

THE NORTH DAKOTA **Soybean** GROWER MAGAZINE

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The Soybean Market Saga

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On the cover

North Dakota farmers once again demonstrated their resilience by battling difficult conditions during the 2019 growing season. Excess rainfall in some areas, too little in others and a challenging market for all meant growers had many cards stacked against them. Despite those hurdles, North Dakota soybean farmers have never lost their determination to grow quality soybeans to feed the world.

—Photo courtesy of Wanbaugh Studios



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S taying Involved

Legislative Director Emeritus Scott Rising always said, "If you want to be able to tell the story, you need to be at the table." For the policy side of the North Dakota Soybean Growers Association (NDSGA), I have found this statement to be true in the sense that staying involved with the issues and the decision makers allows you to have not only an identity, but also, to some degree, that seat at the table. Therefore, we attempt to follow so many threads that affect agricultural producers.

These past few months have included meetings that covered water quality, transportation, land reclamation from saltwater spills, the automatic trespass issue and workforce development. Two issues, transportation and workforce shortages, have been taken up by the Greater North Dakota Chamber of Commerce (GNDCC) in the form of committees which are attempting to make a difference in the state.

Actions on transportation have resulted in an ongoing effort to form a Transportation Coalition which would include an initial membership fee of \$1,000 and annual dues of \$500 going forward. The idea is to identify which transportation issues can and should get attention and, then, to create policy ideas which could be proposed as bills. Sharing information with legislators, the Department of Transportation and various users would also be a big part of transforming these ideas into policy.

While the construction, manufacturing, tourism and retail sectors are discussing these matters, we feel it is important for agriculture to be involved, and we aspire to be at that table as often as practical. The same is true of workforce development.

North Dakota has trouble finding qualified help for many jobs which affect agriculture, so in the past, the NDSGA has testified in support of bills that would help guide students into the technical fields which are badly needed in our industry, such as information technology, welding, mechanics, etc.

The initial chamber meeting in September mentioned that, perhaps, communicating with both K-12 and higher education to help new laws enacted last session would be more effective while exploring and discussing policies for the 2021 session. With smart people here and in other states who have good ideas, helping the GNDCC with input and effort can pay off down the road.

No matter the issue, it is relatively easy to generate good ideas, but you may have noticed, and I have learned to my great frustration, that implementing change statewide can be very slow. Consensus needs to be built through education and discussion, and then marketing or selling the idea, even one that might be aided by law. For example, think about the societal changes regarding seatbelts and smoking. The changes take a lot of time and effort. How do we properly fund transportation as the national support levels diminish? Who pays when we need to give students who are going into careers which are helpful to agriculture a break in tuition? Often, funding is where good intentions and ideas run into defeat, so that is where discussion with legislators and other governmental agencies becomes crucial.

Following interim committees is important in order to understand what legislators are thinking. These meetings become a place where people from



Veteran lawmaker and educator Phil Murphy is the NDSGA liaison between legislators and farmers.

different agencies and industries (such as agriculture) can convey to the legislators what their status and needs may be.

As mentioned in the last magazine, the Agriculture and Transportation Committee will be studying grain inspection and will begin its work during the first week of October. The Natural Resources Committee has begun its work to see what can be done with the ever-present issue of posting laws. The Energy, Development and Transmission Committee will be looking at what has taken place for new practices which, hopefully, can return some land to production after having suffered through salt/production water spills. I was on that committee in 2013 when members encouraged North Dakota State University and the University of North Dakota's Energy and Environmental Research Center to work together in order to get the land back into shape. Maybe these institutions have a viable solution. As mentioned earlier, these changes take time.



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vening the Score

In a perfect world, most farmers I know would love nothing more than to just be able to focus on growing and marketing their crops. How enjoyable it would be to concentrate on caring for crops and livestock without worrying about other distractions such as regulations, trade issues or legislation. Those issues would be handled by someone else, and we could just do our thing.

Unfortunately, that's not the world in which we live.

As farmers, we contend with many issues; some things are under our control while many others are not. It's easy to fall into the trap of thinking that someone else will worry about those challenges while we do what's comfortable.

At a recent North Dakota Soybean Growers Association (NDSGA) board meeting, we discussed legislation from the most recent legislative assembly that would automatically post private land as no trespassing. The NDSGA supported the legislation because board members felt that it protected private landowner's property rights. The bill narrowly failed.

While talking about the no trespass legislation,

we learned that one North Dakota lawmaker heard from approximately 300 constituents who opposed the bill. Not a single person spoke in support of the bill to this legislator. Not one.

I realize that, while agriculture is one of North Dakota's most important economic drivers, farmers are a minority population. Still, this 300 to 0 tally is a stark illustration that we cannot expect someone else to speak on our behalf. We must be willing to let our voices be heard on issues that are important to us.

The NDSGA works diligently on behalf of North Dakota farmers. NDSGA representatives are at the capitol and at hearings, hosting legislators and working with administration officials, while actively operating our own farms. As an organization, we've been successful on many fronts to advocate for our fellow farmers. However, there's nothing that will influence a lawmaker more than a call, an email or a personal conversation with a constituent.

Even though we'd probably rather be tilling a field or moving grain, we have to be willing to take a few minutes of our time to call or email our representatives in order to voice our concerns. It



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may be a step out of our comfort zone. A 300 to 0 deficit is proof that there are plenty of people willing to make those connections, but they may not have our interests in mind.

It's up to us to even the score. We can't depend on someone else to do it for us.



Membership Application

To join ASA and the North Dakota Soybean Growers Association, complete and return this application with payment.

Name: _____

Spouse: _____

Date of Birth: _____

Farm/Company Name: _____

Address: _____

City, State, Zip: _____

County: _____

Phone: _____

Cell: _____

Email Address: _____

Occupation (Please check all that apply)

☐ Farmer ☐ Retired ☐ Agribusiness

☐ Finance ☐ Elevator ☐ Other

Do you currently grow soybeans?

☐ Yes ☐ No

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Do you raise:

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Right Where He

Belongs



Logan Ferry has never really wavered in his life's goal. From an early age, it was obvious that farming was in

his future.

"I've been 100 percent positive about that my whole life," Ferry explains. "I bought sugarbeet stock while I was in college. Both sides of my family farm, and farming is what I know. That's been pretty clear to anyone who knows me."

After graduating from high school, Ferry attended North Dakota State College of Science in Wahpeton to study farm management before returning to the family farm.

Roots to the land run deep in the family because Ferry is the fifth generation on the family farm near Manvel, North Dakota, joining his father and uncle in the operation. Over 125 years ago, the family homesteaded the land located a mile west of the Red River.

Today, the farming operation is very diversified, and it includes wheat, barley, soybeans, sugarbeets,

edible beans, corn and sunflowers. Logan and his dad also run a cow-calf operation.

"We've got a little of everything, which keeps it fun," Ferry says. "It makes every day different."

Full Immersion

Ferry says that he is interested in all aspects of the farm, but he is intrigued by the promise of precision agriculture and reduced tillage.

"Operationally, I would like to

work toward more minimum or strip till, and incorporate cover crops, both for cattle and soil conservation," Ferry explains. "It creates a simplicity. You don't have to make two tillage passes, instead maybe just one or sometimes none. With cattle in the mix, I think cover crops can bring something back to the land."



Manvel farmer Logan Ferry knew early on there would be no better place for him than on the family farm.

Difficult economics in agriculture are making conditions challenging for farmers nationwide. Low prices and trade disruptions are limiting profit opportunities and chewing up farm equity. Ferry is moving forward while keeping an eye on the bottom line.

"These are challenging times for young farmers. Farming is a tough business to get into, and conditions now might be discouraging some young guys from getting in, and the last year has been off the charts," Ferry says. "I just have to keep pushing. I can't worry about what's out of my control. My goal is to market the best I can, raise the best crop I can and not go crazy on the spending."

In addition to his own experience and education, Ferry can draw upon the resources of his father and uncle who survived treacherous economic times themselves.

"My dad and uncle went through the challenges of the 1980s and the good times in 2012," Ferry says. "The approach they taught me was

to keep it even keel. If you can make it through the tougher conditions, that broadens your perspective and prepares you for future situations."

Although current conditions are challenging for growers of all ages, Ferry is still enthusiastic about what the future holds for him and other North Dakota farmers.

"With these uncertain markets, we may see some farmers get out of the business," Ferry says. "We're in a very fragile time, but at the same time, with advancements like precision agriculture, I think there's a bright future."

Emerging Young Leader

In addition to his farming responsibilities, Ferry is a director for the North Dakota Soybean Growers Association (NDSGA). He was first connected to the NDSGA when he was selected to participate in the American Soybean Association and Corteva Agriscience's Young Leader Program (formerly called the



Ferry has moved from a young leader development program into a seat as NDSGA director to learn more and contribute to the soybean industry's advancement.

DuPont Young Leader Program).

The Young Leader Program enhances participants' skills through leadership, communication, and issues-based training while building a strong peer network and generating increased success for their businesses and communities. Many graduates of this training program, including Ferry, assume leadership roles with their state and national soybean associations.

"The Young Leader Program was a good stepping-stone to become more aware of what's going on in the industry," Ferry contends. "It's a golden opportunity."

Ferry has used the experience he gained as a young leader and NDSGA director to help himself as a farmer and to benefit fellow soybean growers.

"There's so much more that goes on in the industry that most people never see. Serving on the board broadens my perspective and helps me as a farmer," Ferry says. "I get to learn while promoting the benefit of our industry, which is important for North Dakota."

Because the NDSGA works on policies which affect North Dakota farmers, Ferry says that he's learned a lot about the need for farmer involvement and how that participation works in the legislative process. Equally valuable to Ferry are the connections that he's made with

fellow soybean leaders.

"I enjoy meeting other farmers. A lot of other board members are about the same age, so not only do we hear about the issues, but we get to bounce ideas off each other. You don't always get that," Ferry says. "But, it's not a hayride. I'm still newer to the board and still learning."

Long Haul

Having a hand in supporting agriculture is an important motivator for Ferry, especially because he has no intention of doing anything else.

"My goal is to farm as long as I can," Ferry says. "It's never crossed my mind to do anything else. Farming is what I want to do because that's what makes me happy."

Ferry says that he enjoys working with his dad and uncle and that he appreciates how most of his extended family also lives nearby. That family connection to the land, both now and for the future, is part of why Ferry feels completely at home right where he is.

"I get to work around my dad and uncle every day. We get along well, so it's awfully rewarding," Ferry says. "Our family farm has been in the same spot since 1874. That means a lot. We're doing the right things for our farm, so it will be available to the sixth or seventh generations if they want to keep it going."

—Story and photos by Daniel Lemke



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Shaping Our Future

I'll admit that, before I began serving on the North Dakota Soybean Council (NDSC), I wasn't fully aware of everything the organization does. I knew about the NDSC, but my knowledge only scratched the surface of the council's involvement and influence.

Years ago, the farmer who represented my district and I served on another board together. He approached me about considering the NDSC board. I gave it a try because the Council's mission sounded interesting to me and worth my time.

I was right.

After serving on the NDSC board for six years, I now have a broader appreciation for the work that the Council and staff do to benefit North Dakota farmers. Whether it's supporting research, working to develop new soybean uses or cultivating new markets, I have learned a great deal about the effect that the checkoff makes for North Dakota and on my farm.

One thing that I've learned from my time serving the NDSC is the value of personal relationships. Meeting face to face with our customers, both domestic and international, is an eye-opening experience and a vital part of doing business. Building soybean markets is often done on a very personal level. We and our customers both benefit when we can build a mutually beneficial partnership. The

Council recognizes this and works hard to form and to strengthen connections with the people who want our soybeans.

Before I was elected to the board, I didn't realize the difference that the board makes for soybean farmers. We can take great pride in what we do because it's an important job. In addition to directing the investment of North Dakota soybean checkoff funds, we host trade delegations with current and prospective customers. We meet with our clients to build relationships and help them understand the care and commitment that we put into growing high-quality soybeans.

To a person, NDSC directors are involved because they realize that we, as soybean farmers, are all in this together. Making decisions and supporting efforts that benefit North Dakota farmers assist all of us. The board has a diverse set of backgrounds and experiences that meld into one mission of helping North Dakota become a premier soybean supplier.

My time on the NDSC is limited. My term ends in March of 2020, so there will be an opportunity for someone new to step in to learn and to help grow the state's soybean industry. In fact, there are several positions open for North Dakota farmers who want to have a hand in shaping their future.

In 2020, the NDSC will seek four soybean farmers from the following districts to serve on its board



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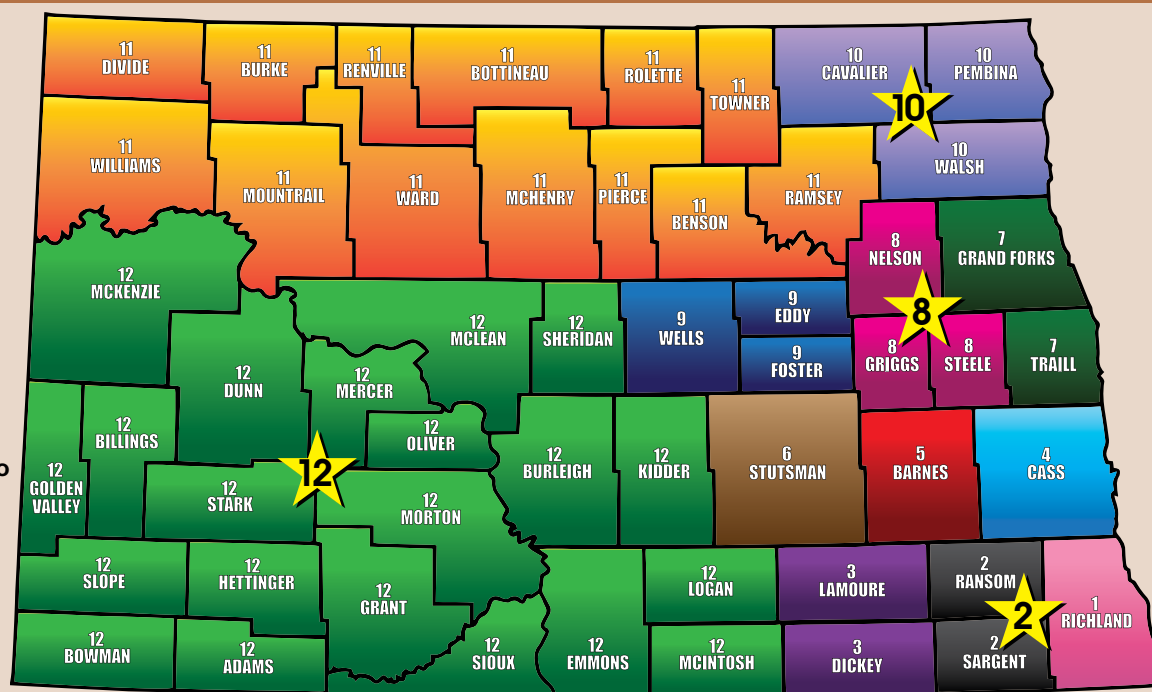
of directors:

- **District 2:** Ransom and Sargent Counties
- **District 8:** Nelson, Griggs and Steele Counties
- **District 10:** Cavalier, Pembina and Walsh Counties
- **District 12:** McKenzie, Dunn, Billings, Golden Valley, Slope, Bowman, Stark, Hettinger, Adams, Mercer, Oliver, Morton, Grant, Sioux, McLean, Burleigh, Kidder, Logan, Sheridan, Emmons and McIntosh Counties

"I urge you to consider how you could help shape the state's soybean industry by participating in NDSC's election process by either nominating yourself or a fellow soybean farmer in your area. I'm glad that I did, and I know you will be, too."

—Perry Ostmo

More specifics about the Council elections will be shared in the December issue of the North Dakota Soybean Grower.





Meet Our New Intern

Marissa Tuhy joined the North Dakota Soybean Council (NDSC) at the end of August. This fall, Tuhy is a junior at North Dakota State University (NDSU) pursuing a double major in Management Communications and Agricultural Economics. She is involved with the Saddle and Sirloin club and Phi Eta Sigma Honor Society as well as serving as the president of the NDSU Agriculture Collective and as an ambassador for the College of Agriculture, Food Systems and Natural Resources.

“NDSC is proud to be able to offer an internship to students in North Dakota who are interested in learning more about the soybean industry and preparing for a career in agriculture,” says NDSC Executive Director Stephanie Sinner. “We are delighted to have Marissa as part of our team this fall, and we are looking forward to the expertise she will bring to our outreach and education efforts for North Dakota soybean producers.”

Tuhy grew up in South Heart, North Dakota, and was actively involved with 4-H and Future Farmers of America (FFA). These organizations developed and shaped Tuhy’s passion for the agriculture industry and serving others. She showed sheep and competed on many judging teams, including meats, land, range and livestock. Tuhy strengthened her leadership skills by serving as a state 4-H ambassador and the North Dakota FFA state secretary.

“I am excited to dive into my work as the marketing/communications intern for the NDSC,” says Tuhy. “I look forward to working alongside dedicated professionals who share my passion for agriculture while developing my communication skills and gaining insight into other areas of our industry.”

—Story by staff, photo by Betsy Armour



Marissa Tuhy

Looking to Diversify with Livestock?

A strategic decision facing today’s farmers can be whether to specialize or to diversify their farming operation. The following is a brief, high-level starter guide to consider developed by the North Dakota Livestock Alliance (NDLA) to help North Dakota farmers plan for incorporating livestock into their crop farms.

NDLA Best Practices for Successful Permitting

- Contact the NDLA first to help provide support throughout the permitting process.
- Be diligent when selecting future livestock facility sites.
 1. Does it meet the applicable zoning set-backs from neighbors and communities?
 2. What is the proximity to high-traffic or recreational areas?
 3. Where are the aquifers and other waters?
 4. Swine producers: does the distance to other swine operations comply with industry biosecurity measures?
 5. Distance to utilities such as water and electricity.
 6. The NDLA strongly recommends a pre-permit site review, a free service provided by the North Dakota Department of Environmental Quality (ND DEQ).

7. Consult with an environmental engineer during the site-selection process.
- The NDLA will assist with developing and executing a community outreach plan.

Livestock Zoning and Permit Application Process

- Access the applicable zoning authority.
 - o Call the ND DEQ or visit its website to determine if the local county or township has zoning authority. The NDLA strongly recommends starting the application process at the local level.
- Typical permitting process may vary by location. For guidance on this process, contact the NDLA for more information.
- Once the local level is complete, begin the state permit-approval process.
 - o Complete the North Dakota application for approval of a livestock waste system.

Recommendations from the North Dakota Department of Environmental Quality

- Use an environmental engineer who is registered in North Dakota; a list can be provided upon request.

- Choose your site with the utmost care.
 - o Contact the ND DEQ for a pre-permit site review.
- Contact the NDLA for assistance with community outreach.

Following successful permitting and construction of a new livestock operation, the NDLA will offer assistance for planning and hosting an open house to celebrate this new addition to North Dakota’s livestock industry.

Financial Assistance for North Dakota Livestock Producers

There are multiple financial incentives available to livestock producers across the state. Contact the North Dakota Department of Commerce’s Office of Economic Development and Finance for details at (701) 325-5300 or www.business.nd.gov.

For more information, contact NDLA Executive Director Amber Boeshans at (701) 712-1488 or amberboeshans@ndlivestock.org. Visit the NDLA website at www.ndlivestock.org.

NDLA is a nonprofit, non-partisan organization that assists farmers, ranchers and communities with the development or expansion of the livestock industry.

—Story by staff



Changing Weed Management Behaviors

Two years ago, a bus tour program to Nebraska in order to learn more about Palmer amaranth left

North Dakota State University (NDSU) Extension Agronomist Tom Peters fearful about the future of crop farming if the weed ever came to the state.

"I was scared to death about our prospects if Palmer amaranth ever got established in North Dakota," Peters recalls.

Since that 2017 program, Palmer amaranth was discovered in five North Dakota counties, although all known stands were small and were controlled. A follow-up program to Nebraska in August 2019 left Peters a bit more hopeful about a future with Palmer amaranth.

"This time, I felt we could tackle the weed if an integrated plan could be implemented," Peters says. "There's hope."

Creating Awareness

The North Dakota Soybean Council awarded NDSU Extension a grant for travel to the University of Nebraska West Central Research and Extension Center at North Platte to learn how Palmer amaranth is changing the way corn and soybeans

are grown. The mission included NDSU Extension staff, members of the North Dakota Weed Control Board, farmers and ag retailers.

"Behaviors in Nebraska have changed since 2017," Peters says. "Farmers there saw Palmer amaranth control as strategically important. They have zero tolerance for weed escapes."

Peters says that the delegation visited an area of Nebraska that primarily used a no-till approach which

took tillage from the equation as a management tool. Farmers bulked up on their cultural practices and didn't just rely on chemicals. Growers incorporated narrower row spacing, higher plant density, crop rotation, cover crops and field-edge control into their weed management plan.

"The farmers who understood the situation and changed their behavior used a continuous weed-management plan. Their practices were implemented in fields over the course of years,"



Controlling every Palmer amaranth plant is important because each weed can produce a prolific amount of seed.

Peters says. "Farming practices in 2019 that are coupled with practices in 2020 will, ultimately, pay dividends in 2021."

Peters says that he saw areas where strategic management plans were working well. Those efforts included starting with clean fields using postemergence burndown herbicides. Growers then applied soil residual herbicides at multiple time points beginning with a pre-emergence application and followed by early post-emergence application. Finally, growers finished by using a post-emergence herbicide. Farmers applied a dicamba product or Liberty as the closer, typically just before row closure. If needed, weed escapes were pulled by hand. Those chemical programs were complimented with cover crops seeded after wheat, corn or soybean harvest to discourage later-germinating Palmer amaranth.

"That's the recipe we're going to have to follow," Peters explains. "We can't allow Palmer amaranth to get established."

Peters says that Palmer amaranth can be expensive to control. Given the current farm economics, farmers likely can't spend an exorbitant amount on weed control. In



Farmers can quickly lose fields infested with Palmer amaranth if not managed and weeds controlled when they're small.

Nebraska, if Palmer amaranth is established, Peters says that farmers may need to spend as much as \$100 per acre on weed control.

Stutsman County NDSU Extension Agent Alicia Harstad took part in the Nebraska program to learn about research being done by the University of Nebraska and to see how farmers were coping with Palmer amaranth.

"We saw Palmer that was growing taller than corn," Harstad says. "In that same cornfield, there were also 4- to 6-inch-tall Palmer plants growing under the canopy."

Like Peters, Harstad knows that North Dakota farmers need to be proactive about weed control. She says that farmers are already struggling with herbicide-resistant kochia and that waterhemp is becoming increasingly difficult to control.

"If we are proactive about weed control, we can prevent complete field disasters. If we are reactive about weed control, it will be a losing battle," Harstad says.

Long-Term Solution

Agronomists and weed experts know that successful weed management will involve long-term plans, not just choosing which herbicides to spray that year.

"It could be a 3- or 4-year plan that includes crop rotations and cover crops, then think strategically about

herbicides," Peters says. "It's a long-term view, rather than a year-by-year view."

"We also need to think about rotating herbicides within the whole crop rotation, not only within the same growing season," Harstad says. "For example, take a look and see what herbicide modes of action you are using in your soybeans this year, and try to avoid using the same ones in your corn the following year."

Harstad says that farmers need to think beyond just herbicides and consider other factors that affect weed control, such as spray quality, using the right adjuvant, getting the crop to canopy faster and other production practices.

"There isn't an 'easy' button when it comes to weed control," Harstad adds.

While Palmer amaranth has a reputation as a formidable weed, Harstad encourages farmers to apply the same approach to managing a much more common pest.

"I am glad people are looking for and are worried about Palmer," Harstad says, "but we need to make sure to not forget about waterhemp."

Whether for waterhemp or Palmer amaranth, commitment to diversified management practices will be a determining factor in a farmer's ability to control these troublesome weeds.

—Story by Daniel Lemke, photos by NDSU Extension

A Noxious Guest

Palmer amaranth was added to the list of North Dakota's noxious weeds in early 2019, becoming the 13th plant listed. Landowners and operators are required to do whatever they can to control the spread of noxious plants because those plants can be injurious to the land, people and livestock.

Stan Wolf, Cass County weed officer, is one of the people responsible for enforcing the state's noxious-weed laws. Weed officers are the first line of defense on all grasslands and rangelands in North Dakota. Wolf credits NDSU Extension with raising awareness about Palmer amaranth.

"Farmer owners and operators know about Palmer," Wolf says. "They may not know exactly what it looks like, but they're doing a good job of looking. The main thing is, if they see something that's not normal, get it identified. Work with your agronomist, Extension or a weed officer, someone who can identify what the plant is."

Wolf is concerned about Palmer amaranth not only on cropland, but also in other areas such as fencerows, pastures and shelter belts. He says that, if those areas aren't controlled, weed seed is free to move around via water or birds. Of particular concern to Wolf are hunting food plots. He says that these areas are typically in hidden spots, out of sight from most people, which make them attractive to wildlife. Those areas could harbor noxious weeds such as Palmer amaranth, especially if the plot was seeded with products purchased from other states. Two of Minnesota's Palmer amaranth infestations originated from conservation planting seed and contaminated cover-crop seed.

"Who knows where that seed came from?" Wolf asks. "Any seed source is suspect if not produced locally in areas known to be Palmer amaranth-free."

Noxious weeds listed in North Dakota include

- Absinth Wormwood
- Canada Thistle
- Dalmatian Toadflax
- Diffuse Knapweed
- Houndstongue
- Leafy Spurge
- Musk Thistle
- Palmer amaranth
- Purple Loosestrife
- Russian Knapweed
- Saltcedar
- Spotted Knapweed
- Yellow Toadflax



Palmer amaranth control is going to require an aggressive, multi-pronged approach to keep fields clean, according to NDSU researchers.



Managing the Unplanted

Saying that farmers across North Dakota and nationwide faced challenges during the 2019 growing

season is an understatement. Wet conditions through much of the Corn Belt resulted in an estimated 19.4 million acres of prevented planting according to the USDA Farm Service Agency (FSA). The FSA

reported over 830,000 prevented planting acres in North Dakota alone.

Just because farmers were unable to plant crops in those areas doesn't mean management stops. In fact, unplanted areas require additional at-

tention for weed control and nutrient management.

Unplanted acres can be the perfect environment for weeds to grow unchecked. If the fields are dry enough to allow implements in, farmers could manage weeds by spraying, tilling and establishing cover crops.

"A lot of prevent plant acres in North Dakota have been tilled," says Joe Ikley, North Dakota State University (NDSU) Extension weed control specialist. "If that tillage was done in late July and fields were not worked again or planted to cover crops, there will likely be some weed management issues."

Weed management experts have long advised farmers to watch for weed trouble spots or escapes while fields are harvested. Noting the type of weed and the location can help growers formulate next year's management plan. That practice is still recommended for planted and unplanted fields.

"Be aware of what weeds went to seed to prepare for next year," Ikley says. "What goes to seed will be an

issue next year."

"Prevented planting provides the perfect conditions for certain weeds to enjoy a good seed bed," explains crop consultant Sarah Lovas. "If those weeds, like waterhemp or ragweed, are difficult to control or are herbicide resistant, areas where farmers took prevented planting provide the perfect conditions for them to grow."

Spreading the Word

Ikley participated in a series of meetings across North Dakota to help farmers address concerns with prevented planting acres. He says that the main thing farmers need to understand is what weed species have gone to seed.

"The biggest thing is to know the weeds that have seeded and then be strategic. If it's waterhemp, that weed is easier to control in corn than in soybeans," Ikley says, "so it's important to know what's in the seed bank because it could affect next year's rotation."

Ikley says that waterhemp is likely the main weed concern, but there could be other weeds that farmers will need to control, such as ragweed or kochia. He recommends using post-harvest down time to plan for



Crop consultant Sarah Lovas says acres that went unplanted in 2019 are likely to be the most problematic again in 2020.



next year based on what farmers learned about their weed populations this fall.

Lovas adds that there could be rotation issues with herbicides and other management options, so farmers should keep that in mind when planning for next year's crop. Growers also need to pay attention to field edges and the areas around prevented planting acres.

"Check the edges because weeds can creep in from field edges," Lovas says.

Cover Crops

Where possible, getting a cover crop established on prevented planting acres is the preferred management option. If those acres don't have a cover crop established, they'll be most likely to be prevented planting again next year.

Planting cover crops helps to suppress weeds. Ikley says that, if grasses such as cereal rye are established, there is a good scenario for controlling broadleaf weeds. Broadleaves are easier to control in the fall, so

spraying 2-4D or dicamba herbicides will kill most weeds without harming the rye.

Established cover crops will do more than manage weeds. The crops also utilize some of the excess water that kept farmers from getting the crops planted in the first place.

"Cover crops are a good management tool for both water usage and weed suppression," Lovas says. "Those acres that were wet this year typically will be the last ones planted again next year, so using up that water is critical."

"Without that cover crop to utilize the excess soil moisture, the possibility of prevent plant could arise again, especially if the snowmelt and rainfall we receive next spring is close to normal," says Angie Johnson, the NDSU Extension agent for Steele County.

Getting a cover crop established on prevented planting acres, especially in areas with high water tables, can be helpful to manage soil salinity, Johnson says.



Angie Johnson, NDSU Extension agent in Steele County, assesses the overall health of a soybean field.

"Salts can be an issue in prevent plant acres as well. In areas with high water tables, salts move through capillary rise up towards the topsoil, causing challenges to raising a crop," Johnson says. "Lowering your groundwater table by incorporating cover crops on can be an option to help utilize water and keep the salts down in the soil profile."

According to Johnson, another consideration that gets overlooked with prevented planting acreage is soil micro and macro activity. With no live cover, the soil has no roots present to help create pore space for water to infiltrate into the soil profile (instead of ponding on the surface). Macro activity, such as earthworms, also create pore space for water movement down the soil profile, and earthworms need plant material to feed on in order to survive.

"Our good microorganisms also start to show a decline when there is reduced plant life present in our soils," Johnson explains. "This can be visually assessed by looking at your soil aggregates."

Fallow Syndrome Concern

Lovas says that farmers need to be on the lookout for the potential to have fallow syndrome in prevented planting acres. Mycorrhizae form a symbiotic relationship with plants and help the plants take up phos-

phorous. Not all plants host the soil mycorrhizae, so fallow syndrome can occur following a non-host crop, such as sugarbeets, or if the land was not planted at all.

Symptoms of fallow syndrome can be corn plants that look purple because they're not getting the needed nutrients from the soil.

"If farmers plan to plant corn into prevented planting acres next year, they will need a good fertilizer program, and they may need to add phosphorous and zinc," Lovas says.

Lovas explains how growers will need to manage their phosphorous program so that the nutrient is available for crops right away in the spring. While fallow syndrome is most common in corn, Lovas says that small grains can suffer from it, too, and may require additional fertilizer.

Using cover crops can also help manage fallow syndrome. Lovas says that getting cover crops planted early in the summer gives the seed time to become established, giving the roots a chance to explore the soil. A diverse cover crop mix is best to help develop those mycorrhizal relationships.

Visit with your local NDSU Extension agent if you have questions or want additional information.

—Story by Daniel Lemke, photos by Daniel Lemke and Wanbaugh Studios



NDSU Extension Weed Control Specialist Joe Ikley says farmers need to know what weeds have gone to seed on their prevented planting acres to properly manage next year.



Twenty-Three Participants From Across the World Attend NCI's INTSOY Course

The Northern Crops Institute (NCI) hosted 23 participants from six different countries for the

INTSOY course. The five-day course ran from August 12-16, during which time the participants had the opportunity to travel to Minnesota, North Dakota and South Dakota in order to learn about each facet of the soybean industry.

The course began on Monday, August 12, in Minneapolis, Minnesota. Participants visited Buhler, Inc. to learn more about the equipment and technology used to extrude and to process soy products. The group then traveled to the "Minnesota Millennial Farmer," Zach Johnson's, fifth-generation farming operation. While visiting the farm, participants had the opportunity to see farm machinery, to hold soybeans directly from the grain bin and to stand in soybean fields. During the visit, one participant commented, "I have worked in the soybean industry for six years, and this is my first time holding soybeans." Following these two visits, the group departed for Fargo, North Dakota.

On Tuesday, August 13, participants arrived at NCI to take part in lectures and discussions as well as hands-on experiences at NCI's labs and feed mill. Linda Funk, executive director of the Soyfoods Council began by sharing details about trends in new soyfoods. Dr. Zhisheng (Zach) Liu of NCI provided a brief introduction about soy foods and soy chemistry. Participants then got to work in NCI's laboratory with pilot-scale production of tofu and soy milk. Fol-

lowing this hands-on experience, the group heard from Eugene Dust, a senior extrusion technologist at Buhler, Inc., about the science and practice of extrusion and all the possibilities it provides. The day concluded with the group in NCI's laboratory learning about the pilot-scale production of textured soy protein.

Wednesday, August 14, was another full day for participants. The day began with a presentation from Anita Florido of Zeeland Farm Services about functional facts of defatted soy flour. Following the presentation, NCI's Jena Bjertness led a lecture on the benefits of high-oleic soybean oil. Jon Stratford of Natural Products, Inc. lectured on full-fat soy ingre-

dients in food applications. Then, NCI's Nick Sinner spoke about soy in snack foods. Following Sinner was

Claire Schlemme from Renewal Mill who lectured on potential uses for okara in foods. Janeth Colina from Insta-Pro International concluded the day with a lecture and demonstration about extruded soy meal uses in



A participant who has worked with soy milk for six years holds soybeans for the first time while touring Zach Johnson's farm in Minnesota.



Participants receive hands on experience within NCI laboratories.



The INTSOY Course provided many opportunities to tour different operations within the soybean industry.

feed applications at NCI's feed mill. The group then departed Fargo for Brookings, South Dakota.

Thursday, August 15, began the group's first day in Brookings. The day began with a welcome to South

Dakota State University (SDSU) by the Dean of Agriculture, Food and Environmental Sciences, John Killefer, Ph.D. Participants then learned about functional soy proteins in processed meat applications and

saw a demonstration at the SDSU Meat Lab. The group enjoyed ice cream from the Davis Dairy Bar and then toured the Davis Dairy Plant. Following the visit to SDSU, the group took part in a lecture and discussion at McCory Gardens with Ariel Beverly, Ph.D., of DuPont Nutrition and Biosciences about the isolates and concentrates used to fortify drinks. The group then took part in a tour at Prairie AquaTech. The day concluded with a graduation dinner and reception at McCory Gardens.

The course concluded on Friday, August 16, by departing Brookings and touring TruShrimp in Balaton, Minnesota. The group's final tour took place at the Central Farm Service Elevator and Shuttle Loading Facility in Randolph, Minnesota.

The INTSOY course is one of the most diverse courses that NCI

offers. With the wide range of industry tours, hands-on experiences, and discussions and lectures with professionals, participants are able to see every aspect of the soybean industry. Along with these experiences, participants are able to see the thriving agriculture industry throughout the region and to learn about the processing of soybeans from field to elevator along with the various ways that soybeans and soy products can be utilized. NCI strives to provide the best educational experiences for its participants, ultimately connecting them to the global marketplace.

To learn more about NCI, or to view a list of future courses, visit northern-crops.com.

—Story and photos by Billie Lentz,
Northern Crops Institute

Harvest-Time Safety Tips May Not Be New... **But They Could Save Your Life**

Whether you're gearing up for your first soybean harvest or your 50th, now is a great time to pause and to consider the importance of farm safety.

Dr. Ken Hellevang, North Dakota State University extension specialist and ag engineer, has heard of way too many accidents related to grain bins and farming equipment. He says that there are precautions to take in order to help farmers avoid becoming a safety statistic.

"Grain entrapment is not a new topic, but one that's important to offer consistent reminders about," Dr. Hellevang says. "At the rate farmers are moving today, it's all too easy to get sucked into that bin, and once you're in, it's like quicksand, even at chest level."

To prevent an accident from occurring, Dr. Hellevang suggests that farmers turn off equipment before entering the bin.

"It's also wise to have a buddy around, someone to go for help, if

need be," he adds.

Grain bins were intended for the grain to be removed from the middle, but this situation isn't always a reality when farmers get busy.

"Removing grain from the sides of a bin can create a distortion in the loading, possibly causing the bin to collapse," Dr. Hellevang warns. "Farmers can prevent this by checking the manufacturer's recommendation and familiarizing themselves with

what a bin can tolerate."

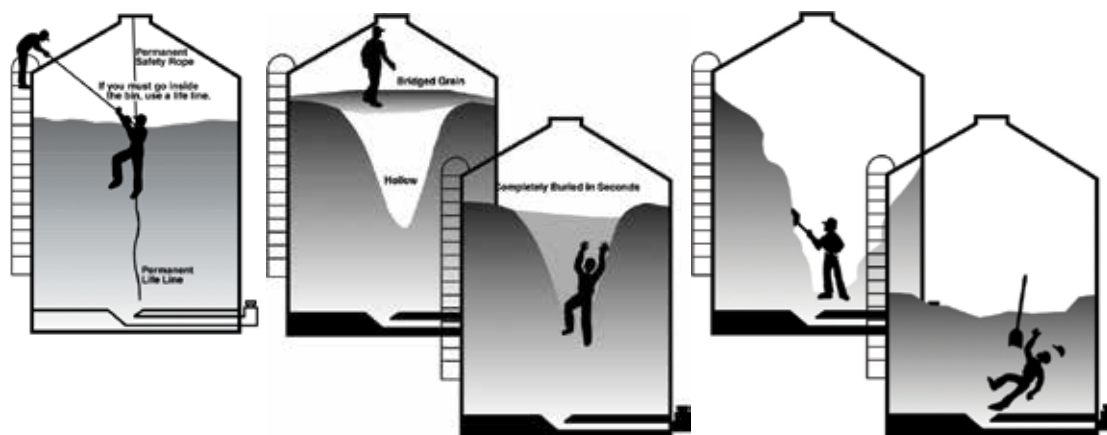
Bodily harm isn't the only danger facing farmers this harvest. In a wet year, mold and fungi can grow on plants, and that can cause respiratory issues. The good news is, once again, these issues are preventable.

"Farmers should wear a face mask to filter out mold spores and fine dust particles," Dr. Hellevang says. "Usually, the most protective ones carry an N95 rating."

Farm accidents are serious and contribute to agriculture being ranked as one of the most dangerous professions in America. By keeping safety in mind, farmers can greatly minimize these hazards.

"Make sure everyone around equipment knows what they should be doing and why they should be doing it," Dr. Hellevang advises.

—Story courtesy of United Soybean Board, graphics by NDSU Extension



THE SOYBEAN MARKET SAGA



A decision by President Trump to delay additional tariffs on Chinese goods, goodwill soybean

purchases and a promise by Chinese officials to reduce punitive tariffs sent soybean markets rallying in mid-September. Whether these actions will have long-term ramifications for North Dakota soybean markets or if the efforts are another in a series of false starts remains to be seen.

For months, soybean markets have fluctuated, rallying on any news that progress was being made in reaching some sort of trade agreement with China, then inevitably sinking again when no real progress materialized.

Northland Community and Technical College Farm Business

Management Instructor Betsy Jensen likened the market situation to a recurring scenario from the comic strip Peanuts there the character Lucy frequently taunted Charlie Brown by innocently holding a football for him to kick. Even though he knew better, Charlie Brown's urge to kick the ball

overtook him, and he'd approach the ball with abandon, only to have Lucy pull the ball away just as he went flying past, landing with a thud.

"That's how I feel about news with China," Jensen told a crowd of farmers at a marketing panel discussion during the Big Iron Farm Show.



Market advisors like Tommy Grisafi advise farmers to use the marketing tools at their disposal to capture market opportunities.



Northland College Farm Business Instructor Betsy Jensen says trade woes should be a wake-up call to build more domestic demand.

Chinese and U.S. officials were scheduled to meet face to face in October to continue negotiations. In mid-September, both sides made conciliatory gestures that prompted market optimism, but farmers have been here before.

“Headlines used to make market movement, but there are so many unknowns,” Jensen said, “and this administration does a lot of unconventional things.”

Jensen says that she has become weary of the false starts. “Let me know when something gets done.”

The trade war with China has dragged on for over a year. Some marketing experts believe the time is right to get an agreement before both the U.S. and China brace for a protracted stalemate.

“I think we have one more shot at this,” Michael Zuzolo of Global Commodity Analytics and Consulting said of the chances for a trade deal with China. Zuzolo said that pork prices in China are rising and that China’s economy has slowed. “If we

aren’t able to get a deal soon, I think both sides will dig in, and this trade war could last a long time.”

Indications are that China will buy more U.S. soybeans and pork. Tommy Grisafi with Advance Trading says that food prices are going up in China, which could spur additional purchases, mainly of U.S. pork. Chinese food costs have risen, and residents spend as much as 40 percent of their income on food while, in the United States, the amount is less than 10 percent.

“Ninety-nine percent of our population is hoping for low prices. You’re the one percent hoping for higher prices,” Grisafi told the farmers.

Domestic Demand

Restoring trade relations with China would be good news for North Dakota soybean farmers, but it wouldn’t eliminate the need for farmers to be proactive with their marketing. The trade issues with China have also highlighted the death of domestic soybean markets.

Nearby markets help to diversify the risk for soybean farmers.

“There needs to be domestic demand in this area,” Jensen said. “North Dakota was built for China. This could be our wakeup call. We need to diversify.”

“North Dakota got so reliant on China,” Grisafi agreed. “You have to have other customers. If there’s an early frost, you could chop corn for silage, but who will buy it? You need hogs, cattle, shrimp, something here. How will you survive if we never get China back?”

Managing Variability

There are plenty of variables remaining as North Dakota farmers head into harvest. The amount and influence of prevented planting acres is yet to be fully determined, which will affect harvested acres.

Because of the wide variability for crop planting dates and plant development, the harvest window in North Dakota could be extended. Therefore, storage space could be at a premium while offering farmers the chance to capture market upswings.

“When harvest is longer, the value of space is increased. The ability to react quickly could be rewarding this year,” Grisafi said.

The marketing panel agreed that, if they’ve not already done so, farmers need to put an emphasis on developing and implementing their market-

ing plan. That plan means locking in some prices while having the flexibility to react to opportunities.

“Elevate your marketing plan,” Zuzolo advised. “We have to push harder on that because it makes a difference. You can’t just plan to market from your combine. There’s nothing wrong with making that plan a priority.”

Jensen said that she was introduced to a new term this year while working with a farmer: “birthday beans.”

“Those are soybeans that this farmer had held onto for more than a year,” Jensen said.

Jensen said that she saw bankers lose their cool because farmers held onto grain too long.

“Don’t be too stubborn to sell. Work your grain marketing plan. I expect lenders to take a good look those plans this year,” Jensen said.

Rather than trying to guess and to hit the market highs, Jensen encourages farmers to aim for steady gains. She explains that even experienced traders rarely hit the market highs. Farmers should be willing to use all the marketing tools at their disposal.

“Good farmers forward contract and spread risk instead of holding out for cash price,” Jensen said. “We have to accept that we’re not always going to be an A student in marketing, but we can aim for being a B student.”

—Story and photos by Daniel Lemke

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Market expert Mike Zuzolo encourages farmers to give their marketing plan a higher priority.



Ag Programs Play a *Leading Role* in 2019

Thanks to disaster programs, prevented planting questions and trade issues, a Big Iron session featuring

several U.S. Department of Agriculture (USDA) representatives drew an overflow crowd of farmers who wanted to learn more about how those programs will affect their operation.

Martin Barbre, head of the USDA Risk Management Agency; Kathy Sayers, chief of staff for the USDA Farm Service Agency (FSA); and North Dakota FSA Director Brad Thykeson took the spotlight to an-

swer questions about programs which the various USDA branches oversee.

Barbre, an Illinois farmer, explains how it's helpful that he and other USDA leaders are farmers.

"We bring that farm focus to our teams," Barbre said. "Staff know the programs, but they don't always understand how it affects farmers. We're able to bring that farmer touch to the USDA."

Among the programs of concern for farmers is the Market Facilitation Program 2.0 (MFP), which was implemented to mitigate some of the financial pressure that farmers face as a result of retaliatory tariffs put on U.S. soybeans and other crops by China. Signup for the MFP 2.0 runs through December 6, 2019. If they have not done so, producers should contact their county FSA office to

schedule an appointment to enroll in MFP 2.0.

Unlike the first MFP program, assistance for 2019 crops is based on a single county payment rate multiplied by a farm's total plantings of the MFP eligible crops, in aggregate, during 2019. Those per-acre payments are not dependent on which of those crops are planted in 2019.

Sayers admits that county rates



NDSGA and American Soybean Association director Monte Peterson quizzed the USDA representatives about farm programs impacting North Dakota farmers.



Red River Farm Network host Don Wick (far left) facilitated the Big Iron forum with USDA representatives Martin Barbre, Kathy Sayers and Brad Thykeson.



USDA Farm Service Agency Chief of Staff Kathy Sayers says her office has her plenty of feedback from farmers about the county Market Facilitation Plan calculations.

vary widely, which not everyone appreciates.

"That formula has prompted lots of questions and love mail," Sayers quipped, "but our chief economists set the county rates using a tremendous amount of data."

Sayers says that signup for the MFP 2.0 program has been brisk and that the agency has worked to get

funds to farmers as fast as possible, despite the overwhelming response. She admits that staffing at FSA offices around the country has been a challenge.

"Over \$3 billion was issued to farmers in the first 3 weeks of signup. We received about 10,000 claims per hour the first 2 weeks of the signup period," Sayers said.



Martin Barbre heads up the USDA Risk Management Agency. His agency is processing tens of thousands of prevented planting claims.

If deemed necessary, a second round of MFP 2.0 payments would likely be released in late November. A possible third round of funds could be available in January.

Prevented planting acres across the U.S. remain an unknown number. The USDA has estimated over 19.4 million acres of unplanted cropland in 2019; however, Barbre says, "Over \$2.5 billion has been paid on prevent plant claims so far. We're paying about half a billion dollars in prevent plant claims per week."

Barbre had prevented planting on his Illinois farm, which is unusual.

"I've never had 30-plus percent prevent plant on my farm before," he said.

The USDA opened prevented

planting to haying and grazing as of September 1. Barbre says that the deadline is normally November 1 to prevent farmers from getting the double benefit of capturing a crop after they've been paid for prevented planting.

Farmers also voiced their displeasure with the USDA's National Agriculture Statistics Service (NASS). A perceived inflation of the crop size by the USDA and conflicting crop size estimates from two different USDA branches led growers to believe that there was a lack of communication between branches.

"That has been a topic of conversation," Sayers admitted. "We're listening. It's not falling on deaf ears."

—Story and photos by Daniel Lemke

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North Dakota State FSA Director Brad Thykeson's agency is responsible for administering many USDA programs, including the Market Facilitation Program.



U.S.-Japan Natto Summit Held in Fargo

Natto Buyers, Distributors and Producers Attend

The third annual U.S.-Japan Natto Summit was held in Fargo, North Dakota September 3-5. Twenty-three

Japanese natto soybean buyers attended along with natto suppliers from North Dakota, Minnesota, Michigan, Arkansas and Ohio.

Natto is a traditional Japanese food which is made from fermented soybeans. Fermentation breaks down the proteins in the soybean, making it easier to digest than whole soybeans. Natto is often eaten for breakfast and is popular in Japan for its health benefits. Natto soybeans are small, with a clear hilum and thin seed coat.

As a sponsor of the event, the North Dakota Soybean Council (NDSC) took part in the conference and tours.

“The Natto Summit is a great example of how international trade meetings should be held,” says Harrison Weber, NDSC director of market development. “The small, intimate setting allows for buyers, distributors and producers to build direct relationships, potentially ending in direct business.”

Japan imports about 75 percent of its annual natto-soybean needs from the U.S. Of that amount, nearly 80 percent comes from the Red River Valley region. This summit brings many supply chain partners and competitors together for a two-day conference in order to discuss and to

share the concerns, challenges and highlights within the industry.

Attendees toured three food-grade soybean plants: SB&B Foods, Inc. in Casselton, North Dakota; Brushvale Seed, Inc. in Breckenridge, Minnesota; and Richland IFC in Dwight, North Dakota. The attendees toured soybean research plots and breeding nurseries, all while experiencing each step of the food-grade soybean cleaning process at the facilities.

—Story and photos by Katelyn Blackwelder, Minnesota Soybean Research & Promotion Council



Linda Funk from The Soyfoods Council and Liz Sloan of Sloan Trends, Inc. presented at the Natto Summit. They talked about U.S. and global food trends.



Natto Summit attendees tour Brushvale Seed in Breckenridge, Minnesota.



Benefits of U.S. Soy Global Trade Exchange

Because international relations remain at the top of everyone's mind, North Dakota Soybean Council

(NDSC) helped sponsor more than 300 buyers from 52 countries in Chicago for the U.S. SOY Global Trade Exchange & Specialty Grains Conference (GTE) on Aug. 20-22. Co-hosted by the U.S. Soybean Export Council (USSEC) and the Specialty Soya and Grains Alliance (SSGA), soy and grain industry leaders, buyers and suppliers gathered in Chicago in order to network and

share ideas about how to move the industry forward.

Alongside over 800 industry partners, exporters, importers and farmers, NDSC attended and exhibited at the conference, touting the high quality of North Dakota's soybeans.

"I'm really proud of the soybeans we grow in North Dakota," says NDSC Secretary Mike Langseth of Barney. "They have a great essential

amino acid profile and feed as well or better than beans with higher crude protein. Additionally, North Dakota soybeans store beautifully; we basically keep them in a freezer after harvest. So as a buyer, if you need to time your purchases differently, you can be assured soybeans sourced from the Pacific Northwest will be still of excellent quality."

International buyers were interested in putting a face to a name for their soybean imports.

"We import 2.1 million tons of soybean meal and provide protein to over 400 million people," says Made Astawan, an Indonesian soybean buyer. "We buy soybeans out of the Pacific Northwest whenever we can."

Overseas buyers were also interested in current planting conditions and the projected prices for this harvest season.

The final day of the GTE brought a wealth of knowledge during a full list of high-profile speakers, including Ted McKinney, Under Secretary for Trade and Foreign Agricultural Affairs. Learning and breakout sessions had topics which included trade, African Swine Fever (ASF), non-tariff trade barriers and global container shipping issues and challenges.

EAA message reaches international buyers

University of Minnesota Professor Dr. Samuel Baidoo shared his knowledge about essential amino acids (EAA) and how soybeans in the Midwest can meet nutritional needs for livestock around the world.

"When it comes to feed, protein is not important, it's the amino acids," Baidoo said. "They (Midwestern soybeans) provide all of the important elements. Luckily, Midwestern soybeans have high levels of these amino acids, meaning less is being wasted because of the higher nutritional benefit."

The EAA message has been a focus area for NDSC, along with the Minnesota Soybean Research & Promotion Council and the South Dakota Soybean Research & Promotion Council.

"We are able to take this knowledge back and share with our customers," says Umakantha, Asia subcontinent consultant for the USSEC. "With northern-grown soybeans' low foreign material levels and higher EAA value, this is something to share."

—Story by Northern Soy Marketing, LLC, photos by staff



The North Dakota Soybean Council (NDSC) was a sponsor of and exhibitor at GTE again this year. From left to right: NDSC Director of Market Development Harrison Weber; NDSC Executive Director Stephanie Sinner; NDSC Secretary Mike Langseth, Barney; and NDSC Director Adam Redmann, Saint Thomas attended the conference on behalf of NDSC.



BEST FUEL PRACTICES FOR POST HARVEST

Hopefully, your harvest season is well underway, and preliminary indicators are positive. The Farmers'

Almanac is predicting another harsh winter, so before you put your equipment away, let's go over some best fuel handling and storage practices to minimize any problems you could encounter.

After harvest, fill the fuel tanks on all your equipment. Fuel tanks should be kept as full as possible to reduce the amount of air in the tank. Exposure to air causes oxidation and degradation of the fuel. Excess head space in the tank can lead to water problems. When temperatures fall below 32°F, that means icing.

Determine if you need to winterize your fuel storage tank. If you don't need large amounts of fuel in the winter, save money and do it right by winterizing a small amount of diesel in your portable tank. We recommend that you fill your bulk storage after harvest for the same reasons listed earlier (oxidation, degradation and

water). Let the bulk storage freeze over the winter, regardless of whether it is No. 2, B10 or B20. It will thaw without separation in the spring. If you need to winterize bulk storage, do so before the temperatures get too cold. Winter additives and blending with No. 1 diesel should take place before the fuel reaches its cloud point, which is when the naturally occurring paraffin starts to appear. Typical North Dakota fuel has a cloud point no higher than +5°F. For the best results, blend No. 1 diesel and/or additives at 15°F

to 20°F.

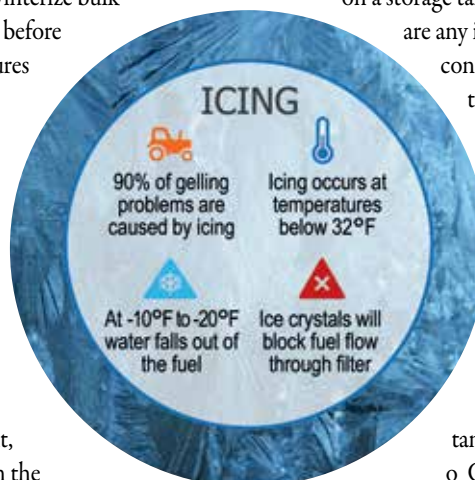
Tips for Diesel Storage, Handling and Use in the Winter

- Always install a dispenser filter on a storage tank. If there are any issues with contaminants, the dispenser filter will plug but will keep the contaminants from progressing to the vehicle tanks.
 - o Going into fall, install a new, 30-micron filter to accommodate the increased fuel viscosity.
 - o Avoid using water-absorbing filters. The pleats will become

saturated with water and will freeze at temperatures of 32°F or below.

- In the fall before colder weather sets in, visually check the tank for free water by obtaining a tank bottom sample. Check again in the spring.
- Bulk fuel and equipment tanks should be kept as full as possible in order to reduce condensation, oxidation and fuel degradation.
- When blending No. 1 diesel with No. 2 diesel, put the No. 1 diesel in the tank first. No. 1 diesel is lighter than No. 2 diesel and will not mix if it is put on top of No. 2 diesel.
- Winter additives should be administered when the fuel is at least 10 to 15° above the fuel's cloud point.

—Story and graphics by Lisa Pedderson, MEG Corp Fuel Consulting



CHECK FOR WATER

Diesel fuel should be clear & bright.
If fuel is clear and bright, no action is needed.



Hazy fuel indicates water saturation
If fuel is hazy, monitor it regularly



Free water accelerates corrosion & fuel degradation
If visible layers appear, remove free water



DIESEL HELPLINE

The Diesel Helpline exists to assist diesel users with diesel- and biodiesel-related questions, to troubleshoot and diagnose filter plugging problems, and to provide guidance on proper fuel-handling and tank-maintenance practices. If you have questions, encounter a fuel-related problem or need help troubleshooting the cause of filter plugging, please contact:

1-800-929-3437 OR

INFO@MEGCORPMN.COM

Retain fuel and filter samples to send in for diagnosis.



Prairie Fare

Soyfoods and Health: What to Know

Soy products, including foods, touch our lives every day.

Some things touch our lives in more ways than we might imagine, including soy. Soy-based products are all around us.

If you read a newspaper this morning, it may have been printed with soy ink. You may have had cereal with added soy protein or topped your cereal with soy milk. If you had eggs, chances are that the chickens responsible for your eggs ate soy-based feed.

You may be driving a vehicle fueled with soy-based fuel. For lunch, a stop at a Chinese restaurant could include soy sauce, miso (fermented soy), or hot and sour soup with tofu (high-protein soy curd).

Perhaps someone in your home is vegetarian or flexitarian, so you grilled a soy-based burger for a high-protein entrée. You could have a salad topped with salad dressing made from vegetable oil, which is primarily soybean oil.

You may know kids going back to school with crayons made, in part, from soy. At the end of the day, you might relax with the flicker of a candle made from soy and snack on some crunchy, savory soy nuts.

Recently, I participated in a session in Maryland that brought participants from the field to the table in order to learn about soy foods. We interacted with farmers, food processors and chefs, learning that soy helps “fix” nitrogen in the soil to improve the soil’s fertility.

We tasted a variety of foods which were made with soy, including some tasty edamame appetizers, soups, sauces and other foods with added soy.

I don’t often take photos of my food at restaurants, but the artistic food plates were ready for their photo op.

My role was to answer questions about nutrition and to help explain some of the research, clearing up some myths surrounding soy foods.

Soy is unique in the world of plant proteins, and it has been used in the human diet for thousands of years. Soy contains all the essential protein building blocks, or amino acids. In other words, soybeans do not have to be paired with rice or another grain to make them complete.

Like any plant food, soy contains no cholesterol. Soy foods also are rich in several nutrients, especially protein and fiber. Protein is essential to build and repair body tissue. Soybeans contain soluble and insoluble fiber. In addition to an overall healthful diet, diets which are high in soluble fiber may help to reduce cholesterol, and diets which are high in insoluble fiber help with regularity.

Soy provides essential fatty acids which we cannot produce in our body. Soy also is rich in B vitamins which are necessary to produce energy from the foods we eat. Soy provides phosphorus and iron. Phosphorus is necessary for cellular growth and production. Iron is crucial for the production of red blood cells and hemoglobin.

In fact, soy foods that meet guidelines for protein content and other nutrients have carried a heart health claim for the past 20 years.

Soy foods carry an allergen statement because some people cannot consume soy products without having allergic reactions. Besides soy, the “big eight” list of allergens are milk, eggs, fish, shellfish, peanuts, tree nuts and wheat. Fortunately, a fairly small number of people have allergies, but be sure to heed to warnings.

Sometimes, however, other kinds

of “warnings” about various foods appear on social media and other sources. From time to time, these messages pop onto the advertisements on my Facebook page.

I think we all know that we can’t believe everything we see and hear about foods. For example, while it’s true that soy contains phytoestrogens (plant estrogens), these natural chemicals do not act like human estrogen hormones. They are not to blame for feminizing men, for example.

Researchers conducting human studies have reported that the natural plant compounds in soy may reduce the risk for prostate and breast cancer, and may reduce hot flashes in

menopausal women or perhaps improve fertility.

My best advice is to aim for variety in your diet. Don’t be afraid of food. Be aware of research-based recommendations about nutrition and health from credible sources.

Have you ever tried edamame? These immature soybeans are available in the freezer section of many grocery stores. Here is a recipe that we tried at North Dakota State University; the dish was well liked.

—Story and recipe by
Dr. Julie Garden-Robinson,
NDSU Extension

Edamame Hummus

Ingredients

- 1½ cups frozen, shelled edamame
- ¼ cup tahini*
- ¼ cup water
- ½ tsp freshly grated lemon zest
- 1 lemon, juiced
- 1 clove garlic, smashed
- ¾ tsp kosher salt
- ½ tsp ground cumin
- ½ tsp coriander
- 3 Tbsp extra-virgin olive oil
- 1 Tbsp chopped, fresh flat-leaf parsley

**Tahini is a sesame seed paste that is available at many grocery stores. You might find it with the condiments or in the ethnic food section. Sometimes, tahini is in the refrigerated section with deli items.*

Directions

Boil the edamame in salted water for 4 to 5 minutes, or microwave, covered, for 2 to 3 minutes.



In a food processor, puree the edamame, tahini, water, lemon zest and juice, garlic, salt, cumin and coriander until smooth. With the motor running, slowly drizzle in 2 tablespoons of the olive oil, and mix until absorbed. Transfer to a small bowl; stir in the parsley; and drizzle with the remaining oil. Serve with vegetables or crackers. Refrigerate the leftovers.

Yield: The recipe makes 10 servings. Each serving has 100 calories, 8 grams (g) fat, 4 g carbohydrate, 4 g protein, 2 g fiber and 150 mg sodium.



CommonGround ND

PARTNERS WITH MULTIPLE FIELD-TO-PLATE DINNERS TO SERVE UP AGRICULTURAL CONVERSATIONS

North Dakota farmers and ranchers are known to produce some of the finest-quality commodities in the world. This summer, many urban consumers had the opportunity to have their senses tantalized by amazing fare that was served in picture-perfect agricultural settings. These CommonGround North Dakota (CGND) dinner events were hosted by producers who were eager to share their personal stories about their life and work on the farm and the ranch.

The first event held this summer was the 2nd Annual Banquet in a Field Western Style in Belfield, North Dakota. In the beginning of July, CGND partnered with the Dickinson Chamber Agriculture Committee to bring approximately 150 guests to Arrow K Farms. Invitees had the opportunity to engage in dialogue about where food comes from while feasting on a wonderfully prepared, multi-course meal that featured local commodities.



Farmland to Fine Dining guests were treated to fine cuisine and agriculture-related conversations at the Kenny and Bonnie Miller ranch near Bismarck.



Cocktail tables were planted in front of many different crops, so agriculture volunteers could strike up conversations with guests about the crops and the products produced in North Dakota.



Dinner on the Prairie guests paused for a quick photograph while waiting to be served at the event.

The next event was the inaugural Dinner on the Prairie. This event was held at the end of July in South Prairie near Minot. The excitement was credible, bringing forth a well-attended invitation-only and memorable event. The mission was to bring together a group of farmers, ranchers, educators and consumers in order to empower and to educate people to feel confident about their food decisions and to showcase the diversity of North Dakota agriculture.

The inaugural Farmland to Fine Dining event, the third dinner event, was held in early August near Bismarck, welcoming members of the area's urban community. This event was open to people who purchased tickets; a portion of the proceeds benefited Farm Rescue. Diners traveled to the country to hear farm and ranch stories while they were served an exquisite meal. Attendees also engaged in conversations with farmers and ranchers to help understand how



Farmland to Fine Dining was held at Kenny and Bonnie Miller's ranch near Bismarck. Pictured left to right: Dave Lehman, Angie Friez, Kenny and Bonnie Miller (ranch hosts), Angil Wanner-Koper and Dennis Agnew.



consumers can follow the steps back to where food was grown. The event's platform was to create an educational and entertaining fine-dining experience while generating awareness about the importance and sustainabil-

ity of local agriculture.

The final scheduled event, the 3rd Annual Dinner in the Valley, was held at the Sheyenne River Bend Farm near Valley City this September. Dinner in the Valley was hosted by the

Valley City Chamber of Commerce Ag Committee. Conversations and North Dakota grown food were served during this invitation-only event.

To learn more about

CommonGround North Dakota and each of these partner events, go to www.commongroundnd.com.

—Story by Betsy Armor,
photos by organizers

Ag Adventure Day at the Red River Zoo Helps Kids Understand Modern Agriculture

Kids were climbing on farm equipment, plunging their hands into buckets of corn and digging for worms during the third annual Agriculture Adventure Day at the Red River Zoo in Fargo, North Dakota. Families enjoyed free admission for kids and a free lunch during this August event.

At the Ag Adventure Passport Headquarters, kids were greeted by Suzie Soybean and Bob the Cob. Kids received Ag Passports with four activities that they had to do throughout the zoo grounds. Once kids completed an activity, their passport was stamped. After the four activities in the passport received stamps, the kids received a fun prize!

At the first activity, sponsored by Amity and RDO, kids of all ages had the opportunity to climb around farm equipment. Kids asked questions about farming and how farmers used the equipment throughout the growing season.

The next activity was rich in soil health. NDSU Extension Soil Health volunteers helped kids

dig in the soil to find worms. U.S. Department of Agriculture-NRCS (USDA-NRCS) volunteers answered questions about soil health and also talked about conservation practices on modern farms. Finally, there was a giant blow-up soil tunnel to walk through with information on the sides for kids to read about what makes up healthy soil. NDSU Extension Soil Health Specialist, Red River Zoo Board Member and Coordinator of the Ag Adventure Day event Dr. Abbey Wick talked about how this event helps kids learn about the modern farm and that soil is definitely a key component of a farm's success. "The number one resource farmers have is their soil. It's their legacy, it's what is passed down to their kids and the next generation," says Dr. Wick.

The third activity, sponsored by the Extension Master Gardner Program of NDSU Plant Sciences, centered around creating beautiful garden spaces that are friendly to pollinators. The volunteers also answered many questions regarding event attendees'



A smiley girl shows off her newly dug up worm from the soil bin at the NDSU Extension Soil Health booth.

lawns, gardens and trees.

Farmers were on hand at the final Agriculture Passport activity which gave kids the opportunity to ask about crops. Representing the North Dakota Soybean Council (NDSC) and the North Dakota Corn Utilization Council (NDCUC), these farmers were eager to share information and were able to do a "show and tell" of the different crops. NDSC Director Rob Rose of Wimbledon was one of the farmers who stamped kids' passports and answered kids' questions about farming. "This event is great for kids. Many of them are removed from the farm, and so for us to bring the farm to them, it just makes sense. They get to see many aspects of the farm here at the zoo, like the crops growing and the ability to climb into tractors, they get a good experience and with that, comes a lot of great questions," says Rose.

Even after the passports were filled with stamps, many people stayed for the Penny and Pals show, checked out the Modern Agriculture

Exhibit (open all year long!), played some crop match games with 4-H volunteers, created corn and soybean necklaces (that they were able to plant at home later), and also talked with CommonGround North Dakota (CGND) volunteers about food and farming.

CGND volunteer and North Dakota Corn Growers Association (NDCGA) Grower Services Director Elli Ressler was happy to share her crop and livestock production experiences with event attendees. "As a CGND volunteer, I was able to answer questions about food and farming. Families have many questions about food and how it is produced. I'm glad we were able to connect and have meaningful conversations with them during the Agriculture Adventure Day event," says Ressler.

Agriculture Adventure Day was made possible by generous partners and sponsorships from many North Dakota agriculture commodity groups and industry, including the NDSC, NDCUC and CGND.



NDSC Director Rob Rose of Wimbledon was one of the farmers who stamped kids' passports and answered questions about farming.



Soy is Easy to Add to Your Meals

Soyfoods have been around for generations and are a staple in many diets. Soyfoods can be incorporated

into any diet very easily and still deliver the health benefits for which soyfoods are known.

Adding soyfoods doesn't require a diet makeover. Dr. Julie Garden-Robinson is a professor and extension specialist in the Health, Nutrition and Exercise Science department at North Dakota State University. Dr. Garden-Robinson says that there are numerous types of soyfoods available on store shelves for people to try.

"Soymilk; tofu; edamame, which are immature 'green' soybeans; soynuts; and fermented foods, such as tempeh, are just a few of the wide

range of soyfoods," Dr. Garden-Robinson says. "Researchers have shown that eating more soy products may reduce our risk for certain types of cancer, heart disease, Type 2 diabetes and osteoporosis."

Soy can be valuable for people who cannot consume meat, offering healthy options to meet their diets' protein requirements.

She also says that soyfoods are rich in many nutrients, including protein, which makes them especially important for people focusing on plant-based diets. Soyfoods also provide fiber, calcium and iron. Because

it is plant-based, soy contains no cholesterol and is low in saturated fat.

"In fact, some researchers have reported that consuming soyfoods may reduce blood cholesterol levels and, potentially, blood pressure," Dr. Garden-Robinson says.

Linda Funk, executive director of The Soyfoods Council, says that it's easy to include soyfoods, even for people who didn't grow up eating soy. Even one-to-two servings of soy per day can deliver valuable health benefits.

"That can be as easy as eating one-quarter cup of soy nuts or drinking a cup of soymilk," Funk says. "It's incredibly easy to add, but you have to have the products on hand."

Funk says that soymilk in shelf-stable packaging can be kept in the pantry for extended periods of time, but it must be refrigerated once it's been opened. Soy is also a main ingredient for many prepared products, including nutritional snack bars, zone bars and even some cereals. The higher up on the nutritional label that soy appears, the higher the percentage of soy is in the product.

There are also whole products, such as soy nuts, edamame and even canned soybeans, that are readily available.

Many people enjoy fruit smoothies, and Dr. Garden-Robinson says that soy can be included as an ingredient.

"Enjoying a smoothie made with strawberries, blueberries and soymilk for breakfast adds both fruit and protein to the diet," Dr. Garden-Robinson says.

Many people also shortchange themselves on vegetables. Stir-frying firm tofu with broccoli, carrots, snow peas and other vegetables can help



meet the daily recommendation of at least 2.5 cups of vegetables.

"The tofu takes on the flavor of the sauce used in the stir-fry," Dr. Garden-Robinson adds. "You also might try the steamer bags with edamame for a fun snack or side dish that kids will enjoy. If you like tacos or spaghetti sauce, you can try the soy crumbles that are available."

While anyone can benefit from adding soyfoods to their diet, Dr. Garden-Robinson says that there are numerous population segments for whom soyfoods can be particularly helpful. Children who cannot consume dairy due to allergies or lactose intolerance benefit from the availability of soy-based formulas and baby foods.

"Soyfoods provide the protein, calcium and vitamins needed for adequate growth of children. Some research shows that early use of soy products may reduce risk of diseases later in life," Dr. Garden-Robinson adds.

Dr. Garden-Robinson says that

Easy Soy and Meat Chili

Ingredients

- 2 Large onions, chopped
- 3 Garlic cloves, minced
- 1 Each large green and red sweet pepper, chopped into small pieces
- 5 Tbsp chili powder (depends on how spicy you like)
- 2 tsp dried oregano
- 2 tsp cumin
- 8 oz. ground hamburger
- 1 cup dry Textured Vegetable Protein (TVP*)
- 2 cans (15 oz.) black soybeans, rinsed and drained
- 1 can (14.5 oz.) diced tomatoes with chilies
- 1 can (28 oz.) diced tomatoes
- 8 cups low-sodium tomato juice
- Salt and pepper to taste

**Textured Vegetable Protein and Textured Soy Protein are one in the same. They are both trademarked names. If a recipe calls for one or the other, they are interchangeable.*



Toppings: Shredded cheese, sour cream and chopped onion

Directions: In a large sauce pot, sauté the onion, garlic and peppers until softened. Add chili powder, oregano and cumin; stir to blend. Add hamburger; stir until browned. Add the TVP; stir until blended. Add beans, tomatoes and tomato juice; stir until blended. Bring to boiling; reduce heat; simmer 40 minutes, stirring occasionally. Add salt and pepper to taste. Serve with your favorite chili toppings.

Yield: 12 to 16 servings.



there's a growing interest in flexitarian and vegetarian diets, both of which focus on plant-based foods. Soy provides a variety of nutrients which are needed for a balanced diet for people who consume little, if any, animal products. Even the meat-and-potatoes crowd can incorporate soy without a major menu overhaul.

"You do not need to be a vegetarian or vegan to add soyfoods to your diet," says Funk. "For an extra boost of protein, you can add soy to your favorite ground meat dishes with Textured Vegetable Protein (TVP) or Textured Soybean Protein (TSP). Why not try it when the health benefits are so strong and well researched?" Funk asks.

To learn more about soyfoods and ways to incorporate soy into a healthy diet, visit www.soyconnection.com, www.thesoynutritioninstitute.com or www.thesoyfoodscouncil.com.

—Story by Daniel Lemke, photos and recipes courtesy of The Soyfoods Council

Sweet and Sour Chicken and Textured Vegetable Protein Meatballs

Meatball Ingredients

- ½ cup TVP
- ½ cup chicken broth or
- ½ cup water and ½ teaspoon chicken bouillon granules or
- ½ chicken bouillon cube
- 1 can (5 oz.) chicken
- 3 tablespoons all-purpose flour
- 1 egg
- 1 tablespoon milk
- ½ package (2 oz.) onion soup mix
- ½ teaspoon Worcestershire sauce (optional)

Sweet and Sour Sauce Ingredients

- ½ cup packed brown sugar
- 1 tablespoon cornstarch
- ½ cup vinegar
- 2 tablespoons catsup
- 1 tablespoon water
- 1 can (8 oz.) pineapple chunks in juice
- 1 green pepper, seeded and chopped
- 4 cups cooked rice (white or brown)



Directions: Preheat oven to 400°F. In a medium mixing bowl, stir the TVP, chicken broth and canned chicken (and the liquid from the can), breaking the chicken into small pieces. Let the mixture stand for 3 minutes. Sprinkle flour over the chicken mixture. Then, using clean hands or a spoon, mix the egg, milk, onion soup mix and Worcestershire sauce. Shape the mixture into 12 (1-inch) balls. Arrange the balls on the bottom of an oiled or sprayed 9x13x2-inch baking pan. Bake until lightly browned and firm

to the touch, about 15 minutes. While the meatballs are baking, make the sauce. In a saucepan over medium-low heat, stir the brown sugar, cornstarch, vinegar, catsup and water. Stir in the pineapple chunks and juice. Blend. Stir in the green pepper, if used. Heat, stirring occasionally, until the mixture comes to a boil and is thickened, about 10 minutes. Serve the meatballs and sauce over cooked rice.

Yield: 4 servings.

Poultry
18,200,000 Metric Tons
(the meal from
844 million bushels)



Hogs
7,000,000 MT
(the meal from 324 M bushels)



Dairy
4,000,000 MT
(the meal from 185 M bushels)



Beef
1,200,000 MT
(the meal from 55 M bushels)



ANNUAL U.S. SOYBEAN MEAL USE

Source: USIB Market View Database, 2017/2018 © 2019 United Soybean Board (8857-34)



Fore!



Thank you for making the 16th annual Fargo area and 6th annual Jamestown golf tournaments successful! The tournaments are a way for the North Dakota Soybean Growers Association (NDSGA) to say thank you to members and supporters. Your membership dues and sponsorship of NDSGA events help to provide the necessary funds to continue policy and advocacy work in Bismarck and Washington, D.C. We're proud of our past successes and are continually working to make things better for soybean growers throughout North Dakota.

Sixteenth Annual Fargo Area Golf Tournament

Congratulations to our Fargo tournament winners:

First Place:

Team SB&B: Scott Sinner, Todd Sinner, Jeremy Sinner and Bob Sinner.

Second Place:

Team AgCountry Farm Credit

Services – Jamestown: Steve Dale, Nick Blaskowski, Shawn Taft and Eric Knodel.

Third Place:

Team Peterson Farms Seed – Streeter Elevator: Brett Williams, Matt Schwarz, Andy Heflin and Josh B.

Congratulations to our Fargo contest winners:

Longest Putt #7: Chris Kappes

Longest Putt #18: Brett Levos

Longest Drive #5: Todd Sinner

Longest Drive #14: Bryan Larson

Closest to Pin #11: Chad Fyre

Thank you to our Fargo tournament sponsors: **Hole Sponsors:** Advance Trading, Inc., AgCountry Farm Credit Services, American Federal Bank, BASF, Bayer, Bushel, Central Sales, Eide Bailly, Ellingson Water Management, Farmers Business Network, FMC Agricultural Solutions, Legend Seeds, Inc., MEG Corp – Biodiesel, MicroEssentials – Mosaic Company, North Dakota

Soybean Council, Proseed, Syngenta and Visjon Biologics.

Lunch: North Dakota Soybean Council

Dinner: BNSF Railway

Golf Balls: Asgrow

Golf Towels: Asgrow

Player Carts: Northern Crops Institute,

Program: National Biodiesel Board

Signs: D-S Beverages

General: Agassiz Seed.



Sixth Annual Jamestown Golf Tournament

Congratulations to our Jamestown tournament winners:

First Place:

Team Innovative Agronomy: Gannon Van Gilder, Dave Barnick, Mike Stoller and Brian Carlson.

Second Place:

Team Peterson Farms Seed – Streeter Elevator: Brett Williams, Matt Schwarz, Andy Heflin and Cole Diede.

Third Place:

Team Ellingson Water Management: Corey Haag, Jeff Schroeder, Jordan Kautzman and Don Kautzman.

Congratulations to our Jamestown contest winners:

Longest Drive #6: Dave Barnick

Longest Drive #17: James Shockman

Closest to Pin #12: Brett Williams

Closest to Pin #4: Tom Readell

Longest Putt #16: Nick Paulsrud

Longest Putt #9: Levi Hintz



the Fun of it

Thank you to our Jamestown golf tournament sponsors:

Hole Sponsors: Advance Trading, Inc.; AgCountry Farm Credit Services; BASF; Bayer; Butler Machinery Co., Central Sales, Inc.; Centrol, Inc.; Crary Industries; Ellingson Drainage; Farmers Union Insurance; Garitt Ire Agency; Gavilon Grain; FMC Agricultural Solutions; Gavilon Grain, LLC; Innovative Agronomy; Legend Seeds, Inc., MEG Corp - biodiesel; Nutrien; Proseed; Sky Farmer Ag Services; and Valley Plains Equipment

Lunch: North Dakota Soybean Council

Dinner: BNSF Railway

Player Cards: National Biodiesel Board

Golf Balls: Asgrow

Golf Towels: Asgrow

Welcome Bags and Hats: North Dakota Soybean Council

Signs: D-S Beverages

General: Agassiz Seed.



For more photos of the tournaments, check out facebook.com/NorthDakotaSoybeanGrowersAssociation

Two NDSGA tournaments are scheduled for 2020. The Jamestown tournament is scheduled for July 28, 2020. The Fargo event will be at Rose Creek August 25, 2020. More information is available at ndsoybean.org.

—Story by staff; photos by Betsy Armour Images and staff



APPLY FOR A SCHOLARSHIP TO ATTEND:

Executive Women in Agriculture Conference

January 28–30, 2020 | Hilton, Chicago



The North Dakota Soybean Council (NDSC) is offering scholarships for two North Dakota women who are actively engaged in farm management and production of soybeans. Each scholarship will help cover costs of registration, air fare and hotel fees up to \$2,500 for each selected recipient.

To apply, complete and submit an online scholarship application by 4:00 p.m., Friday November 29, 2019. Applications can be found online at ndsoybean.org

All applications received by the deadline will be

competitively scored by NDSC. NDSC will have complete discretion over participant selection for the scholarships.*

Connect with women in agriculture who are making a difference. Share ideas with women who make up more than 30% of farm operators serving in diverse areas such as human resources, financial reporting, record keeping, as well as production and technology. You'll leave inspired and energized to take what you've learned and implement it into your own farm business.

To apply online, visit ndsoybean.org
Deadline: Friday, Nov. 29 by 4:00 p.m.



If you have questions, please call (701) 566-9300

* You're not eligible to apply if you have previously attended EWA Conference.

Small Refinery Waivers Bad Deal for Biodiesel

Here we go again. In August, the Environmental Protection Agency (EPA) granted 31 of 38 retro-active small refinery exemptions for 2018. We can't contain the frustration and utter disappointment that we have with how this administration is handling its responsibility to administer the Renewable Fuel Standard (RFS).

Congress passed the RFS back in 2007; the bill was signed into law by George W. Bush, a lifelong oil and gas guy. The law was passed to encourage investment in advanced biofuels such as biodiesel, renewable diesel and renewable jet fuel. Biodiesel producers responded, making the investments and building an industry that, today, produces more than 2 billion gallons of transportation fuel each year. This market also provides added value to feedstocks such as soybean oil, used restaurant oil and animal fats.

The oil industry feverishly insists that the ethanol industry isn't harmed by small refinery exemptions because production has grown. What about biodiesel? The oil industry never mentions us because they know that small refinery exemptions disproportionately affect biodiesel because of the way the RFS is constructed.

We have said again and again that biodiesel is very different from ethanol. The president was instrumental in clearing the path for higher blends of ethanol year-round when he lifted the Reid Vapor Pressure (RVP) waiver this summer, action which we supported. He and his EPA administrator have mentioned E15 when they have spoken about what they believe to be the minor effect of exempting RFS gallons. It's as though they think we are dumb enough to not understand that they are giving with one hand but taking away with the other.

Now, back to biodiesel. E15 does nothing to expand the demand for biodiesel. Ethanol is not biodiesel. In fact, the RFS recognized this fact by establishing a category for biodiesel, separate from ethanol, called biomass-based diesel. At the time, policymakers recognized the need to segment biodiesel and renewable diesel within the bigger RFS pool so that growth for those products could be differentiated in the overall program and so that we would see biofuel advancements in both the gasoline and diesel sectors.

Fast forward to 2019, and we now have an EPA that, just months ago, proposed a draft rule to hold the biomass-based diesel category flat for

2020, keeping it at 2.43 billion gallons for the second year in a row. Then, in early August, the same EPA granted nearly one-half billion gallons of biomass-based diesel waivers. To highlight the hypocrisy for this action, while filing the draft rule two months ago, the EPA documented, in writing, the fact that it expected to grant zero (that's zero as in none, zilch, nada) gallons of small refinery waivers in 2020. We're supposed to understand and accept that move?

Refineries fill out applications for waivers, stating why the RFS creates an undue hardship on them. The Department of Energy (DOE) reviews the applications and decides whether the waiver request has merit. The DOE then provides the EPA with a recommendation for a complete rejection of the request, a partial volume-waiver request or full support of the request.

Every year, biodiesel and renewable diesel fill more than 90 percent of the RFS volumes reserved for advanced biofuels, but the EPA complains that advanced biofuels have not materialized quickly enough to meet the RFS goals. Now, the agency is holding its thumb on the industry and blocking growth. This action is not only blocking growth, but also helping to reduce demand through small refinery exemptions.

As the agency continues to give exemptions to every refiner that asks, the damage could reach \$7.7 billion, or 2.54 billion gallons, according to Scott Irwin, an agricultural economist from the University of Illinois. A "small" oil refinery by RFS definition—one that processes 75,000 barrels of oil a day and produces nearly half a billion gallons of fuel a year—would have an RFS obligation to use just 20 million gallons of biodiesel or renewable diesel. Many U.S. biodiesel producers are smaller than that. Just one small refinery exemption would eliminate their entire market, and the EPA granted 31 exemptions.

President Trump vowed to protect and defend American farmers; in fact, he calls them patriots. However, his actions will put the biodiesel producers which those same farmers depend on for their market out of business. It's already happening, and it's having a devastating effect on rural communities across the nation.

President Trump and EPA Administrator Wheeler should clearly know what this action means to workers, producers, farmers and investors



Donnell Rehagen,
National Biodiesel Board
Executive Director



**Ryan Pederson
Rolette, North Dakota
Farmer and National Biodiesel Board
Governing Board Member**

for the biodiesel and renewable diesel industry. The new round of unwarranted RFS exemptions just destroyed jobs and a valuable marketplace for hardworking Americans, including those patriotic soybean farmers whom the president has called on to be his willing allies in the trade dispute with China. If this is how the EPA administrator treats the president's allies, we would hate to see how Mr. Wheeler treats the president's enemies.

FULL-CIRCLE RETURN

HERE'S HOW THE SOY CHECKOFF WORKS. The national soy checkoff was created as part of the 1990 Farm Bill. The Act & Order that created the soy checkoff requires that all soybean farmers pay into the soy checkoff at the first point of purchase. These funds are then used for promotion, research and education at both the state and national level.



* Led by 73 volunteer soybean farmers, the United Soybean Board (USB) invests and leverages soy checkoff dollars to MAXIMIZE PROFIT OPPORTUNITIES for all U.S. soybean farmers.

unitedsoybean.org



Getting to Know the Grower



Brian Jodok
Northwood, North Dakota

Tell us about your farm.

Our farm was homesteaded in 1884. We are a diversified farm with wheat, soybeans, corn and edible beans. I farm with my wife, Alane; my son, Karl; and his wife, Alyssa.

What do you like best about farming?

I like that, when my kids grew up, they saw what I did. Unlike some other jobs, kids don't know what their parents are doing for a living. Parents go to the office and come home at night. Farming was something they could see and learn what needed to be done.

Did you always know farming was something you wanted to do?

No. I was a music teacher and then came home to farm when my dad passed away.

What's most exciting about the upcoming harvest season?

Harvest is not my favorite season. I think spring is my favorite when we

are getting the crop in. Harvest is sort of anti-climactic to me.

How and why did you get involved with the North Dakota Soybean Council?

I was nominated for the county position and got elected. From there, I was elected to be on the full board.

Why are soybeans part of your crop mix?

Soybeans are good for rotation. They are also flexible, doing well on different soils and seeding dates.

What changes do you expect to see on your farm in the next 5 to 10 years?

I think farmers, in general, need to find a way to add value to their crops rather than market them as just a commodity. We need to be careful

about preserving quality, so we aren't a last-resort marketer.

What do you like to do outside farming?

I like to visit family and travel to new places. I enjoy seeing what it is like to live in other areas.

If you could go anywhere where would it be?

Australia. I've read a lot of books that have taken place there.

If you could add equipment, what would it be?

I would like to update the no-till equipment we have.

What's the equipment or technology you wouldn't want to be without?

Computer.

—Story by staff, photo by Betsy Armor

Getting to Know the Expert



Ryan Buetow, Cropping Systems Specialist North Dakota State University Dickinson Research Extension Center (REC)

Where did you grow up?

Cologne, Minnesota

What is your degree?

I attended NDSU for a bachelor's degree in Crop and Weed Science with a minor in Botany and an M.S. in Plant Sciences. My project for my master's thesis was working with soybeans and dry beans. I'm currently working towards

a Ph.D. while working for NDSU. My Ph.D. project is looking at hard red spring wheat establishment.

What brought you to NDSU?

For my master's program, I worked with Hans Kandel as my major adviser and enjoyed the extension work that allowed for one-on-one interaction with farmers and helping them solve problems. What I love about working in southwestern North Dakota is the wide range of crops and the great pheasant hunting.

What is the scope of your work at the Dickinson REC?

I work closely with county agents in the region and provide agronomy programming. I also work closely with industry and some farmers to establish trials that help answer questions with unbiased science. I have several applied trials and demonstrations covering seed treatments, fertilizer management, crop rotation and more. I speak at meetings and workshops throughout the year on a wide range of topics and to a wide range of demographics. Some days, I'm speak-

ing to first graders about where their food comes from, and some days, I'm speaking to farmers and industry leaders about soybean nodulation, how to identify certain weeds or the effect of crop rotation on pests.

A project that I'm excited about is the trial we're conducting with Chris Augustin from the Minot REC; we are looking at the effect of applying lime to crop land. We are seeing more acidic soils in the region, and it is having a large influence on productivity.

How has soybean production changed in that area of the state?

The past couple years, we've received more rainfall in August, which really affects soybean yields by keeping the plant from being stressed during flowering. Historically, this region hasn't received that rainfall. Moisture, along with better varieties, has changed the viability of soybeans in this region.

What's the best part about what you do?

Being able to provide information that helps farmers and teaching people from urban settings or without agricultural background about the great work that farmers and ranchers do.

From your research, what are the most critical factors for raising good soybeans?

Like other small plot researchers, we've had issues with rabbits; gophers; and, sometimes, prairie dogs damaging our plots, so pest management is important no matter the pest. Good root nodulation, moisture at planting and in August, and having an adequate population with quick canopy cover is vital from what I've seen.

What do you like to do away from work?

I enjoy pheasant hunting with my golden retriever, Hercules; hiking; snowboarding; cheering on the Bison and Minnesota Vikings; and going to concerts when I get a chance.

—Story by Dan Lemke, photo by staff

Japan Trade Pact Applauded

The American Soybean Association (ASA) is pleased with news that the Trump administration has reached a trade agreement, in principle, with Japan, a top-10 export market for soybeans.

In a statement, U.S. Department of Agriculture (USDA) Secretary Sonny Perdue said, "By removing existing barriers for our products, we will be able to sell more to the Japanese markets. At the same time, we will be able to close gaps to better allow us to compete on a level playing field with our competitors."

The ASA agrees with the secretary's sentiments and appreciates the administration moving forward with this bilateral agreement.

Speaking on behalf of the association, ASA President Davie Stephens said, "We have repeatedly stressed, this past year during the trade war with China, that we would like the administration to work hard on existing and new free trade agreements (FTAs), so we are definitely pleased to hear that the president and his team have heard ASA and other farm groups by working on this deal. Along with more stability for soybean exports to Japan, this FTA also brings potential to increase pork and beef exports; a value-add opportunity for soybeans and way to create more jobs here in the U.S."

Soybeans and soy products are America's leading agricultural export with an export value of more than \$28 billion last year. More than 60 percent of America's soy crop is exported globally.

Biofuels Battle Rages On

The American Soybean Association (ASA) has called for the Environmental Protection Agency (EPA) to increase biomass-based diesel volume requirements for 2021, to increase advanced biofuel volumes for 2020 and to begin restoring the billions of gallons of demand that have been waived through the retroactive small refinery exemptions.

In July, the ASA and the National Biodiesel Board (NBB) voiced concerns when the EPA announced zero growth for the biomass-based diesel and advanced biofuel volumes. The ASA said that the proposal doesn't reflect the needs and capabilities of the domestic biodiesel and soybean industries, and the proposal is a big miss for growers.

In its comments, the ASA also called on the EPA to restore the volumes that courts have determined were unlawfully waived in 2016 through improper use of the general waiver authority. The ASA specifically cited the benefits that the Renewable Fuel Standard (RFS) and increased biodiesel production provide for diversifying domestic energy supplies, reducing emissions, providing enhanced markets for soybean farmers and boosting the rural economy.

The refinery exemptions granted by the EPA, including the 31 which were recently issued retroactively for 2018, are additional blows to soybean markets that are already depressed.

The RFS is a federal program designed to increase markets for American farmers, to decrease U.S. dependency on foreign oil and to curb the carbon footprint through reduced emissions. At the same time, the RFS has taken hits in the form of small refinery waivers as well as flat biomass-based diesel and advanced biofuels volumes for 2020-2021 that supporters say push the industry backwards.

"These decisions are a one-two punch for the biofuel industry and, bottom line, farmers," said Rob Shaffer, an ASA director and chair of the organization's Biodiesel and Infrastructure Committee. "We are heartened by the support we are getting from (the) USDA and members of Congress, including Senator Grassley and many others speaking up and fighting for the RFS. They understand the value not just for biodiesel producers and soybean

farmers, but rural economies, the environment and U.S. consumers."

Immediately following the EPA's decision to allow 31 additional small refinery exemptions, one of the largest biodiesel producers in the country announced the shutdown of three plants located in Pennsylvania, Georgia and Mississippi. Other large producers have announced closings and have laid off workers, with more closings and layoffs likely if these policies remain unstable.

Shaffer continued, "We may be reeling, but we are not KO'd. Congress can enact an extension of the biodiesel tax credit, and the administration can still get the RFS back on stable footing. This program, with their help, can accomplish what was intended: Higher levels of domestic,

renewable fuels that enhance energy diversity and security; promotion of jobs and value for farmers and rural economies; and environmental benefits from reduced emissions."

The ASA urged President Trump to uphold his commitment to support the RFS and American farmers by increasing the RFS, and pushed Congress to get the biodiesel tax credit extension completed. Retroactive waivers for RFS volumes, the zero growth proposed for future RFS volumes and inaction on the biodiesel tax credit are all compounding the pressure on a soybean industry that is already facing a down farm economy; the lingering trade war with China; and seasonal, weather-related issues.

—Story by staff

Intern Lends a Helping Hand to the NDSGA

North Dakota State University (NDSU) student Jacy Hauge has joined the North Dakota Soybean Growers Association (NDSGA) as an intern for the 2019-20 school year.

Hauge grew up on her family's farm near Carson. She's currently a sophomore majoring in Agriculture Communications with a minor in Ag Business. Hauge is no stranger to North Dakota agriculture, having served in several leadership roles while working on the family farm.

"Growing up, I found a love for cows and was involved in both 4-H and FFA," Hauge says. "I served the North Dakota FFA as a state officer."

Hauge will work with NDSGA during the upcoming school year and will represent the organization at numerous events in the coming months, including the Northern Corn and Soybean Expo. Hauge's internship will provide the NDSGA with additional staff represen-



tation while helping Hauge to gain experience and to fuel her appetite for agriculture.

"I have a passion for advocating for agriculture and networking with both producers and consumers," Hauge says. "I love meeting new people and hearing everyone's agriculture story."

Be sure to say hello and to share your story with Hauge during the coming year.



BORON – GET BETTER PERFORMANCE FROM EMERGENCE TO HARVEST

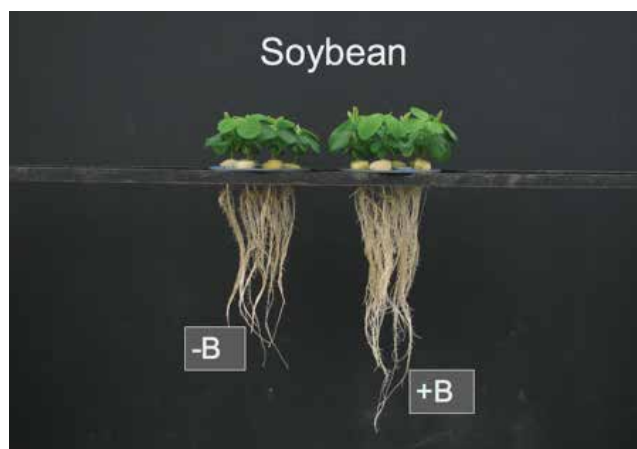
As genetic and agronomic practices continue to drive higher yield potential in soybeans, nutrient removal rates are also increasing, creating more demand for fertility. One micronutrient vital to many crops is boron, the world's second-most deficient micronutrient, after zinc. Even though boron is only needed in small amounts, soybeans that have adequate boron throughout the entire growing season outperform those that don't.

A JOURNEY THAT STARTS AT THE ROOT

Some of the most important plant interactions happen below the soil surface. Without a healthy root structure, uptake of water and nutrients can be hindered throughout the season. Boron is essential to fuel early-season root growth and elongation, setting soybeans up for success. Boron also impacts other physiological functions, including nitrogen fixation, structural integrity and the uptake of other important nutrients, like potassium.

Boron plays a crucial role in soybeans' flowering and reproductive stages, impacting flower initiation and pollen development. But by the reproductive stage, sodium borate — the most commonly applied form of boron — may no longer be available in adequate amounts, due to its highly soluble form, which is susceptible to leaching. On top of this, boron cannot easily move from the leaves to other plant organs, like the flowers and pods. Therefore, since translocating boron isn't an option, and the soil supply of sodium borate may be limited, growers hit a roadblock in crop nutrition.

But sodium borate isn't the only option. An additional fertilizer, called calcium borate, is a more slowly soluble form which releases boron throughout the growing season. While some growers may apply foliar boron, its limited plant mobility reduces the effectiveness to only the plant tissues that foliar application touched. Applying only calcium borate, however, may not ensure adequate availability during early season growth, putting root and vegetative development at risk.



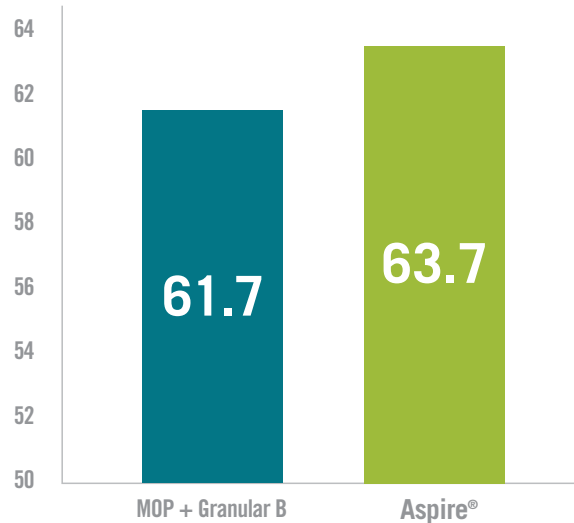
Dr. Ismail Cakmak, Sabanci University

Conduct regular soil and tissue tests to determine your boron needs. Discuss the results with your retailer to find an option that works best for your operation. For more information on what Aspire® can do for you, or to find a retailer, visit AspireBoron.com.

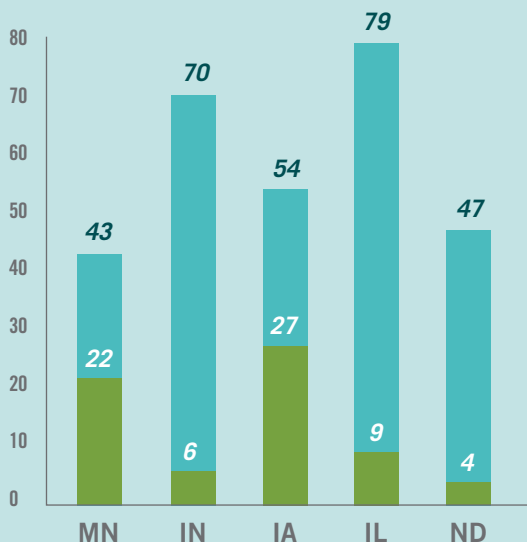
TWO IS BETTER THAN ONE

Either form of boron is beneficial to soybeans; however, applying only one form may not be sufficient. Fortunately, Aspire® is formulated with two forms to ensure adequate boron all season long. Its Nutriform® Technology combines potash with fast-release sodium borate and slow-release calcium borate into each granule, allowing for the flexibility to apply in the spring or fall. Additionally, Aspire provides uniform nutrient distribution across the field, unlike a traditional MOP fertilizer blended with granular boron. In fact, a recent study by The Mosaic Company found soybeans with sufficient levels of uniformly distributed boron more rapidly take up potassium, and ultimately increase yield compared to conventional MOP + granular boron treatments.

SOYBEAN YIELD (bu/ac)



PERCENT SOYBEANS PLANTED



Up to 60 percent of yield comes from soil fertility, but sometimes, weather will delay fertilizer application and in some cases planting, like what much of the nation has experienced the last few years. While weather may not permit spring fertilizer applications, planning for fall fertilizer options, like Aspire®, is an ideal way to ensure your soil and crops will get the nutrition needed for optimal yields.

MAY 19, 2018

MAY 19, 2019



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GROWERS ASSOCIATION

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SAVE THE DATE

Plan to attend. Plan to learn.



A Full Day of Information-Packed Events Designed to Make You a Better Producer.

The North Dakota Soybean Growers Association, North Dakota Corn Growers Association, North Dakota Soybean Council and North Dakota Corn Utilization Council have teamed up to host the Northern Corn and Soybean Expo.

Fargodome

February 4, 2020
7:30 a.m. – 4:45 p.m.



NorthernCornSoyExpo.com