

AGRICULTURAL RESEARCH, EXTENSION, AND EDUCATION REFORM ACT

• Mr. CONRAD. Mr. President, I am pleased to support the Agricultural Research, Extension, and Education Reform Act, the 1996 farm bill's research title. This bill will bring many benefits to the Nation's farmers and to producers in North Dakota. This bill is important not only to our farmers but to North Dakota State University, our five Tribal Colleges and all facets of agricultural production that are the State's lifeblood.

In addition to establishing agricultural research priorities, the bill makes positive changes in the operation of the Nation's agricultural research system, which I am pleased to support. Specifically, this bill will increase the accountability of USDA funded research by increasing stakeholder input. Just this year, the North Dakota State Legislature created one of the first stakeholder groups in the country and gave it unprecedented power to direct the agricultural research at North Dakota State University. This 13-member group met for the first time in July to set priorities for agricultural research in North Dakota. We look forward to being able to serve as a model to other States planning to increase stakeholder input.

I am very pleased the Agriculture Committee and now the U.S. Senate have strongly supported funding for agricultural research. Our Nation's economic base was founded on agriculture and as we drift toward an increasingly urban population, we drift from our agrarian roots but we must not ignore the importance of agricultural productivity. North Dakota farmers and livestock producers continually look to increase farm efficiency, profitability, and environmental stewardship by using new technologies. It is critical that federally funded research focus on these goals while producers maintain global competitiveness.

The bill's Initiative for Future Agriculture and Food Systems provides new funding of \$100 million in fiscal year 1998 and \$170 million for each of fiscal years 1999 through 2002 to competitively award research, extension, and education grants on issues related to food genome mapping, food safety and technology, human nutrition, new and alternative uses, production of agricultural commodities, biotechnology, and natural resource management.

These are the directions that agricultural research must go in order for the United States to maintain its edge in the global market while providing greater harmony between agriculture and the environment.

Mr. President, I am very pleased this bill incorporates my proposal to give policy research centers the authority to study the effect trade agreements have on farm and agricultural sectors, the environment, rural families, households and economies. Of special concern are the impacts of Canadian grain

imports and international policies on the Northern Great Plains. Specifically, I would like them to examine the impact of multinational trade policy issues and North American cross-border policies on Northern Plains agriculture, identify strategies to improve export opportunities for this region of the country, and evaluate the impacts of national and international policies on the region's agricultural competitiveness, farm income, farm structure, and rural economies. Policy researchers at North Dakota State University requested this amendment to help obtain funding for the proposed Northern Great Plains Policy Research Center which would serve as part of the Food and Agricultural Policy Research institute consortium. I fully support their proposal.

And finally, Mr. President, I am very pleased that the bill includes provisions to authorize the Secretary of Agriculture to grant up to \$5.2 million in each of years 1998 through 2002 to a consortium of land-grant universities combating diseases of wheat and barley caused by *Fusarium graminearum* and related fungi, commonly known as scab. Scab has had a profound effect on the farmers and economy of North Dakota and this year alone it is expected to cause \$1.1 billion in economic damages. I cannot stress enough the importance of research to combat this horrible crop disease and thank my colleague from Minnesota, Senator WELLSTONE, for working closely with me on this issue and my colleague from Indiana, Senator LUGAR, for including these provisions in the manager's package.

Mr. President, so that everyone may fully understand the consequences of this crop disease, I would like to submit an economic analysis of scab's impact on my home State of North Dakota. I would also like to submit for the RECORD a recent newspaper article from the Grand Forks Herald, headlined, "An agricultural nightmare," which describes scab's impacts and discusses the need for research to combat the disease. Mr. President, I ask that both submissions be printed in the RECORD in full.

The material follows:

THE MARKET ADVISER: SCAB LOSSES SEVERE—GEORGE FLASKERUD, EXTENSION CROPS ECONOMIST NDSU EXTENSION SERVICE

Scab in spring wheat, durum and barley will have a severe impact on the economy of North Dakota this year. Estimates by the department of agricultural economics at North Dakota State University put the direct loss to producers at about \$355 million. The total loss is expected to be about \$1.1 billion when the indirect impact on the communities is included. This brings total scab losses since 1993 to about \$2.9 billion. Demecey Johnson and I, with the help of others in the department, calculated the losses.

These losses have severely damaged many farm financial statements. The median debt/asset ratio for North Dakota farmers increased from 48 percent in 1992 to 56 percent in 1996 and is expected to further increase this year. In addition, North Dakota had a

net loss of about 2,000 farms between 1992 and 1996, in many cases due to scab. The debt/asset ratios were derived from the records of farmers in the North Dakota Farm Business Management Education Program.

The total direct loss in 1997 was the greatest of the scab losses since 1993. Yield losses were greater during 1993 and 1995 than during 1997, but, when the price effect was considered, the total direct loss during 1997 was record-setting. The price effect during 1997, to date, has been negative, on average, which accentuates the 1997 yield loss. The price effect has been negative because actual net selling prices have been below what they would have been during a normal year, on average. Many times over the past five years, a positive price effect offset some or all of the loss due to lower yield.

Spring wheat scab losses have generally increased over time when both the yield and price effects are considered. Total direct spring wheat scab losses since 1993 were worse every year except one, the exception being 1996. Barley losses were substantial in three of the five years: the largest was in 1993 followed by 1997 and 1995. For durum, the yield effect exceeded the price effect in two of the five years, 1995 and 1996.

Yield losses were calculated as the difference between trend yields and actual yields. Trend yields were derived from 1970-92 data, leaving out two drought years. The trends were extended to 1997 to derive losses during 1993-97. The yield losses were calculated for Crop Reporting Districts 2, 3, 5, 6, and 9, essentially the eastern portion of North Dakota that has suffered from scab.

Price impacts were calculated as the difference between normal prices and actual net selling prices. For spring wheat, normal prices for 1993-97 were derived from the 1989-92 price relationship between actual net selling prices and Minneapolis futures prices. For durum, normal prices for 1993-97 were derived by multiplying the 1993-97 spring wheat normal prices by a factor of 1.09, which is the long-term price relationship between durum and spring wheat prices. For barley, normal prices for 1993-97 were derived from the 1989-92 price relationship between actual net selling prices and Duluth feed barley prices. These methods permitted both the yield and quality effects to be reflected in the price impacts.

This analysis did not address such factors as insurance indemnity payments and disaster payments. Both were substantial in 1993. Based on my observation of yields in 1997, however, I would expect that insurance indemnity payments will be relatively low this year. Many yields appear to be about at the level where insurance indemnity payments would just start to be realized.

[From the Grand Forks Herald, Sept. 12, 1997]
AN AGRICULTURAL NIGHTMARE—INFESTATIONS OF SCAB PROVIDE AREA FARMERS LOTS OF PAINS IN AND OUT OF THE FIELDS

(By Erin Campbell)

Termed the Armageddon for wheat and barley and compared with cancer, scab remains an uninvited guest and pillager of small grains fields in the region for the last five years.

"It's not a new disease to the area," says Jochum Wiersma, small grains specialist with University of Minnesota, Crookston. In fact, it's popped up a few times in the region since the turn of the century.

Scab can infest any wheat-growing area if it has the right moisture conditions to develop, he says.

"We certainly are due for a break," says Don Loeslie, a Warren, Minn., farmer.

Wetter-than-normal weather conditions provide tailor-made conditions for scab to thrive and impact the rural economy.

"When we got rain in July, it used to add to bushels, now it takes away," says Neal Fisher, deputy administrator for the North Dakota Wheat Commission.

For some producers, scab has robbed them of profits for five years.

"It was the sure crop to plant. We could always pencil in a profit," Loeslie says. When farmers deliver grain to their local grain elevator, its quality is evaluated, and the grain is "graded." Grades vary from elevator to elevator. At the MayPort (Mayville and Portland, N.D.) Farmers Co-op elevator grades include milling, No. 1, No. 2, No. 3, No. 4 and terminal or feed wheat.

The price impact of a difference between grades usually amounts to 5 to 10 cents. Feed wheat usually brings 70 cents less than the top market price.

Farmers also receive discounts for low test weight and damage, or they may collect premiums for high protein content.

This year, discounts for damaged wheat aren't as severe as previous years because the shriveled, scabby grain kernels didn't make it into producers' combine hoppers, says Dan Pinske, general manager for MayPort Farmers Co-op elevator.

Instead of discounts, farmers harvested less grain.

"It (scab) was so severe it (scab-damaged grain) didn't make it into the combine, so they lost a lot of bushels," he says.

ECONOMIC IMPACT

Those lost bushels affect producer's profits and the entire region's economy.

Elevators profiting on volume have been hit in the pocketbook as scab reduces the region's wheat yields.

"If we start knocking off 30 to 40 percent of the potential (crop), it's a huge income loss," Pinske said.

A study recently done by Demcey Johnson and George Flaskerud, both of North Dakota State University's Agricultural Economics Department, shows scab caused a total economic impact of \$2.875 billion from 1993 to 1997. That's a combination of a \$934 million direct impact and an indirect impact of \$1.941 billion.

Producers in Minnesota saw a 33 percent loss due to scab in 1993. This year, the loss is expected between 12 percent and 18 percent in the northwest valley area of Minnesota, says Roger Jones, Extension plant pathologist at the University of Minnesota.

That loss is comparative to the direct impact of losing one year's entire wheat crop, Fisher says.

The total economic impact of spring wheat production on the region would be about \$3.96 billion, using last year's production of 313.5 million bushels multiplied by an average seasonal price of \$4.10, a plus a "multiplier" effect. Durum, at 79.4 million bushels times the seasonal average price last year of \$4.40, plus the multiplier effect, equals roughly \$1.08 billion. All barley, at 143 million bushels, times an average seasonal price (average of feed and malting) of \$2.45, plus the multiplier effect, also is equivalent to about \$1.08 billion.

The scab epidemic has made research efforts a main focus to get the wheat industry back in the black.

But, that takes money.

Scab has become a more prominent issue since 1993 and was the reason for a visit by the newly appointed U.S. Department of Agriculture undersecretary for research, economics and education, Miley Gonzalez.

The North Dakota Wheat Commission and other state grain commissions and councils also are making research a priority when preparing budgets.

The North Dakota Wheat Commission has about \$2.4 million to spend this year. If esti-

mates are correct, and the wheat harvest is 100 million bushels lower, the commission will have \$800,000 less than last year. The commission's budget comes from an 8/10 of a cent per bushel checkoff.

But, commissions and councils can't shoulder the entire research effort, either.

Attempts at gaining more federal dollars for research are slowly gaining strength in Washington. About \$1.2 million in federal funding is planned for 1998.

STOPPING SCAB

Instead of battling the problem individually, states also are teaming up to stop scab.

Minnesota, North Dakota, South Dakota and Canada joined forces in 1993 after the Minnesota Association of Wheat Growers organized a scab symposium.

A 12-state scab initiative, which includes the Dakotas and Minnesota, also was initiated a few years ago.

"The fact that it affects other wheat is, in a way, a blessing in disguise because it becomes a national problem," Wiersma said.

One of the key research tasks is finding varieties that resist scab.

"Variety shifts have cut the disease levels in half," Jones said.

Most of the varieties used by producers existed before the epidemic hit, and some new varieties have proven to be less susceptible. Barley has not made variety changes to date, but varieties on the horizon look promising.

For a variety to be successful, resistance would need to be twice the current resistance level, Jones says.

"I have a lot of confidence in our scientists, but it's not going to be overnight," Fisher said.

In order to solve the scab problem, the industry needs to focus on more than resistant varieties.

Although controversial, different residue practices, such as plowing, may help destroy scab inoculum.

The only way to prove it is by plowing the whole valley, which is unlikely, Wiersma says.

"Producers need to look at their residue programs. Simply relying on genetic resistance, we are going to have a difficult time resolving this problem," Jones said.

Change in rotation practices and alternative crops also are options, but they alone cannot solve the problem, either.

"Rotation has an impact, but it's marginal," Wiersma says.

OTHER CROPS

Alternative crops, such as oilseeds and beans, face market uncertainty because of overproduction. Many producers have decreased wheat acres as much as possible and are trying other crops.

"Producers are looking for every alternative they can, and that's understandable considering the circumstances. (However) those markets are easily saturated," Fisher said.

Many producers also are considering planting winter wheat, but it also can be attacked by scab if excessive moisture comes at the wrong time, Jones says.

And there simply is not a large enough variety of crops to choose from in the northern valley.

"There aren't enough specialty crops to tide us over. We don't have the luxury of the southern areas," Loeslie says.

Besides, producers who use wheat as a rotation for other crops, such as sugar beets, can't change their rotation plan.

Sugar beets are planted on a field once every three years, with four years being optimal, said Mark Weber, executive director of the Red River Valley Sugarbeet Growers.

Like the flood that hit Grand Forks this spring, this river of scab will never be forgotten, Loeslie says.

"It's not a healthy situation for the region."

But the producers in this area will not go down without a fight. Loeslie is confident the dedication and work of a team effort will prove to be successful in the long-term.

"I hate to give up. Wheat has been too good to us for too long." ●

TRIBUTE TO DR. MARY LYNN TISCHER

● Mr. WARNER. Mr. President, I rise today to thank Dr. Mary Lynn Tischer, who leaves my Washington office after almost a year of ceaseless effort as a Transportation Fellow. As we sought to develop consensus on the ISTEA II legislation, Mary Lynn provided superior analysis and assistance, working extensively with her counterparts to gather a large coalition of support for this complex piece of legislation.

Mary Lynn worked with Virginia Secretary of Transportation Robert Martinez and Virginia Governor George Allen as they sought to steer the Step 21 legislation at the State level. In her role as the Administrator of the Office of Policy Analysis, Evaluation, and Intergovernmental Relations at the Virginia Department of Transportation [VDOT], Mary Lynn served the Commonwealth of Virginia admirably. She has worked on travel forecasting, analysis of travel behavior and mode choice, model development, goods movement, and trucking issues. Mary Lynn was chosen to manage the congressionally mandated Heavy Vehicle Cost Allocation Study, the Study of the Feasibility of Designating the Interstate for Larger and Heavier Vehicles, and several studies on state regulation of motor carriers.

Mary Lynn received her Ph.D. in political science from the University of Maryland, with an interdisciplinary major in social psychology as well as a specialty in American government and public policy. Dr. Tischer also serves on the Group I Council of the Transportation Research Board, and is active on several committees and task forces of TRB and AASHTO, including the Reauthorization Task Force.

Mary Lynn is widely recognized as an expert in her field. She was chairman of the International Association of Travel Behavior, editor of *Transport Reviews*, and on the editorial board of *Transportation*. Her proficiency has led to her participation on steering committees for national and international conferences, most recently for Household Travel Surveys and Uses of the Decennial Census. She has given numerous papers, and is extensively published in the transportation and marketing fields.

Mary Lynn has been tireless in her work here in my Washington office. Her cheerful demeanor, quick wit, and skillful assistance and intelligence will be sorely missed. I extend my warmest regards to Mary Lynn, and wish her all good luck in her future endeavors. ●