, if there is no such hearing in three years' time, the reason may be that those friction points were addressed, that the framework met the challenge, that new projects came online, and that domestic fertilizer production expanded as projected, strengthening our nation's farm and food security immensely.

Project Meadowlark will be one of those projects either way. We are committed to delivering it. The farmers who supported us are counting on it. The community in Gothenburg is counting on it. But this Committee, and the broader federal apparatus, has the ability to make the path easier or harder for the projects that follow Project Meadowlark and easier or harder for the framework as a whole to succeed.

I am grateful for the seriousness with which the Committee is engaging on this issue. I am grateful to Senator Boozman for the opportunity to contribute to this thinking, and for the invitation to testify today. I am grateful to the Ranking Member, Senator Klobuchar, and to all the members of this Committee for the bipartisan engagement that has characterized your approach to this issue. I am grateful to Senator Fischer, who represents Nebraska on this Committee, for her continued attention to these issues. This is the kind of work that demonstrates Congress at its best, focused on a real problem affecting real Americans, willing to look at solutions across multiple agencies and policy instruments, willing to listen to people from across the agricultural and industrial spectrum.

I look forward to your questions, and I would be honored to be a continued resource to this Committee as you proceed with the legislation that will operationalize this framework.

Thank you.

**DOCUMENTS SUBMITTED FOR THE
RECORD**

MAY 12, 2026



Honorable Committee Members, first of all, we would like to thank you for your support in extending 45z in July. This investor incentive will be very useful in building Eggnite nutrient recovery facilities to produce fertilizers on a regional basis.

While other distinguished presenters will present short-term solutions regarding fertilizer prices and imports (25% wow), we would like to focus your attention on a long-term fix that could help solve both fertilizer and downstream water quality issues with a feedstock our nation has in abundance: manure.

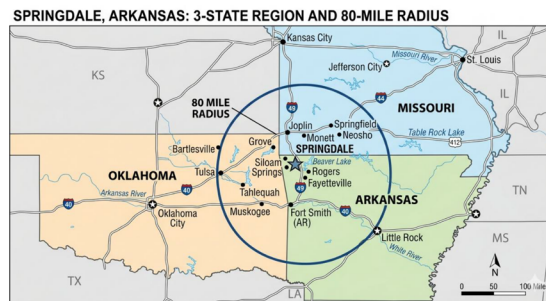
Now, for this discussion, we will focus on poultry, specifically broiler chickens, in our regional area, which includes Northwest Arkansas, Eastern Oklahoma, and Southwest Missouri. Chicken has become the protein of choice for American consumers as it is tasty, nutritious, and convenient. Consumption is now estimated to be around 103-114 pounds per person per year. It is predominantly grown in our area in large houses, which are known as Concentrated Animal Feeding Operation (CAFO) units, and a single house can produce 5.5 flocks and up to 150 tons of chicken poop per year. Houses are then clustered around regional processing plants.



In the past, many farmers grew cattle and chicken together as the chicken litter provided valuable and economical fertilizer for farmers' fields to grow more grass. Now, cattle are ruminants, with four stomachs, whereas a broiler chicken only has one, and thus poultry contains five times the nitrogen and three times the phosphorus of beef manure. Chicken litter is loaded as a fertilizer source. However, the high phosphorus level is more than most plants and grasses can use in a single year, and, over time, in many areas like ours, it has slowly built up to excessive levels, which is known as "Legacy Phosphorus". Thus, excessive phosphorus and nitrogen can wash downstream and cause eutrophication, algae blooms, and other water quality issues. If you look at the EPA map, you can see it is an issue everywhere and not just in agriculture.



With urbanization converting around 1.8 million acres per year in the U.S., traditional land application, manure spreading, is becoming increasingly regulated and restrictive.



So, let's look at our region again and, as a conservative estimate, let's use 2 million tons of chicken litter generation per year in the area. What a fertilizer source, but what is the issue?

With the excessive levels of phosphorus in the chicken litter, it is more than the area's fields and pastures can use. Nitrogen is also only 50% plant available and must mineralize on the ground for plants to use. So, manure is hauled out of one watershed into another, requiring local farmers to buy higher priced imported fertilizers from countries like Russia, while water quality concerns and lawsuits continue. Thus, farmers are caught in the middle, as is the case in this region.

SO, LET'S WORK TOGETHER AND SOLVE THIS PROBLEM.

So, let's use the 2 million ton number. On average, broiler litter has been documented to show 60 pounds of nitrogen, 60 pounds of phosphorus, and 50 pounds of potassium per ton, plus

micronutrients. In addition, land applied broiler litter has been shown to volatilize and lose up to 70% of its nutrient nitrogen value as gas into the atmosphere (air = smell), not efficient.

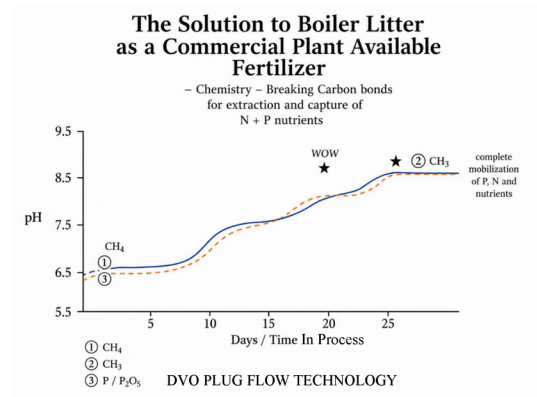
Why hasn't this solution been solved?

1. High ammonia levels build up in wet manure and are toxic to most anaerobic processes that try to break it down. Ammonia inhibits and kills bacteria.
2. Manure pH in the range of 6.5-7.0 holds nutrients and phosphorus in forms bonded within the manure, so the soil microbes have to break it down on the ground, taking up to four years to become fully plant available (not fully available for use). Nutrients laying around in soil is not good.

So, what is the solution? Next Generation Technology



A systems approach that utilizes new technology to pull out ammonia so the manure digestate can be fully digested, 98.7% confirmed, while manure effluent pH is raised above 8.4, which allows the carbon bonds on the nitrogen/ammonia and phosphorus molecules to be broken. Thus, the fertilizer nutrients can be extracted and captured for use as efficient plant available fertilizers.



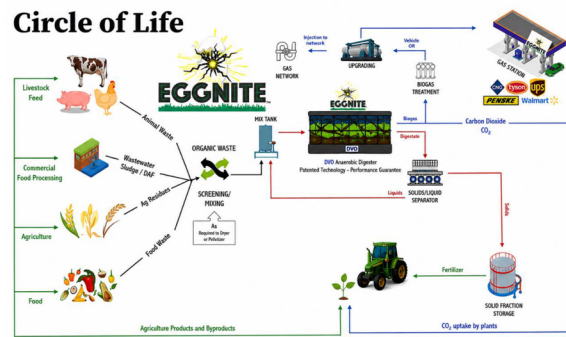
So, assuming again that two million tons of poultry broiler litter is our regional number then that is 120 million tons of nitrogen, 120 million tons of phosphorus, and 100 million tons of potassium.

So, if you combine the map of poultry production facilities, imagine what hundreds of millions of pounds of phosphorus removed from the broiler litter and repurposed and sold where needed, in a more useable and efficient can do. A dual process to produce better forms of domestic fertilizer, while improving high nutrient watersheds and downstream water quality. A win-win.



So, what if public policy could be focused on helping directly and achieving these objectives?
Our suggestions:

Imagine our NWA/OK/MO Region as a starting point. A regional domestic organic fertilizer facility with plant board certified fertilizers.



1. Process technology verified and confirmed by independent land grant university research.
2. Removing and capturing hundreds of tons of phosphorus from poultry litter for domestic sale to U.S. farmers.
3. Repurposing nitrogen and potassium into slow release fertilizer blends that can stay in the region, providing prescription non phosphorus solutions to area farmers at competitive prices, plus added micronutrients.
4. Ability to combine and process with food waste for landfill avoidance. A solution also to poultry plant wastewater sludge.

Now let's consider incentives for agriculture and farmers to lead the way and focus on watershed impact and long term improvements via verified nutrient recovery systems.

1. Cost effective domestic fertilizers available regionally minus phosphorus where needed.
2. Nutrient recovery, water quality incentive with targeted phosphorus capture and extraction technology

3. Fuel credits (RIN) amendment to share RIN credits tied to phosphorus extraction and repurpose.
 1. Optional add-on: Fleet fuel circularity agreement
 2. Food retail and processing centers could divert food wastes to approved process digesters at reduced tipping fees, landfill avoidance, and share RINs when fueling their trucks.



The Eggnite Solution – the difference is Science

Regional fertilizer production from combining CAFO manures, processing plant wastes, and food wastes.

A performance based watershed improvement model where farmers, processors, and waste generators become fertilizer and fuel producers and attain watershed and air quality improvements.

The broiler industry alone could produce millions of tons of domestically produced efficient fertilizers while removing millions of tons of phosphorus out of the waste stream. A win-win for all.

We would welcome the opportunity to provide and discuss more details on this next generation agricultural, economic, and environmental solution. Please let's work together and farmers will lead the way.

Respectfully submitted,

Joe G. Brooks – Chairman
Eggnite Agricultural Solutions, LLC



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THE POWER OF SCIENCE

EFFICIENT HIGH QUALITY FERTILIZER | STRONG AGRICULTURAL SOLUTIONS

We would welcome the opportunity to discuss details. *Thank you!*

Op-Ed: Secretary Brooke Rollins: President Trump is ensuring fertilizer affordability and availability for our farmers

Secretary Brooke Rollins

May 12, 2026



As I meet with farmers across America and hear their concerns, one refrain has echoed above all others in recent weeks: the rising cost of fertilizer. This anxiety is real and matters to all Americans, because fertilizer is essential for maintaining our ability to feed ourselves as a nation. When it becomes unaffordable, our food security is threatened, and with it, our national security and our freedom.

Unfortunately, expensive fertilizer has been a longstanding issue. The last administration did little as the price of fertilizer shot up 40 percent, at one point even reaching 99 percent higher prices. Prices are high now, but they pale in comparison to peaks under Biden.

When it comes to the past decade of price hikes, industry consolidation is largely to blame, as four companies control three-fourths of the domestic nitrogen fertilizer market — two of which are not even American owned— driving farmers to rely on countries like Russia and other unstable suppliers for this critical input.

This is an immediate problem in need of both short- and long-term solutions. Fortunately, President Donald Trump has made this issue a top priority. Under his leadership, we have achieved unprecedented collaboration across government and the private sector on a host of policies to give our farmers greater predictability and options.

The Trump administration has already taken bold actions to make fertilizer more affordable and accessible for our farmers in the short-term. In March, President Trump suspended the Jones Act for 60 days, and he has since extended it for 90 more days, boosting shipping flexibility to help fertilizer flow more freely to U.S. ports. To further grow domestic supply, he recently removed restrictions on fertilizer imports from Venezuela. The Department of Transportation has been working to identify additional short-term solutions as well, so that fertilizer can be transported more efficiently this planting season.

At the president's urging, the private sector has also stepped up to meet the moment. Manufacturers listened to farmers and made fertilizer options more accessible and affordable, including by prioritizing supply for American customers this season and allowing them to lock in pricing through the 2028 season.

At the same time, we are also working to rebuild domestic production capacity in the long-term. Left and right, we are incentivizing the private sector to start building so that we can manufacture more affordable fertilizer here at home. Several ongoing projects are expected to reach major construction benchmarks in the coming year, and early estimates suggest these facilities will supercharge our domestic production capacity as they begin operation.

Transforming an industry reliant on global markets won't happen overnight. But by streamlining permitting, fast-tracking projects, and recruiting greater investments into the U.S. through the Commerce Department's Investment Accelerator, the Trump administration is leveraging every opportunity to onshore and nearshore fertilizer production in record time. Additionally, the Department of Energy recently closed a major loan to help finance a coal and ammonia fertilizer facility in Indiana, which will produce 500,000 metric tons of anhydrous ammonia per year.

And in March, President Trump directed the Environmental Protection Agency to rewrite the rules on Diesel Exhaust Fluid (DEF), spurring the Dakota Gasification Company to deliberately prioritize higher urea production while reducing DEF output.

American innovation is another key weapon in our arsenal. From expanding research into more efficient crop nutrition options that diversify away from imported fertilizers to harnessing new agricultural technology so our farmers can do more with less, we are leaving no stone unturned in the fight for affordable farming.

To be clear, our work to rebuild domestic production didn't just begin this year. Last fall, the Trump administration listed two key fertilizer ingredients, phosphate and potash, on our list of critical minerals. And together with the Department of Justice, the U.S. Department of Agriculture has beefed up antitrust enforcement to prevent any anticompetitive behavior by fertilizer manufacturers.

Today, lawmakers in Washington will gather with industry experts to discuss the state of fertilizer access and how to best position the U.S. moving forward. Many in Congress have already put forward innovative solutions to supplement our existing efforts, and we hope for continued collaboration to strengthen American agriculture and our national security. Thanks to President Trump's commitment and vision, we are building a future where our farmers are not beholden to foreign, even hostile, nations to feed, fuel, and clothe our nation and the world.

Secretary Brooke L. Rollins is the Secretary of Agriculture.



Statement for the Record

of

**The United Steel, Paper and Forestry, Rubber,
Manufacturing, Energy, Allied Industrial and Service Workers
International Union (USW)**

for the

Senate Committee on Agriculture, Nutrition, and Forestry

Hearing on

**“Perspectives on the Fertilizer Industry: Ensuring a Stable
and Affordable Supply for American Producers”**

May 12, 2026

Chairman Boozman, Ranking Member Klobuchar, and members of the Committee, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (USW) appreciates the opportunity to provide this statement for the record regarding the importance of maintaining a stable, affordable, and resilient fertilizer supply for American producers and workers.

USW is North America's largest industrial union, representing workers across the chemical, mining, manufacturing, energy, and related sectors, including workers employed at fertilizer and chemical facilities throughout the United States.

A strong domestic fertilizer industry is critical not only for American agriculture, but also for maintaining industrial jobs, supply chain resilience, and domestic manufacturing capacity. Fertilizer facilities support thousands of skilled, family-sustaining union jobs and provide critical inputs for American farmers. Once domestic industrial capacity is lost, it is difficult and costly to rebuild.

Recent disruptions in global supply chains have underscored the risks of overreliance on foreign production for critical agricultural inputs. The United States must maintain the ability to produce fertilizer domestically to help ensure long-term supply stability and protect against market volatility, geopolitical instability, and foreign state-supported production.

USW has seen firsthand the impact unfair trade can have on fertilizer workers and domestic production. In prior testimony before the United States International Trade Commission concerning ammonium sulfate imports from the People's Republic of China, the union highlighted how surging low-priced imports disrupted domestic production and threatened jobs at facilities in Texas, Virginia, California, and Idaho. Trade enforcement tools, including antidumping and countervailing duty (AD/CVD) laws, remain important safeguards to ensure American producers and workers can compete on a level playing field.

Farmers and industrial workers share a common interest in policies that strengthen domestic production, support supply chain resilience, and preserve good jobs in the United States. USW appreciates the Committee's attention to these issues and looks forward to working with Congress to support a strong domestic fertilizer industry and a stable fertilizer supply for American producers.

Dear Chairman Boozman, Ranking Member Klobuchar, and members of the Senate Committee on Agriculture, Nutrition, and Forestry—

Thank you for providing the U.S. Department of Agriculture with an opportunity to provide comment for the record on today's important topic: fertilizer affordability and accessibility.

To be clear, challenges with fertilizer affordability did not occur overnight. The market experienced a turning point during the Russian invasion of Ukraine, which drove significant increases to the price of oil and natural gas; both commodities are key inputs in nitrogen-based fertilizers. Though oil and natural gas prices eventually returned to pre-invasion levels, fertilizer products like urea and urea ammonium nitrate remained roughly 35 percent above their historic average. United States phosphate production is down more than 28 percent over the last decade. These are problems years in the making that have contributed to unstable supply chains resulting in global price increases.

To date, the Trump administration has taken multiple actions that reflect a whole-of-government commitment to finding both short-term and more permanent solutions to longstanding issues plaguing access to fertilizer. These include a temporary waiver of the Jones Act, removal of restrictions on imports from Venezuela, and investment acceleration through our partners at the Departments of Energy and Commerce. For example, the Department of Energy recently closed a major loan to help finance a coal and ammonia fertilizer facility in Indiana, which will produce 500,000 metric tons of anhydrous ammonia per year.

The private sector continues to meet the moment through other ways. Multiple companies continue to participate in the previous Administration's Fertilizer Product Expansion Program, and we are scrutinizing every detail of each to ensure outcomes are realized.

Members of this body have also engaged. On behalf of the Department, I look forward to providing technical assistance for Leader Thune, Senator Grassley, and Ranking Member Klobuchar's *Fertilizer Transparency Act*, and Senator Marshall and Ranking Member Klobuchar's *Homegrown Fertilizer Act*, among others.

Please know the Department and the whole of the Trump administration are relentless in their desire to mitigate high prices in farm country, and to create more accessible options for the products needed to guarantee our great nation continues to enjoy the most abundant, the most affordable, and safest food supply.

Thank you.

Stephen Vaden
Deputy Secretary of Agriculture

Introduction of Eddie Melton at Senate Agriculture Committee
Remarks by U.S. Senator Mitch McConnell
May 12, 2026

Thank you, Mr. Chairman.

I am honored to be here today to introduce my good friend and President of Kentucky Farm Bureau Eddie Melton.

For the last 17 years, Eddie has served on the executive committee for Kentucky Farm Bureau, and I have had the pleasure of working with him during his time as President to secure major wins for Kentucky and America.

Last year, Eddie came to me with an idea that would preserve farmland AND lower taxes on farmers.

That's a great combination. Congress passed it. It's a perfect example as to why we should listen carefully when farm leaders speak.

Not only is Eddie a leader for farmers, but he himself knows what it's like to run an operation. He is a fifth-generation row crop and cattle farmer in Webster County. He has a degree in Agriculture from Murray State University, and his service to Kentucky Farm Bureau began 39 years ago.

So, when it comes to experts testifying before the Senate Agriculture committee, we're in good hands with Eddie here today.

Take it from me, Mr. Chairman—I trust Eddie completely.

And when it comes to farming and ag policy, I'm confident in his ability to provide honest testimony and credible insight for us today.

He really does know what it means to be a farmer and how legislators can best support our farmers.

And so with that, Eddie, thank you for being here. I know your wife Regina, daughter Lindsey, and grandchildren—Anna and Will—are so proud of you.

Mr. Chairman, thank you for giving me the opportunity to introduce Eddie Melton to this distinguished committee.

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QUESTIONS AND ANSWERS

MAY 12, 2026

U.S. SENATE COMMITTEE ON AGRICULTURE, NUTRITION, & FORESTRY
Perspectives on the Fertilizer Industry: Ensuring a Stable and Affordable Supply for American Producers
 May 12, 2026
 Questions for the Record
Mr. Eddie Melton

Senator Adam B. Schiff

1. This administration touts being America first and farmer-friendly, but trade policies, indiscriminate tariffs, and initiation of war have led to immense problems for farmers. I have traveled across my home state of California and a universal theme has been how these actions have been detrimental to farmers and their ability to plan, and in many cases, continue farming. As you know, the April 2026 Farm Bureau fertilizer survey found that 70 percent of farmers cannot afford all of the fertilizer they need. The American Farm Bureau has documented that specialty crop producers paid 37 percent more for fertilizer between 2020 and 2025, while selling prices for many fruits and vegetables rose only modestly or actually declined. California plays a leading role in specialty crops, growing nearly half of the country's vegetables and over three-quarters of the country's fruits and nuts. The needs of specialty crops are different from many of the large commodity crops of the Midwest and the South. For instance, they require different kinds of fertilizer and have different seasonality. How are fertilizer cost pressures and supply uncertainty affecting specialty crop farmers in your membership differently than row crop farmers? Is the current market creating distinct challenges for those producers? What should Congress know about specialty crop growers when considering how to address these rising input costs?
 - Fertilizer affordability is a serious concern across all sectors of agriculture. In AFBF's nationwide fertilizer survey, which included specialty crop producers, 70% reported they could not afford all the fertilizer they needed for the season. Fertilizer remains one of the largest and most volatile input costs on the farm, and recent disruptions to global supply chains have added further uncertainty to both availability and pricing. Fertilizer is plant food and specialty crops need it just as much as row crops.
 - While current market challenges affect all farmers, specialty crop producers often face unique constraints. Most fruit crops are perennial, meaning growers cannot easily shift acreage or reduce nutrient applications without risking long-term impacts on productivity. Fertilizer, labor, and transportation costs are all on the rise and having an outsized impact on specialty crop producers because they have limited ability to pass higher costs along the supply chain, creating additional pressure on already tight margins.
 - As Congress considers ways to address rising input costs, it is important to recognize the diversity of American agriculture and ensure specialty crop producers are included in the equation. Efforts to strengthen fertilizer supply chains, expand domestic production capacity, improve market certainty, and ensure support programs are accessible to specialty crop growers can help address challenges facing farmers across the country. Any market relief must be designed to help all producers in order to ensure farmers can make it through this growing season.

2. Conservation practices and systems can reduce fertilizer needs while also improving soil health and strengthening resilience to floods and drought. USDA conservation programs, including the Conservation Stewardship Program and Environmental Quality Incentives Program, are consistently oversubscribed, leaving many farmers who want to adopt conservation practices without support. Given strong unmet farmer demand for voluntary conservation support, what additional steps should Congress and USDA take to help more producers adopt practices and farming systems that reduce fertilizer dependence while maintaining productivity and profitability?
 - Conservation practices can play an important role in helping farmers improve nutrient efficiency, build soil health, and strengthen resilience to weather-related challenges. Congress must ensure adequate funding for programs like CRP and EQUIP and adjust those programs to meet the needs of today's farmers and ranchers. Equally important is continued investment in conservation technical assistance, research, precision agriculture technologies, and nutrient-use efficiency innovations that help farmers produce more with fewer inputs. This is why passage of a new farm bill is critical. Furthermore, any updates to those programs must also ensure they remain voluntary and recognize that different regions of the country have different agricultural needs. In Kentucky, where no-till farming originated, most producers use some form of no-till as well as cover crops. In other parts of the country, no-till and cover crops are not feasible options. Congress and USDA must work together and recognize a wider range of conservation practices while also giving farmers credit for existing practices, not just adoption of new ones.

U.S. SENATE COMMITTEE ON AGRICULTURE, NUTRITION, & FORESTRY

Perspectives on the Fertilizer Industry: Ensuring a Stable and Affordable Supply for American Producers

May 12, 2026

Questions for the Record

Mr. Corey Rosenbusch**Senator Adam B. Schiff**

1. Global transport of fertilizer has been significantly impacted by the administration's war in Iran, which has disrupted trade at the Strait of Hormuz. Given its many and large ports, California is a tremendously important location for trade, import of agricultural inputs, and supply chain logistics. How have recent events in the Middle East impacted shipments and fertilizer and other farming inputs coming into the West Coast, which has impacted farmers not only on the West Coast but across the nation?

Corey Rosenbusch's Response on behalf of The Fertilizer Institute:

Primary fertilizer products, like major crops, are produced and traded globally. Changes in global production and demand, trade patterns, geopolitical events, and government policies impact global and national fertilizer markets, which in turn, impact the price U.S. farmers pay. Each macronutrient (nitrogen (N), phosphorus (P), and or potash (K)) has a different level of geographic diversity and thus vulnerability to supply shock that might occur due to action of any single supplying country. Geopolitical events such as ongoing global conflicts in the Middle East and Europe; government controls; subsidies, and other policies impact production, exports and consumption; and the evolving nature of global trade policy are impacting the global market (and prices) for fertilizers.

California Fertilizer Import Activity

California is a major entry point for fertilizer imports into the United States, with fertilizers arriving primarily through the ports of Los Angeles, San Francisco, and San Diego. In 2025, 11% of all U.S. phosphate fertilizer imports and 5% of all U.S. nitrogen fertilizer imports entered through California ports.

San Francisco

The Port of San Francisco is a significant gateway for both phosphate and nitrogen fertilizer imports. In 2025, approximately 4% of all U.S. imports of phosphate and nitrogen fertilizers entered through this port. The largest fertilizer suppliers to the port are Norway, Russia, Trinidad and Tobago, the Netherlands, and Germany.

Among countries directly affected by the conflict or a potential closure of the Strait of Hormuz (Israel, the UAE, Saudi Arabia, Iran, and Qatar), fertilizer imports into San Francisco have primarily originated from Israel (phosphorus fertilizers and fertilizer blends) and the United Arab Emirates (UAE) who ship monoammonium phosphate (MAP) into the port.

During the first four months of 2026, compared with the same period in 2025, imports through the port increased significantly from Russia (urea), Trinidad and Tobago (urea), and Belgium (potassium sulfate).

Los Angeles

The Port of Los Angeles is an important entry point for phosphate fertilizers and, to a lesser extent, nitrogen fertilizers. In 2025, 6% of all U.S. phosphate fertilizer imports and 1% of nitrogen fertilizer imports entered through this port. The largest fertilizer suppliers to Los Angeles are Belgium, Mexico, Norway, France, and the Netherlands.

Among countries directly affected by the conflict or a potential closure of the Strait of Hormuz, fertilizer imports into Los Angeles have primarily originated from Israel (phosphorus fertilizers and fertilizer blends) and Saudi Arabia (urea).

During the first four months of 2026, compared with the same period in 2025, imports from Trinidad and Tobago (urea) increased significantly.

San Diego

The Port of San Diego does not directly import fertilizer from countries affected by the conflict or a potential Strait of Hormuz closure (Israel, the UAE, Saudi Arabia, Iran, and Qatar). The port serves primarily as an entry point for phosphate fertilizers, particularly those imported from Mexico. Relatively small volumes of nitrogen fertilizers enter the United States through this port.

Prices

Because fertilizer is a globally traded commodity, prices in local markets are closely linked to global market conditions. Fertilizer prices reflect worldwide supply and demand dynamics and can change rapidly as those conditions evolve. A market does not need to directly import fertilizer from a supplier experiencing production or export disruptions for local prices to be affected. Reduced global availability can increase prices across many markets. Similarly, heightened seasonal demand in other regions of the United States or the world can raise local fertilizer prices even when local demand remains relatively stable, as increased global demand places upward pressure on prices.

The USDA Agricultural Marketing Service publishes biweekly production cost reports for selected regions across the country. For California, the most relevant publication is the Pacific Northwest Production Cost Report, which provides information on farm input costs, including fuels, synthetic fertilizers, and organic fertilizers.

The table below compares synthetic fertilizer prices reported on February 20 (the report closest to the period before the conflict) and May 29 (the most recent report). Fertilizers for which spring is the peak application season—and for which countries directly affected by the conflict or a closure of the Strait of Hormuz (including Israel, the United Arab Emirates, Saudi Arabia, Iran, and Qatar) play an important role in global exports—have experienced substantial price increases over this period as shown in the table below.

USDA Pacific Northwest Production Cost Report (Bi-Weekly)				
Fertilizer Material	20-Feb	29-May	\$ Difference	Percentage Difference
	Dollars Per Ton			
Ammonium Sulfate	\$ 559.60	\$ 693.08	\$ 133.48	24%
Blend (16-16-16)	\$ 910.31	\$ 973.82	\$ 63.51	7%
Blend (18-18-18)	\$ 980.95	\$ 1,096.08	\$ 115.13	12%
Calcium Nitrate	\$ 31.00	\$ 31.00	\$ -	0%
Liquid Nitrogen (32-0-0)	\$ 683.50	\$ 800.08	\$ 116.58	17%
MAP (Monoammonium Phosphate 11-52-0)	\$ 1,120.88	\$ 1,124.67	\$ 3.79	0%
Potash (Red 0-0-60)	\$ 659.00	\$ 659.00	\$ -	0%
Potash (White 0-0-62)	\$ 852.48	\$ 744.17	\$ (108.31)	-13%
Urea (46-0-0)	\$ 854.51	\$ 1,052.08	\$ 197.57	23%

Should you have any additional questions, please reach out to me or to TFI's Chief Economist [Veronica Nigh](#).



Corey Rosenbusch
President and CEO
The Fertilizer Institute