

THE NORTH DAKOTA **Soybean** GROWER MAGAZINE

VOLUME 9 • ISSUE 2
APRIL 2020

INSIDE

Trade Agreements
Fuel Optimism
and Caution

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n the cover

A difficult fall harvest for many areas of North Dakota will likely translate into some challenging planting conditions this spring. But buoyed by several trade deals and the promise that comes with each new growing season, many farmers are anxious to put last year behind them and are hopeful for a better year in 2020.

—Photo courtesy of Wanbaugh Studios



The North Dakota Soybean Grower is published six times a year by the North Dakota Soybean Growers Association, 4852 Rocking Horse Circle South, Fargo, ND 58104. Website: www.ndsoygrowers.com.

To update subscription information, please call (701) 566-9300 or email info@NDSGA.com.

Send editorial and advertising materials to Nancy Johnson, 4852 Rocking Horse Circle South, Fargo, ND 58104, nancy.johnson@NDSGA.com. Publication of editorial or advertising material in the North Dakota Soybean Grower magazine does not imply endorsement by the North Dakota Soybean Growers Association. Check agronomic advice with local sources and always read and follow product labels.

Traveling the Transportation Path

One issue that the North Dakota Soybean Growers Association (NDSGA) has always supported is a good transportation infrastructure. Advocating for 129,500-pound loads with the correct axle configurations; pushing for more Department of Transportation (DOT) funding; and joining with the North Dakota Soybean Council to bring the DOT, Upper Great Plains Transportation Institute (UGPTI), legislators, and producers together for an educational summit are a few examples of that support from the last two years.

Asked to represent agriculture, the NDSGA joined with the General Contractors, counties and Motor Carriers Associations in press conferences to highlight highway and bridge needs. The NDSGA has also become a founding member of the newly formed Transportation Coalition. The Greater North Dakota Chamber of Commerce has provided leadership in starting and leading this effort in order to provide a united front for agricultural groups, contractors, manufacturers, county and township associations, and others so that we can plan and push for more adequate funding of our transportation systems.

In its first few meetings, the Transportation Coalition has developed and passed bylaws, and approved a logo which will be useful for recognition when using handouts for the legislature. Members also had a meeting with a Montana lobbyist who explained what a similar coalition was able to

accomplish and how the group went about it.

Most recently, Transportation Coalition members spent some time with North Dakota's new Department of Transportation Director, Bill Panos. Like most people at the meeting, I had not heard him speak and shared the group's unofficial opinion that his enthusiasm and background knowledge were impressive, even catchy. He stated that our state DOT is the smallest in the nation in terms of the number of employees, even though North Dakota maintains more road mileage than some other states, including Wyoming and Alaska. While the agency's budget is approximately \$1.4 billion, he mentioned that we are operating with a gap of around \$2 billion, a number which he asked us not to hold him to for now. North Dakota is in a better financial position than many states, and he mentioned some grants for which his department is applying. Panos is hoping that the state can use our substantial fund balances (i.e., Legacy Fund) to leverage our way into greater monies from the federal government because so many federal grants are dependent on matching funds. He noted that there have been no basic changes in state highway funding for 50 years while talking about how very low the price of money is now. Panos would like to move that needle.

There was talk about how he appreciates the UGPTI and, perhaps, would move it to be the research division of the DOT. He also recognized the difference between the weather in Wyoming



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

and North Dakota. Panos noted something to the effect of "In Wyoming, the cold weather comes in from the Rockies, makes a mess and moves on. Here, your cold weather comes in from Canada and sits here. Like a freezer." Panos acknowledged the deleterious effects that those temperatures have on the roads.

Panos seems to be on top of the situation in this state and thanked the veteran staff members who have helped him understand the agency. There seem to be many reasons to expect further dynamism from this man, and the NDSGA will be there to do what it can to find and to promote better funding for roads and bridges.

Association Delegates Caucus at Commodity Classic



Each year, North Dakota Soybean Growers Association board members participate in the annual Delegate Session held during Commodity Classic. After working with fellow delegates to fine tune resolutions to best reflect the North Dakota position on policy issues like water, farm programs, transportation and biofuels, delegates voted to approve a slate of resolutions. The American Soybean Association resolutions will be available shortly on soygrowers.com.

Delegates conferring in the photo are, front row, left to right, Greg Gussiaas, Carrington; Ryan Pederson, Rolette; Monte Peterson, Valley City. Back row, left to right, Josh Gackle, Kulm; Joshua Stutrud, Barton; and Kasey Bitz, LaMoure.

Taking What Comes

When we scheduled the Northern Corn and Soybean Expo for early February, we certainly didn't expect that some North Dakota farmers would still be trying to get their crops from the fields. Numerous farmers with whom I talked at the event are still trying to finish their fall-turned-winter harvest. Some growers missed the expo completely because they were attempting to harvest corn on that clear February day. Nearly 800 farmers did attend the expo to learn about new products and services, and to obtain more knowledge in order to make decisions for the year ahead.

From an agricultural perspective, 2019 was a remarkable year. In many cases, it was memorable for all the wrong reasons. Planting conditions were far from ideal for much of North Dakota. Then, late-season rain and snow added insult to injury. An ongoing trade war with China and a depressed agricultural economy just seemed to pile on the misery.

A funny thing has happened along the way: farmers have persevered. Most farmers I know have kept their heads down and worked through all the challenges. Despite a multitude of obstacles, they've

pushed on, knowing that tough times don't last, but tough people do.

Farmers received some good news late in 2019. China and the United States signed a long-awaited Phase One trade agreement that, hopefully, sets the stage for both short-term and long-term trade gains for North Dakota farmers. The U.S.-Mexico-Canada agreement was ratified and signed in the United States in January. Earlier in the year, the U.S. and Japan reached a trade deal, putting the U.S. on equal trade footing with most of its competitors. Those deals were supported by the North Dakota Soybean Growers Association, and we applaud their passage.

We know that the effects of the newly signed trade deals won't be felt immediately. Their true effect will likely take weeks and months to emerge. However, delayed gratification is nothing new for farmers. We're used to planting in the spring, knowing the harvest payoff won't come until months later.

Farmers will undoubtedly have challenges during the 2020 growing season. Much of the state's soil remains wet; thousands of acres of corn are still standing; and the real results from recent trade



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deals are unknown. Just as we've done every prior spring, we'll work the soil and plant the seed with the commitment to do our very best with whatever comes our way.



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
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Do you raise:

- Cattle Hogs Poultry Dairy

Do you currently grow soybeans?

- Yes No

Soybean Acres: _____ Total Acres Farmed: _____

How did you hear about NDSGA? (Please circle one)

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Casselton Farmer Focused on the **FUTURE**



Even though Josh Askew is only in his twenties, he's already farming with an eye on the future. That future could include the squirming bundle Askew hoists from the car seat in the back of his pickup.

"Now that I have a son, I'm trying to do everything I can, so he has an opportunity if he chooses to farm," Askew says about his 7-month old son, Jax.

Askew and his wife, Carley, farm with Josh's father, Jeff Askew, near Casselton, North Dakota. Josh Askew is a fifth-generation farmer. Together, the Askews raise soybeans, corn, sugarbeets and wheat.

Askew wasted little time getting fully involved with the family operation. After graduating from high school in 2011, he started farming in 2012. It was an easy transition to make because there was little doubt that farming would be his lifelong pursuit.

"Growing up, I was always with my dad," Askew recalls. "From the

start, I knew that farming was what I wanted to do, so that's what I did."

Challenging Start

Askew's entry into farming came at the tail end of a period with strong farm prices. An economic downturn for farm country since then has influenced how he operates.

"Pretty much all I've known has been low prices. That's definitely shaped how I manage now and how I will in the future," Askew says. "I've learned how to operate in these times because that's all I've known. I have plans of how I'll handle man-

aging things when the good times come again."

The Askews' strategy includes diversification. They raise a variety of crops to help spread their risk and to generate revenue opportunities. Josh Askew says that the family brought sugarbeets back into the rotation five years ago, and "the sugarbeets have really helped pick up the slack with lower bean prices. We have to look to other places to bring money in."

Keeping costs down is another strategy which Askew employs in order to maximize farm profitability. That practice includes keeping

the farm's equipment costs to a minimum. If money isn't tied up in farm overhead, there's more financial wiggle room when economic conditions are a challenge.

Dealing with persistent low commodity prices has forced Josh Askew to hone his grain marketing abilities in order to respond when profitable opportunities arise.

"You really have to stay on top of the markets because, when you get that chance, it goes quick. I've definitely had to sharpen my marketing skills and learn how to market a crop successfully," Askew admits.

Cultivating Leadership

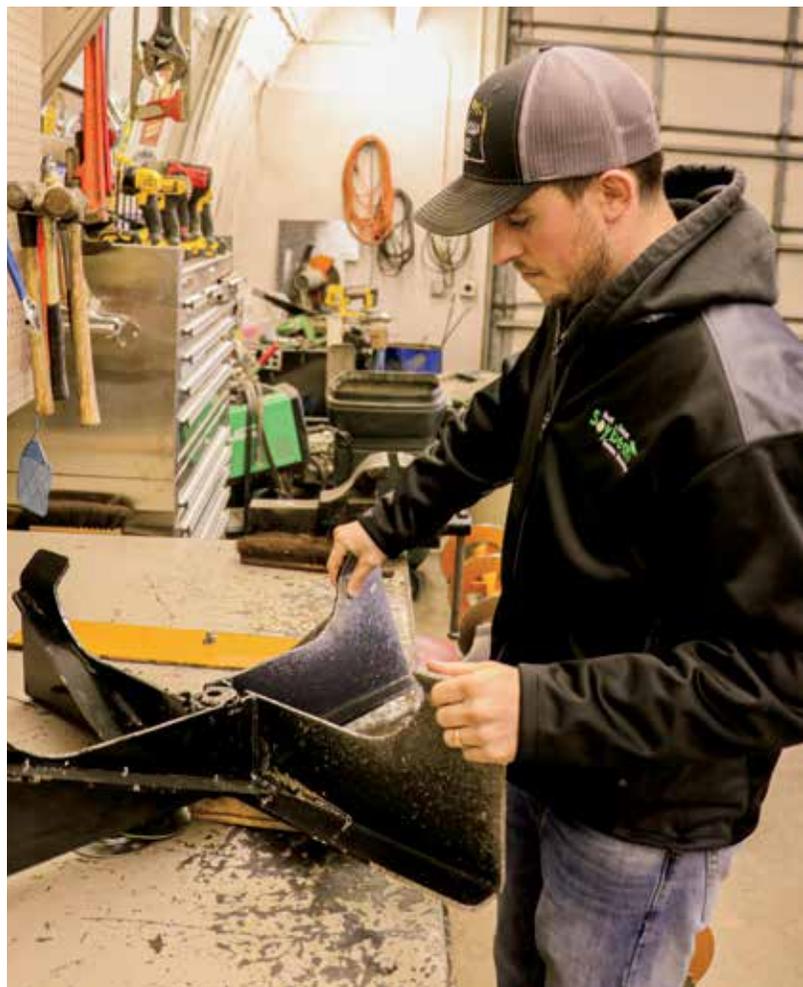
Askew is one of the newest members of the North Dakota Soybean Growers (NDSGA) Board of Directors. He became involved with the NDSGA after being selected to

participate in the American Soybean Association's Corteva Agrisciences Young Leader program. The program develops leadership skills among young farmers from across the United States and Canada.

"I always wanted to get involved in the industry because, if you're not involved, it's hard to complain when things don't go well," Askew says. "I thought the Young Leader program was a perfect step to get involved. I met a lot of good people and learned how boards work successfully."

Askew says that he is interested in policy decisions at the state and national level, especially those issues which affect farmers on a day-to-day basis. He also knows that it's vital for farmers to be represented in policy-making discussions.

"Farmers have to have a presence," Askew explains. "We have to



Josh Askew knew farming was in his future. He's working to ensure that opportunities exist if his son wants to carry on the family legacy.

be involved because it's extremely important for our future."

Looking Ahead

Like many North Dakota farmers, Askew is anxious to put 2019 behind him and to move forward. A wet spring, late planting, low prices and early snow gave many growers a gut punch. He's concerned about all the standing corn and the challenges that could present because as much as half of the state's corn crop remains unharvested. Despite the challenges, Askew is upbeat about the year ahead.

"With the trade deals that have been signed, especially the Phase One agreement with China and the U.S.-Mexico-Canada Agreement, there's finally some light at the end

of the tunnel. There has to be optimism because those deals are what we needed," Askew explains. "We got through the last couple of years, and if everyone sticks to the terms of these agreements, we should start to see some better times."

Having farmed for nearly a decade in challenging economic times, Askew's attitude goes beyond youthful optimism to true hope for agriculture's future.

"Especially with the trade deals that have been signed, 2020 could be our year," Askew says. "We've got so much good going for us right now that I hope it all falls into place, and we can start rolling again."

—Story and photos by Daniel Lemke



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Use Biodiesel: It's Your Product

In January, I was very fortunate to attend the 2020 National Biodiesel Conference and Expo in Tampa, Florida, along with two fuel suppliers and two transportation industry executives from North Dakota. Since all my equipment and trucks on my farm operation are diesel engines, I found this conference extremely interesting and educational. Be sure to read page 25 for more details on the North Dakota Soybean Council's (NDSC) annual "See For Yourself" program designed to send fuel suppliers and fleet representatives from our state to this conference to learn more about biodiesel.

North Dakota is fortunate to be rich in resources for traditional and renewable energy production. As a soybean farmer, you are a key contributor to the renewable fuel industry by growing soybeans and providing the leading feedstock used to make biodiesel. More than half of all biodiesel in the U.S. is made from soybean oil, and that's good news for North Dakota soybean farmers. As you prepare to get in the fields, consider utilizing a biodiesel blend.

Biodiesel is a high-quality, high-performance fuel to use in your diesel farm equipment and vehicles. Even low biodiesel blends such as B2 (2 percent biodiesel and 98 percent diesel) and B5 provide exceptional lubricity that reduces wear and tear on engines. Biodiesel is naturally high in cetane and low in sulfur. Biodiesel has a solvency effect that helps keep fuel systems, storage tanks and injectors clean. It is also a renewable, cleaner-burning fuel that is friendlier to the user and the environment. If that benefit wasn't enough, studies show that biodiesel adds \$1.10 of short term value to each bushel of soybeans.

Fueling your farm with biodiesel provides an opportunity to create a demand for soybeans. Ask your

fuel supplier for biodiesel blends. Through the efforts of the NDSC, more North Dakota fuel suppliers are now making biodiesel blends available as they gain familiarity and confidence with the high-quality diesel fuel. Spring and summer are the perfect time to begin using B10 or B20.

Facts About Biodiesel

- The specification for No. 2 diesel fuel allows up to 5 percent biodiesel because that amount does not change the fuel's physical characteristics. You might already be using it.
- Biodiesel's solvency keeps the injectors and fuel system clean.
- Using biodiesel provides better lubricity enhancement than any additive on the market, helping to prolong engine life.
- B20 has undergone more field testing than any other biodiesel blend.
- Blends from B6-B20 have their own strict specification which is approved by the petroleum and engine-manufacturer industries.
- B20 reduces tailpipe emissions on pre-2007 equipment and reduces the lifecycle greenhouse gas emissions by more than 15 percent when used in vehicles from any year.
- No vehicle modifications are necessary to fuel with biodiesel blends up to B20.
- Power and performance are virtually the same when fueling with blends up to B20.
- All diesel fuel in neighboring Minnesota is required to contain 20 percent biodiesel from April 15 to September 30.

Some people may say that they tried biodiesel 10+ years ago and had some problems. We encourage you to give biodiesel another try. It is true that there were



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some quality issues in the early days. Just like your cell phone and GPS-guided tractor, biodiesel has come a long way in the last 10 years. The industry has improved the quality standards and has implemented a BQ-9000 Quality Program; competition has eliminated biodiesel producers that were making poor-quality biodiesel. If you have questions, need help finding a fuel supplier that offers biodiesel or need help with a fuel-related problem, please call the Diesel Helpline at 1-800-929-3437, and a fuel-quality technician will assist you.

NDSC Congratulates Scholarship Recipients

Annually, the North Dakota Soybean Council (NDSC) sponsors two scholarships for undergraduate students and two scholarships for graduate students at North Dakota State University (NDSU).

NDSC's Undergraduate Scholarship is awarded to sophomores or juniors in crop and weed sciences, soil science, food science, animal science, agribusiness or agricultural economics who have a demonstrated a tie to soybeans; and are a U.S. citizen with a minimum 3.0 GPA.

NDSC's Graduate Student Scholarships are awarded to graduate students involved in research that benefits the soybean industry.

This year, Carley Zaharia, Pembina, North Dakota; and Brendan Hanson, Rochester, Minnesota, were awarded NDSC's Undergraduate Scholarships. Kelly Satrom, Mayville, North Dakota; and Ronald Trotta, Bayville, New Jersey, were awarded NDSC's Graduate Student Scholarships.

—Story and photos by staff



Brendan Hanson



Kelly Satrom



Carley Zaharia



Ronald Trotta



Bin Rescue Demo: A Powerful Illustration

Activity on the Fargodome floor stopped, and Northern Corn and Soybean Expo participants watched in near silence as members of the Sheyenne Valley Technical Rescue Team (SVTRT) demonstrated the process of rescuing someone trapped in a grain bin. The re-enactment was a timely exercise because grain bin entrapments and deaths have become all too common across farm country.

“There were 28 grain bin deaths in 2018,” says SVTRT Team Leader Rick Schock. “Since November 2019, there have been 14 deaths, and I may have lost track because I think there have been three or four since.”

Using a grain shuttle, multiple cameras and a crew of trained rescue team members, the SVTRT demonstrated how a rope rescue takes place. The setup simulated the procedures and highlighted the equipment which the trained firefighters use to perform rescues.

The SVTRT is made of specially trained firefighters from Kindred, Horace and Leonard. The departments cover a wide territory. Schock says that the Kindred Fire Department alone covers 96 square miles. Horace and Leonard also have sizable



Rich Schock, Kindred fire chief and head of the Sheyenne Valley Technical Rescue Team, describes a grain bin rescue demonstration to farmers.

rural territories, much being agricultural areas.

For Schock and other members of the SVTRT, the formation of a specialized grain bin rescue team had a personal motivation.

“We had a friend perish in a grain bin in Kindred in 2008,” Schock states. “He was 43 years old. He had encouraged me to join the fire department. After his accident, we talked about getting more involved in trying to expand our rescue capabilities.”

After another grain entrapment death in Kindred, Schock says that the cooperating fire departments put the rescue team’s development in high gear.

Schock explains that the SVTRT members from Leonard, Horace and Kindred each have a small cache of

equipment, along with personal jump bags, so they can get on the scene of an entrapment before the primary equipment from Kindred would get there with a rescue truck. Team members can start and get the rigging done to speed the process when the rest of the team arrives.

Schock says that the SVTRT has been asked by other fire departments to help with grain bin victim recovery so that members of the local department could distance themselves from uncovering the person whom they know.

“We know here that it’s not an easy thing. We uncovered the guy from our department,” Schock recalls. “It traumatizes everyone.”

The SVTRT has helped with successful grain bin rescues. Schock states that he has also helped other departments debrief following an entrapment rescue or rescue attempt.

Schock fears that, because a lot of North Dakota farmers struggled to get the crops in this year, a lot of out-of-condition grain may have been harvested.

“Grain quality may not be that great. Farmers are storing it in hope that it won’t go out of condition,” Schock explains.

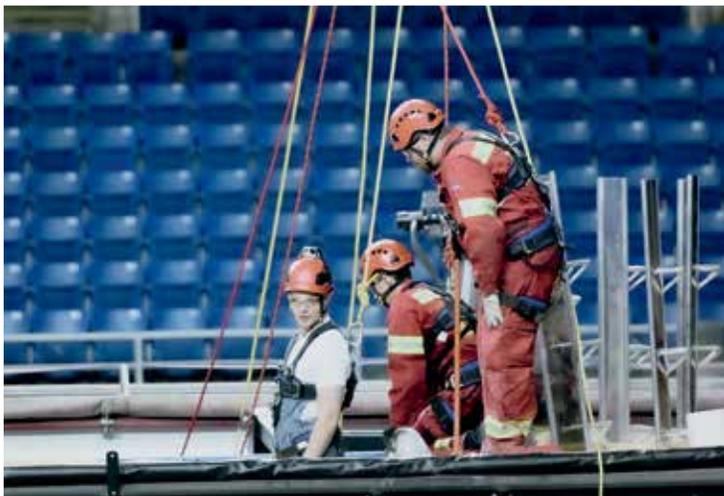
Grain stored at high moisture is a risk to go out of condition, so farmers may be more likely to have grain that has frozen or bridged inside the bins, making it more difficult to empty bins. Schock says that the grain bins’ sheer size also creates challenges.

Schock states that most of the farmers he knows who have survived a grain bin ordeal wish they never would have gone into the bin in the first place. He encourages anyone who has to go into a grain bin to invest in the proper safety harnesses and to never act alone.

In addition to demonstrating the tactics the SVTRT uses for a grain bin rescue, Schock says that one of the reasons he takes the time to talk with people about grain rescues is to reinforce just how traumatic an entrapment can be for all involved.

“There are a lot of ripples in the pond,” Schock explains. “It affects the entire community, not only the family farm itself, but everybody, including the first responders. Everyone is affected by it. How many bushels is your life worth?”

—Story by Daniel Lemke,
photos by Betsy Armour



Saint Thomas farmer Adam Redmann volunteered to be the “victim” during a grain bin rescue demo during Expo.



North Dakota Soybean Council Director Adam Redmann, left, and SVTRT Team Member Jared McCollum.



Difficult Harvest Creates Grain Storage Hazards

Because of difficult harvest conditions last fall, grain may have been stored with higher than normal moisture content, which could pose a danger to anyone working around the grain.

“High-moisture grain storage leads to bin unloading problems,” warns Ken Hellevang, North Dakota State University Extension agricultural engineer. “Grain may be in clumps due to high-moisture grain and foreign material being frozen together, or due to crusted grain flowing in chunks that block grain flow into the grain sump of the unloading system.”

Warming the grain to just above freezing will sometimes enable the frozen grain to flow, Hellevang says. People have also used a variety of other methods to break up the clumps, such as a plumbing snake through the unloading tube, high-volume air pressure to the sump through a tube in the unloading tube, or a grain-vac and plumbing snake combination.

“Do not go into the bin without following safety procedures,” Hellevang cautions.

Grain can also form columns along the bin wall or in other locations. Normally, the columns are broken loose with rods or bin unloading whip units from the bin roof. Poking at the grain while inside the bin may cause an avalanche that buries the person who is poking the grain. The grain can flow with such force that it will come through an open bin door and cover the person poking at the grain outside the bin.

“Make sure everyone, including family and employees, working around stored grain understands the hazards and proper safety procedures,” Hellevang says.

“Too many people ignore safety practices and suffer severe injury or death while working around grain,” Hellevang adds. “They get trapped in grain or tangled in auger flighting.”

Grain Bin Dangers

Never enter a bin while unloading grain or to break up a grain bridge or chunks that may plug grain flow.

Flowing grain will pull you into the grain mass, burying you within seconds. Unloading at 5,000 bushels per hour is moving almost 2 cubic feet of



Challenging harvest conditions have led to grain storage issues for some North Dakota farmers.



grain per second. A 2-foot-diameter by 6-foot cylinder has a volume of about 9 cubic feet, so a person can be completely engulfed in less than five seconds and would not be able to lift his/her feet in less than two seconds.

Stop the grain-conveying equipment, and use the “lock-out/tag-out” procedures to secure it before entering the bin. Use a key-type padlock to lock the conveyor switch in the “off” position to assure that the equipment does not start automatically or that someone does not start it accidentally.

Bridging occurs when grain is high in moisture content, moldy or in poor condition. The kernels stick together and form a crust. A cavity will form under the crust when grain is removed from the bin.

The crust isn't strong enough to support a person's weight, so anyone who walks on it will fall into the cavity and be buried under several feet of grain. Determine if the grain has a crust before any grain is removed. If work needs to be done with a crust, the task must be done before any grain is removed.

“To determine if the grain is bridged after unloading has started, look for a funnel shape on the surface of the grain mass,” Hellevang advises. “If the grain surface appears undisturbed, the grain has bridged, and a cavity has formed under the surface. Stay outside the bin and use a pole or other object to break the bridge loose.”

If the flow stops when you're removing grain from the bin but the grain's surface has a funnel shape and shows some evidence that grain has been flowing into the auger, a chunk of spoiled grain probably is blocking the flow. Entering the bin to break up the blockage will expose you to being buried in grain and tangled in the auger.

If the grain has formed a vertical wall, try to break it up from the top of the bin with a long pole on a rope or through a door with a long pole.



Stored grain is requiring additional attention from farmers this year. Experts warn farmers to use property safety protocol when working with stored grain.

A wall of grain can collapse, or avalanche, without warning, knocking you over and burying you.

Never enter a grain bin alone. Have at least two people at the bin to assist in case of problems. Use a safety harness and rope that prevents you from descending rapidly when entering a bin.

“If you get partially submerged in flowing grain, the force pulling you in is several hundred pounds, far exceeding the ability for a person holding a rope to prevent engulfment,” Hellevang says. “Again, never enter a bin with the unloading system running.”

Rescuing a Trapped Person

If someone gets trapped, take these steps:

- Shut off all grain-moving equipment.
- Contact your local emergency rescue service or fire department.
- Ventilate the bin using the fan if temperatures are moderate. At cold

temperatures, the trapped person faces the risk of hypothermia.

- Cut holes in the bin sides to remove grain if the person is submerged. Use a scoop on a tractor, cutting torch, metal-cutting power saw or air chisel to cut V- or U-shaped holes equally spaced around the bin. Grain flowing from just one hole may injure the trapped person and cause the bin to collapse.
- Form a retaining wall around the person by using a rescue tube or other material to keep grain from flowing toward the person. Then, remove grain from around the individual. Walking on the grain pushes more grain onto the trapped person.
- Don't try to pull a person from the grain. The grain exerts tremendous forces, so trying to pull someone out could injure the person's spinal column or cause other damage.

Other Dangers

Getting tangled in the unloading sweep auger is another major hazard.

Entanglement typically results in lost feet, hands, arms or legs; frequently, death occurs due to the severe damage.

Although you shouldn't enter a bin with an energized sweep auger, it may be necessary in some instances, Hellevang says. All sweep augers should have guards that protect against contact with moving parts at the top and back. The only unguarded portion of the sweep auger should be the front point of operation.

If someone must go into the bin, make sure to have a rescue-trained and equipped observer positioned outside the storage bin. Use a safety switch that allows the auger to operate only while the worker is in contact with the switch.

Never use your hands or legs to manipulate the sweep auger while it's in operation. The auger should have a bin stop device that prevents the sweep auger from making uncontrolled rotations.

—Story by Dr. Ken Hellevang, NDSU, photos by Greg Wanbaugh



Far From

Business as Usual

North Dakota farmers are no strangers to challenges, but spring 2020 promises to give many growers a few more headaches than normal to get their crops planted.

Wet soils, early fall snows and thousands of acres of standing corn have combined to make the prospects of timely planting unlikely for many farmers. Unlikely, but not impossible.

“Nature is going to dictate,” says Bryon Parman, a North Dakota State University (NDSU) Extension ag finance specialist.

Parman says that it’s too early to give up on planned crop rotations or planting intentions, but the decision may be determined by factors outside the farmer’s control.

“Everything is still in play, but we’re going to need some help. We can’t have a late arriving spring or wet weather,” Parman explains. “If we’re cold and wet, soil dries out slower, and that will compound the problems.”

Many North Dakota farmers dealt with wet conditions in the spring of 2019. Some people pushed their planting date beyond normal. That late planting yielded challenges in the fall with wet crops that were a challenge to harvest or remain unharvested.

“I don’t think farmers will push

planting beyond final crop insurance dates this year. Some did that last year and were dealing with very wet corn in the fall,” Parman says.

Parman expects more farmers to take the prevented planting option rather than trying to push planting dates if conditions are poor. He recommends that farmers run budget projections for the coming year with the assumption that they will have to take prevented planting on some acres.

Farmers are often hesitant to take prevented planting because the option is less profitable than getting a crop in the ground.

“Prevented planting is breakeven at best,” Parman explains. “If we roll into spring and conditions haven’t improved, it may be the best option because, as we know, later planting also impacts yields.”

Parman says that farmers may still be wavering with their planting decisions because so many big commodity price movers are still up in the air. Variables include the effect of recently signed trade deals, including an agreement with China. Parman explains that the Phase One details were light following the initial signing. China may buy U.S. soybeans in the spring or may wait until harvest. The decision will affect price movement, possibly influencing what

farmers choose to plant.

Parman recommends that farmers utilize NDSU’s online crop-compare tool as a decision aid. The tool allows farmers to make some base assumptions about yield, price and input costs in order to determine the potential net returns per acre. Parman says that costs are often stable and that yield history is pretty well known, but the markets move. The tool helps farmers decide which crop looks to be most profitable for the year.

“Revise as many times as you can until you have to decide,” Parman suggests. “It seems like every other week we’re getting new information, and news can move markets.”

The crop-compare tool is available at <https://www.ag.ndsu.edu/farm-management/tools>.

Decisions, Decisions

Given the wet soils and snowpack over much of North Dakota, NDSU Extension Agronomist Hans Kandel expects the soil in many areas to dry slowly and late. He anticipates that proper soil conditions and soil temperatures will be delayed.

“We are most likely going to be late and wet,” Kandel says.

Kandel explains that late planted soybeans give up yield potential. However, if farmers can get soybeans

seeded by the second or third week in May, the yield potential is still good. If growers are planting into cold, wet soils, other concerns exist because those conditions are optimal for fungal activity.

“Stand establishment will be challenging,” Kandel contends. “Farmers may need to use seed treatments to get the desired stands.”

Kandel says that, if farmers can get the previous crop off, they should be able to get into fields in a reasonable time in order to get soybeans planted. As the planting date gets later, soil temperatures will likely increase, and there will be more solar energy to get stands established.

Variety selection is vital for soybean farmers, Kandel says. Anticipated planting date, soil conditions and disease pressures will all determine what growers should plant.

“If farmers can get in the fields from about May 15-30, they can stick with a normal maturity,” Kandel says. “Later than that, they may need to consider a different, early maturing variety.”

Kandel cautions that farmers may not have their first choice of varieties. Farmers should spend time selecting the best variety, but they may also need plan B if planting is delayed or if their first seed choice is unavailable.



Handle with Care

The number of wet fields across North Dakota is a concern for Aaron Daigh, an NDSU soil physics professor, who says that soil compaction and smearing will be of concern during spring field activities. Soil frost depths are shallower than typical, allowing fields to thaw and start draining earlier than normal. However, the amount and frequency of the spring rains may prevent soil drying and delay planting activities this year.

“Wet spring conditions, especially for fields that have crops over wintering, will likely result in considerable amounts of prevented planting acres for 2020,” Daigh says.

Many farmers struggled to get crops harvested during the fall. Daigh says fields that endured substantial

rutting during the fall harvest will have subsoil compaction. If ruts happened, there is some level of serious compaction in the subsoil.

“This damages the soil’s ability to drain and limits how much of the old root zone will be proliferated by the next crop,” Daigh explains.

Daigh says that farmers can expect a 15 to 30 percent decrease in the following crop’s yields for areas that had substantial ruts if that field is going into either corn or soybeans. Similar yield consequences may be observed for 2 or 3 years.

Daigh says that farmers who were able to harvest before the fall’s wet conditions or after the soil froze and are looking to perform some level of tillage to manage crop residues should avoid tillage compaction and smearing by waiting for the soil to dry.

“If it is too wet to plant, then it is also too wet to till,” Daigh says.

Daigh explains that, if farmers go into wet fields, they should adjust tire pressures to distribute more of the load over more ground; control field traffic and minimize unneeded passes on fields; and, most importantly, be patient.

“Let fields dry as much as possible before entering for field operations,” Daigh adds.

Standing corn will complicate field work. If farmers with unharvested corn are able to harvest before the end of the 2020 planting windows, Daigh says that they should consider a shorter season crop or variety, or prevented plant, depending on the amount and frequency of spring rains.

“For the no-till folks, then this may be quite close to business as usual

with only minimal delays for getting the next crop planted,” Daigh explains. “For tillage folks, this certainly will not be a business as usual as the likelihood of adequate conditions for non-damaging tillage is very low. If we get an early thaw and little rain, then we may see little to no delays in planting. Any other combination of weather events will result in tillage folks having to go a year without tillage before planting.”

Farmers can check out a short NDSU video that gives strategies for dealing with soil compaction: bit.ly/NDSUsoilcompact.

—Story by Daniel Lemke,
photo by Greg Wanbaugh

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Northern Corn and Soybean Expo



ATTRACTS A CROWD



For the third consecutive year, the Fargodome served as epicenter for North Dakota's corn and soybean industry. The 2020 Northern Corn and Soybean Expo attracted nearly 800 farmers and agribusiness representatives for the one-day event.

The Expo featured general sessions addressing trade issues, marketing

opportunities, and information about risk management from representatives of the U.S. Department of Agriculture (USDA). Expo co-chair Mike Langseth from Barney, North Dakota, says that the lineup of speakers and timely topics generated a lot of interest among the state's farmers.

"A lot of folks were especially interested in hearing from the Farm

Service Agency (FSA) folks with all the interest in farm program signup," Langseth explains.

The FSA manages farm programs put forward in the 2018 Farm Bill. Farmers had until March 15 to sign up for the Agriculture Risk Coverage or Price Loss Coverage programs. Expo attendees were also interested in disaster program details.

"FSA has suddenly become a bigger part of a lot of farm operations than it has been in the past," Langseth says, "so a lot of farmers were very interested in what they had to say."

In addition to presentations on the main stage, a series of breakout sessions were held, covering a wide range of topics from agronomic concerns for corn and soybeans to the influence of



AgriTalk Host Chip Flory shared his insights on global market trends.



NDSU student Anna Lemm helps register farmers during Expo.



North Dakota Soybean Council Secretary Mike Langseth co-chaired 2020 Expo.

the biodiesel industry. Other topics included risk management strategies, weed control tactics and resources to support rural mental health.

“Times have been tough,” Langseth states, “so it’s important for farmer(s) to know what to watch for within their own families and with their neighbors when it comes to managing farm stress.”

Trade disruptions have been a major issue for North Dakota farmers since the U.S. and China started a trade war. A session featuring leaders from the American Soybean Association, the United Soybean Board and the National Corn Growers Association updated farmers about the expected effects for the Phase One trade agreement with China. Langseth says that many growers who attended the Northern Corn and Soybean Expo recognize that, despite a signed Phase One deal, market conditions and commodity prices haven’t improved as quickly as most farmers would

have liked; however, the agreement is, hopefully, a long-term improvement.

“I think we’re all optimistic for a return to more normal trade with China. That would be good for North Dakota,” Langseth says. “Hopefully, this is a long-term win that gets us a better trading relationship with China that’s more fair.”

A grain-bin rescue demonstration by the Sheyenne Valley Technical Rescue Team drew crowds of onlookers to the Fargodome floor. The team staged a simulated grain-entrapment rescue to illustrate the process for rescuing a person who is trapped by grain.

“People really appreciated the demonstration,” Langseth explains. “The demonstration was really important, especially now. Grain bin safety is a big deal all the time, but especially this year since a lot of grain went into the bin wet, and that moisture can lead to problems if grain goes out of condition. The demonstration was a good reminder of what can



Dr. Andrew Friskop and Dr. Sam Markell of NDSU Plant Pathology Department answered questions at Research Pavilion.



Checkoff
Investment



John Phipps was the MC for the day and spoke in the morning about current world markets.

happen if farmers go into a bin, and it was a good reminder that farmers need to use good safety practices.”

The Northern Corn and Soybean Expo included the annual meetings for both the North Dakota Soybean Growers Association and the North Dakota Corn Growers Association.

In addition, about 75 exhibitors took part in the trade show which was held on the Fargodome floor.

“The staff did a great job of putting the Expo together,” Langseth says. “Everyone I talked to enjoyed the day and got something valuable out of attending.”

The 2021 Northern Corn and Soybean Expo is scheduled for Monday, February 22, 2021.

—*Story by Daniel Lemke, photos by Betsy Armour*

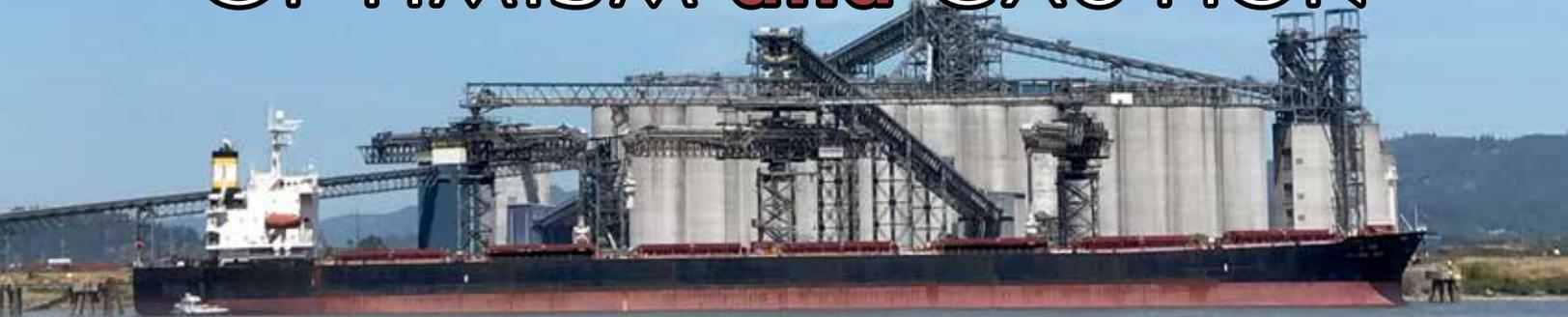


Managing risk panel included Dr. Frayne Olson, far right, of NDSU.



Minnesota Millennial Farmer Zach Johnson shared his social media success story.

Trade Agreements Fuel OPTIMISM and CAUTION



In one frenzied January week, the trade landscape for North Dakota farmers changed. Just how dramatic those changes become still remains to be seen.

China and the United States signed the long-anticipated Phase One trade deal on January 15. The agreement marks a significant de-escalation in a two-year-old trade war between the U.S. and China. The next day, the U.S. Senate voted to approve the U.S.-Mexico-Canada Agreement (USMCA), replacing the long-standing North American Free Trade Agreement.

The agreements are seen as positive news for North Dakota farmers who have been hit particularly hard by the trade war with China.

Phase One

With the Phase One agreement, China agreed to buy \$80 billion of agriculture goods in the next two years. In 2017, China purchased \$24 billion of U.S. commodities. China pledged to use that amount as the baseline for each of the next two years as well as to buy an additional \$12.5 billion in 2020 and an additional \$19.5 in 2021.

“It’s a step in the right direction,” says Kulm farmer and American Soybean Association (ASA) Director Josh Gackle. “Time will tell how it plays out, how terms are enforced, and whether or not China will comply with the conditions of the agreement.”

The agreement doesn’t list specific purchase quantities for each commodity, but oilseeds, including soybeans, are prominently identified.

“We have to be encouraged by this agreement,” says Monte Peterson, an ASA director from Valley City and the U.S. Soybean Export Council’s vice chair. “This starts to de-escalate some of the long-term trade tensions, so it is a good starting point.”

Purchases will be measured by calendar year. Because farmers in Brazil and Argentina are in their harvest period during the early spring, soybean industry experts caution that large-scale purchases from the U.S. may not happen until the 2020 harvest.

Despite agreeing to additional purchases, China made no formal commitment to remove retaliatory tariffs placed on U.S. soybeans. When the Phase One agreement took effect February 14, China halved extra tariffs that had been in effect since last September on crude oil, soybeans, pork and beef. According to Reuters, cuts applied only to the additional tariffs imposed by Beijing in September, and not to the total duties on goods built up since 2018. Total tariffs on soybeans fall from 30 percent to 27.5 percent.

Chinese government officials sometimes waive the tariffs completely, allowing Chinese companies to buy U.S. soybeans without paying the duty. Until the tariff is completely

removed, North Dakota’s farmer leaders remain cautious.

“There are still a number of things that need to be addressed,” Gackle says. “They (Chinese officials) haven’t removed their tariffs. Chinese companies are continuing to buy, and that’s a good thing, but traders, buyers and shippers are still looking to see how China will follow through on the Phase One agreement.”

“I’m concerned that retaliatory tariffs are still in place,” Peterson echoes. “Customers are still concerned whether or not the U.S. can be a reliable supplier.”

Peterson is concerned that, until the tariffs are removed, there are no guarantees that waivers will be granted; the Chinese government could rescind a waiver on a whim, placing companies at risk of spending millions of dollars more for a soybean shipment than they anticipated. That uncertainty could cause some companies to look elsewhere to buy soybeans.

Non-Tariff Barriers

One key provision in the Phase One agreement affects the approval of biotechnology traits. The Chinese government often takes as long as seven years to approve new biotechnology traits. That approval time is after traits have already been approved in the U.S. With the new agreement, China has agreed to a 24-month, on average, process for trait approval. Peterson is concerned that individual

approvals could still take substantially longer than the stipulated 24 months.

Peterson and other soy industry leaders also hoped that the Chinese approval process would run simultaneously with the approval process for the country where the biotechnology trait was developed. That timeline doesn’t appear to be the case.

“According to what we understand, China will not start the approval process until approval has been granted from the introducing country,” Peterson explains.

“Making progress on non-tariff barriers is more of a long-term process,” Gackle explains. “They’re (Chinese officials’) willingness to modify their structure will have a long-term effect.”



ASA President Bill Gordon at Phase 1 Signing.



Kulm farmer and ASA director Josh Gackle is encouraged that recently signed trade agreements benefit North Dakota farmers.

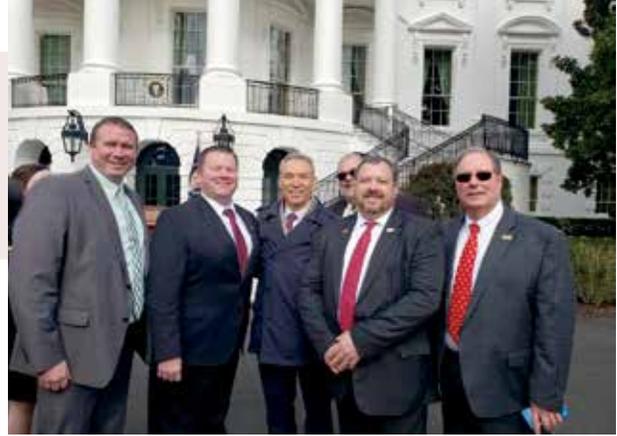
USMCA

The U.S. Senate’s approval sent the USMCA to President Trump’s desk in January. The USMCA passed overwhelmingly in both the House and Senate. The agreement solidifies the trading relationship with the United States’ closest customers.

“To get that through took a lot of effort,” Gackle says. “Between Mexico

and Canada for corn, soybeans and livestock, there’s a lot in this agreement that should help North Dakota producers.”

Mexico is the number two market for whole beans, meal and oil, and Canada is the fourth-largest buyer of U.S. soybean meal and the seventh-leading buyer of U.S. soy oil. Soybean leaders say that the USMCA



American Soybean Association board members, including President Bill Gordon of Minnesota, left, met with USDA Deputy Secretary Stephen Censky, center, during the USMCA trade agreement signing in Washington, D.C.

is essential to sustain the growth realized in those two countries under the North American Free Trade Agreement (NAFTA). With NAFTA, U.S. soybean sales to Mexico quadrupled and to Canada doubled.

“The USMCA impact may be bigger to other sectors than to soybeans specifically, but whenever you can get an agreement ratified, it lends to a better opportunity for the next one,” Peterson says. “It shows we can get it

done, even if we wondered if we were ever going to get to reach the end game.”

Gackle credits the U.S. trade representative with negotiating a good deal. ASA and North Dakota Soybean Growers Association leaders pushed for passage of the agreement and expressed relief that a deal was finally reached.

—Story by Daniel Lemke, photos by Daniel Lemke and Betsy Armour

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Soybean industry leaders are watching to make sure China lives up to terms of the trade agreement.

Market Movement is All About

DEMAND

As the host of a national ag radio show, Chip Flory is used to talking to and hearing from farmers. In the past year, there has been no shortage of topics or concerns to fill the airwaves. The chatter hasn't subsided, especially as farmers make plans for the year ahead.

Flory says that, for many farmers across the country, 2020 will be a better year than 2019 if they can just get in the fields in a timely manner.

"Most growers just want a clean spring," Flory says, "but that needs to come with an improvement in revenue opportunities. If not, having a clean spring is a moot point."

Flory is the editorial director for Farm Journal and the host of Agri-Talk. He hosted two hours of his talk show from the Fargodome during the Northern Corn and Soybean Expo. He also delivered a keynote session about market outlook to wrap up the day's events.

Grain markets are still struggling with the results of a two-year trade war with China. Retaliatory tariffs on agriculture products, especially soybeans, put North Dakota farmers in the middle of that impasse. Exports to China through the Pacific Northwest dried to a trickle.

"When you're the target, that puts you at the tip of the spear," Flory says.

Despite below-average corn and soybean production across many areas of the United States, grain supplies remain strong, although they are

smaller than a year ago. Flory argues that, while global grain usage is high, demand needs to surge for prices to increase.

Trade Progress

Flory says that trade is still the number one issue for most corn and soybean farmers and that the U.S. has achieved some successes in the past year. A trade deal with South Korea provided the template for other agreements, including a treaty with Japan which is an important market for protein. The agreement should help to meet Japan's demand for poultry, pork and beef.

The U.S.-Mexico-Canada Agreement (USMCA) is a win for U.S. agriculture, according to Flory. Mexico is the top export market for U.S. soybean meal. Mexico is also a strong market for pork products.

"They're (Mexico) a huge importer of hams," Flory explains. "That creates demand for products U.S. consumers also want. That's when you get demand that counts."

Even with an initial deal, Flory says that the biggest trade uncertainty remains with China. The Phase One deal still generates the most questions among people. Flory said that he's read the agreement and still has questions about how it will play out in reality.

China has agreed to buy \$80 billion of U.S. ag products over the next two years and has agreed to speed up the process for biotechnol-



Chip Flory talked trade issues at the Northern Corn and Soybean Expo.

ogy trait approval. However, there is enough ambiguity in the agreement to give farmers and others reason for skepticism.

"Is there any real accountability in the agreement? We will only find out if they don't live up to the terms," Flory says. "If we get to August and we see that they're not buying much, then it becomes a question of if there was any accountability in this agreement. We're going to learn a lot more about China in the next few months."

Other Prizes

President Trump will be visiting India in the coming months, and many analysts believe he is going to use trade deals with Japan, South Korea, Mexico and Canada as the template to work on a mini trade deal. India is a notoriously difficult trade market that has high import tariffs and challenging non-tariff trade barriers.

With a population of over 1 billion and a growing middle class, India is an attractive market. However, expectations need to be tempered.

"We have to be realistic," Flory contends. "The challenge with any trade agreement is not only what are we going to sell to them, but what are

we going to buy from them? Right now, it's mostly service."

Flory says that trade discussions started with the United Kingdom. He expects that crafting a trade deal with the European Union might be the toughest task of all.

2020 Expectations

Flory estimates that U.S. farmers will plant about 178 million acres of corn and soybeans in 2020: 84 million acres of soybeans and 94 million acres of corn. That ratio could change based on weather and market movement.

"Soybeans are at the greatest risk. If weather or the market changes, we could see more acres move to soybeans," Flory says. "If we get up to 87 million acres, then we're going to have a bigger carryover."

Flory says that getting increased net farm income from the marketplace and not from a government check will make for a brighter 2020.

"We're going to get there," Flory says. "Demand from global middle-class expansion is happening. Our income will be market-driven again."

—Story by Daniel Lemke,
photo by Betsy Armour

Work the Problem

North Dakota State University Extension Crops Economist and Marketing Specialist Frayne Olson channeled the movie Apollo 13 when encouraging farmers about

their decision-making process for the coming spring. In the 1995 film, Ed Harris, playing the role of mission control head Gene Kranz, tells the ground crew, scrambling to return NASA's damaged space capsule and

flight crew safely to earth, to work the problem and not make the problem worse by guessing. Olson encourages farmers to take the same problem-focused approach as they prepare for the 2020 growing season.

Much of North Dakota is dealing with saturated soils; thousands of corn acres remain unharvested;

and many farmers were unable to get tillage done or fertilizer applied because of the condensed fall harvest window. Throw in the uncertainty of the conditions that they'll face this spring, and farmers are understandably anxious about the season. Olson suggests that farmers think through and plan for possible scenarios, so

growers can react to a situation for which they've already planned, rather than shoot from the hip when it's time to make decisions.

"We don't know what the spring will look like, and that's a big stressor," Olson says. "If we knew, it would be a lot easier to plan."

Olson encourages farmers to plan for how they will manage their operation if their farm experiences a favorable spring with a gradual thaw, no flooding and a limited amount of added spring rains.

"We know there will still be struggles because of all the standing corn, and a lot of farmers didn't get fall tillage done or fertilizer applied, but if we get a nice spring, what changes would farmers make? We have time now to put a plan together," Olson says.

On the flipside, farmers also need to plan for a spring that's not ideal. Olson explains that most farmers are jittery about the likelihood of a late,

wet spring. While those conditions aren't preferred, farmers need to consider how that scenario might change farm-management plans.

A late-arriving, wet spring may mean that farmers have to change their game plan and to rely on custom fertilizer applicators or hire custom tillage done because the planting window may be too condensed for farmers to do it all themselves. Growers may need to enlist the help of neighboring farmers or consider renting or leasing additional equipment because of tight tillage timelines. Olson says that it's better to consider those alternatives and to check on availability now instead of being caught shorthanded later in the spring.

Farmers have already made some big decisions for the year ahead, including signing up for the farm programs outlined in the 2018 Farm Bill. Growers should also have completed crop insurance sign up for



Frayne Olson (far right) addressed risk management concerns with farmers at the Northern Corn and Soybean Expo in Fargo.

2020. With those big decisions made, farmers can turn their attention to other concerns.

Seed selection is one variable that could change dramatically, depending upon the spring conditions. Many growers have already purchased seed, but they could be forced to make adjustments in maturity if the planting dates are delayed. If conditions keep farmers from the field too long, producers may need to adjust which crops they plant.

"Check with your supplier on seed availability and their exchange policy," Olson recommends. "That may influence where you buy."

Risk management extends beyond making the best agronomic decisions and includes marketing. Olson says that, for simplicity, many growers rely on contracts with local elevators or processors as the farmer's main marketing strategy. Farmers can lock in a price, but they guarantee delivery.

"The challenge with delivery contracts is not knowing how many bushels you'll have," Olson explains.

Olson states that, in the spring of 2019, corn and soybeans had a nice mid-May price rally, an indication that the market was encouraging farmers to continue trying to get crops planted. Farmers knew the price was good, but they were unsure how many bushels of production they would have, so many farmers missed the marketing opportunity.

"I'm encouraging farmers to think differently," Olson says. "You

can accomplish the same thing by working with a broker and selling contracts to the futures market, and you don't have to guarantee delivery. It's actually (a) low-risk choice."

Instead of a delivery contract, Olson explains that growers can use futures contracts as a marketing tool. Farmers can lock in a price, then reverse position if they don't have the bushels to sell. Olson says that the futures market can be a way for farmers to take advantage of price rallies without being committed to deliver grain.

"If farmers don't know their acreage or their production, the temptation is to not do anything with marketing," Olson states. "With the futures market, you can lock in your position, then reverse it, if necessary, with just a phone call."

Olson says that farmers need to work with their banker and a broker to get the proper accounts set up, which does take some planning. However, the futures market helps farmers with their marketing flexibility.

By definition, risk management means working to avoid an adverse outcome. Olson hopes farmers develop a plan to avoid adverse outcomes by looking ahead.

"Farmers may have to look at some tough scenarios, but if they look at possibilities ahead to time," Olson explains, "they'll be able to come up with solutions in the calm of the moment, not in the heat of battle."

—Story by Daniel Lemke,
photo by Betsy Armour

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Helping Farmers Fight Resistance

Resistant weeds cost U.S. farmers \$2 billion annually, according to University of Wisconsin researcher Vince Davis. The checkoff saw that and took action.

Take Action is a farmer-focused, educational platform which is designed to help farmers manage herbicide, pesticide and fungicide resistance.

One of Take Action's most popular resources, the Herbicide Classification Chart, was recently updated for 2020. The checkoff joined forces with Christy Sprague, who holds a doctorate in crop and soil sciences, and is a weed extension specialist from Michigan State University, along with a multitude of other researchers around the country to update the chart. The collaboration provides farmers with the most accurate, up-to-date information to fight weeds on their farms.

"The Take Action program provides farmers with the science-backed

resources to help us make the best pest management decisions possible for our farms with the future in mind," said Bubba Simmons III, a checkoff farmer-leader and soybean farmer from Leland, Mississippi.

The Herbicide Classification Chart isn't the only tool in the Take Action tool belt. Take Action has a complete kit, including herbicide, fungicide and insecticide classification charts as well as a fungicide efficacy chart, which is available to download or order from the Take Action website.

In July 2019, Take Action released a mobile app which is available on the App Store and Google Play. The app has features such as The Ultimate Weed Management Checklist; 13 weed management fact sheets; the Take Action Pesticide Application Record; and herbicide, fungicide and insecticide classification charts.

What happens if a farmer finds Palmer amaranth in his/her field without knowing that one plant

can produce 1.5 million seeds in a growing season? What starts as a few glyphosate-resistant plants can suddenly overtake an entire soybean field. Timely weed identification and proper management can prevent such an outbreak.

Even for farmers who haven't dealt with herbicide-resistant weeds, it's important that they're familiar with the weeds that pose the biggest resistance threat as well as the best production practices to manage the weeds.

Launched in 2013, Take Action encourages U.S. soybean farmers to adopt management practices that lessen the effects of resistant weeds and that preserve current and future technology.

"The industry is at a critical juncture in managing resistance to herbicides as well as other products," says Larry Steckel, who holds a doctorate in crop sciences and is a row-crop weed management professor at the University of Tennessee. "New

pesticides are being developed and registered for use at a much slower pace than in the past.

"Because of this, it is becoming more and more important to actively delay the development of resistance to herbicides and other pesticides currently in our toolbox." Steckel continues. "This is why implementing management strategies—like rotating modes of action, using the full labeled rate and incorporating cultural practices—is crucial."

In response to this growing problem, agriculture-technology companies BASF, Bayer, DuPont, Dow, Monsanto and Syngenta came together with the soy checkoff in 2011 to establish a unified approach to educate farmers about weed management practices. From there, the checkoff invested in research by weed scientists at universities across the country and an educational program for farmer outreach, creating Take Action.

Five commodity organizations have also joined the effort. Take Action encourages farmers to arm themselves with more weapons, such as crop rotation, residual herbicides and multiple modes of action, to wield against weeds. It's all about being prepared.

"Taking the time to understand the products you use and apply them responsibly will not only save you money today by ensuring the most efficient balance of product," said Simmons, "but also, it will help save all farmers money by keeping these tools available."

Keep up with the latest updates by following Take Action on Facebook at www.facebook.com/IWillTakeAction; Twitter at www.twitter.com/TakeActionWeeds or by visiting the Take Action website at www.iwilltakeaction.com.

—Story courtesy of the United Soybean Board, photo by staff



NDSU's Joe Ikley helps farmers identify the differences between pigweed species, including waterhemp and Palmer amaranth at KMOT Ag Show in Minot on January 30.

Soy Checkoff Continues to Provide RETURN ON FARMER INVESTMENTS

According to a recent independent economic study, the soy checkoff continues to translate farmer investments into significant benefits for U.S. soybean farmers. The results of the 2019 return-on-investment (ROI) study, which is required by the U.S. Department of Agriculture, found that U.S. soybean farmers received \$12.34 in added value for every dollar they invested in the soy checkoff.

“These have been some of the toughest years to be a soybean farmer,” said USB Chair Jim Carroll III, a soybean farmer from Brinkley, Arkansas. “We have to be wise and careful with our investments in this business, and I’m proud that our soy

checkoff continuously adds value to our industry.”

The ROI study analyzed the demand- and supply-enhancing activities funded by the soy checkoff between 2014 and 2018 and was conducted by Dr. Harry Kaiser, a leading research expert at Cornell University in the field of agricultural economics and its application to commodity checkoff programs.

“The study finds that USB’s activities have had a positive and significant impact on soybean demand between 2014 and 2018,” Dr. Kaiser said.

Key findings included:

- U.S. soybean farmers received \$12.34 in added value for every

dollar they invested in the soy checkoff over the last five years.

- Every dollar U.S. soybean farmers invested in international promotion activities produced \$17.95 in return value.
- Soy checkoff investments made toward demand-enhancing research and promotion returned an average value of \$18.18.
- Collaborative soy checkoff investments in production research that leverage industry and academic partners continue to provide promising returns to U.S. soybean farmers, returning an average value of \$9.42.

—Story courtesy of
United Soybean Board

Welcome, Linda!

In January, the North Dakota Soybean Council (NDSC) welcomed Linda Briggs of West Fargo, North Dakota, as our part-time office assistant. She is the friendly voice you hear when calling our office and the smiling face you see when visiting.

Briggs’ career spans many years of service to the agricultural community. In October 2018, she retired from the Northern Crops Institute (NCI) at North Dakota State University after 16 years of service as the office manager. While at NCI, she enjoyed meeting guests from all over the world and working with the ag commodity groups. Linda and her husband, Wes, have two grown children and four grandchildren.

“It is an honor to work with people in agriculture and assist in finding ways to feed the ever-increasing world population,” says Briggs. “Working with (the) NDSC allows me to stay connected with agriculture. Thank you for this exciting opportunity!”

—Story by staff, photo by
Betsy Armour



Linda Briggs, NDSC
office assistant

Living Ag Classroom 2020



NDSU agriculture college students Jacy Hauge and Hannah Gress discuss soybeans with Fargo area fourth graders.

In January, February, March and April, the North Dakota Soybean Council educated over 4,000 fourth graders in Bismarck, Fargo, Jamestown and Lisbon; students learned about soybeans’ importance

to the state, including how soybeans are grown and the array of products made from this “miracle bean.” The Living Ag Classroom events are collaborative efforts by many North Dakota agriculture and commodity

groups; these events teach fourth-grade students how their food gets from the farmer’s field to the grocery store’s shelves.

—Story and photo by staff

Charcoal Rot of Soybeans: First Evidence of Major Damage in North Dakota

In mid-August 2018, a soybean field with extensive disease damage was observed in Cass County.

There were large patches of wilting and dead soybeans spread over a 120-acre field (Figures 1 and 2). An investigation about the disease's cause was immediately undertaken, and the disease was identified as charcoal rot caused by the fungus *Macrophomina phaseolina*. The field was monitored for three weeks. On September 8, it was examined again for the progress and amount of disease. An estimated 60 percent of the plants were either dead or diseased (Figure 3). There were few patches of living plants without symptoms. A drone was utilized to photograph the field in order to more accurately measure the diseased and healthy areas. This amount of charcoal rot damage had not previously been observed in a North Dakota soybean field. This disease had been observed previously on soybeans in other North Dakota fields, but in general, the disease did not occur each year; the amount of disease within a field was low; and this disease was not considered a major problem for this northern production area. Charcoal rot had been observed on other crops, such as corn and sunflowers, in the area.



Large patches of dead and dying soybeans due to charcoal rot on August 14, 2018.



Same area as depicted above, but most plants have died or are almost dead on September 8, 2018.

Charcoal rot of soybeans is a disease that occurs worldwide. In the United States, it is more common in southern production areas. In Kansas, for example, it is considered a major disease. This soil-borne pathogen has a host range of over 500 plant

species, including crops such as corn, sunflowers and dry beans. A unique characteristic of this pathogen is that, following infection which can occur in the seedling stage, the fungus usually remains dormant in the host until environmental stresses occur around the time of flowering. High temperatures and drought stress are two of the most important factors for the development of charcoal rot. Disease can rapidly develop under those conditions. The leaves turn yellow, wilt and remain attached to the stem, and the plant dies. As the fungus develops, it eventually produces survival structures called microsclerotia which appear as small, black dots in the tissue. These dots give the tissue a greyish-black color, resembling powdered charcoal, hence the name for the disease (Figure 4). This symptom, which is in the roots or basal part of the stem, is diagnostic for the disease. These microsclerotia

overwinter in the soil with the plant debris and can infect a susceptible host the following year.

The 2018 soybean field was in an area that, between April and July, received about half the rainfall compared to adjacent areas, and plants were likely under considerable stress by late July. In addition, there were moderate to high levels of soybean cyst nematode (SCN) in the field which likely added to the plant stress, although the soybean variety had resistance to SCN. The field had a history of soybean and dry bean production which may have helped to build up the pathogen's level over the years, even though there was no obvious outbreak of charcoal rot in previous crops. All soybean varieties are considered susceptible to charcoal rot, and unfortunately, there are few management options for this disease. Practices that reduce drought stress are always helpful, and seed treatment with an appropriate fungicide may help minimize early infection. High seeding rates should be avoided, so there are fewer plants competing for moisture. Crop rotation to small grains or other non-hosts will help reduce the amount of fungus in the soil. Whenever any disease appears in a soybean field, it is a good practice to have it identified because management options will depend on an accurate diagnosis. A helpful reference for disease identification in soybeans is the North Dakota State University and University of Minnesota Extension publication Soybean Disease Diagnostic Series PP1867 by Samuel Markell and Dean Malvick. This field guide consists of 23 disease descriptions and photos; it was funded by the North Dakota Soybean Council and the Minnesota Soybean Research and Promotion Council.

—*Story and photos by Dr. Berlin Nelson, Jr.; and Dr. Sam Markell, Department of Plant Pathology, NDSU*



Symptoms of charcoal rot in the stem base and taproot of four infected plants on September 8, 2018. The greyish-black tissue color is characteristic of the disease. One healthy plant is on the left side.

North Dakota Farmer Represents U.S. Soy on a Mission to Bangladesh and Pakistan



Pisek farmer Darren Kadlec recently traveled to the Asian subcontinent to meet with current and potential U.S. soy customers. Kadlec, who serves as a director for both the U.S. Soybean Export Council (USSEC) and the United Soybean Board (USB), was part of a U.S. soy delegation that visited Bangladesh and Pakistan in early February.

Opening the Door for U.S. Soy

The growing Asian subcontinent (ASC) region offers great potential to export U.S. soybeans and soybean products.

The rise of U.S. soy imports to Bangladesh and Pakistan over the past several years is due, in part, to the USSEC's ongoing efforts in India, where reverse marketing work drastically increased the consumption of domestic soy, opening the door for higher-quality and more sustainable U.S. soy to be imported into the surrounding ASC countries.

Bangladesh

"Bangladesh is an exciting, emerging market with a lot of promise for poultry and aquaculture producers, along with crushers," says USSEC Regional Director-ASC Pam Helmsing.

U.S. beans accounted for 67 percent of the country's 1.4 million metric tons (MMT) per year of whole soybean imports over the last two years. Crushing is a significant activity in Bangladesh, producing meal and oil for use in the country's feed and food industries. Demand for poultry meat and fish continues to require more soybean meal, and the demand for vegetable oil is growing relative to palm oil.

Participants engaged with Bangladeshi soybean buyers, poultry and aqua producers, and other stakeholders. The trade delegation had meetings with Ambassador Earl Miller and Foreign Agricultural Service (FAS) Ag Attaché Tyler Babcock.

The U.S. soy trade delegation



Pisek farmer Darren Kadlec and USSEC representative Khurram Shahbaz overlook tilapia and catfish production ponds at Krisibid Fisheries outside Dhaka, Bangladesh.

toured the City Crush Organization's (CCO) processing facility near Dhaka. The facility was unloading and processing U.S. soybeans which originated from the Pacific Northwest (PNW) while the group toured the facility.

"It was an exciting coincidence to see PNW sourced beans being offloaded at the crush plant in Dhaka," Kadlec says. "I'm sure there were North Dakota beans in there, and as a grower, it's really gratifying to see your product at the end-buyer, especially at a new crush plant in an emerging market."

CCO employees expressed a strong commitment to U.S. soy, claiming that the facility exclusively crushes U.S. soybeans and prefers their quality, which the employees say has better protein and oil content for refining. CCO traces its support to its participation in last summer's PNW Soy Bazaar, which was organized by the USSEC, together with the North Dakota Soybean Council and other Northern Great Plains QSSBs.

Pakistan

"U.S. soy quality is well recognized in Pakistan," states Helmsing, "and the industry appreciates the technical and trade services offered by the U.S. soy industry."

The U.S. soy team had several meetings with Pakistan's crush indus-

try, learning that the country needs both oil and meal from soybeans. The country shifted from a soybean-meal market to almost exclusively whole beans, importing more than 2 MMT per year, of which the U.S. enjoys a 65 percent market share.

Poultry is, by far, the largest consumer of commercial feeds in Pakistan. Although growth has currently hit a plateau, Dr. Muhammad Aslam, the chairman of the Pakistan Poultry Association, expects around 5 percent growth per year over the next 5 years. Aquaculture is a small, but growing, sector where U.S. soy has been doing development work for several years, including In Pond Raceways Systems (IPRS), with more expected in the future.

Ambassador Paul Jones was eager to hear impressions from Kadlec and other grower leaders about their visit. Jones expressed an ongoing commitment to help U.S. soy exports that went to Pakistan to grow and a willingness to help resolve market access issues. Ag Counselor Rey Santella helped to support the mission and is another strong advocate for U.S. agriculture in Pakistan.

—Story by Jen Del Carmen, USSEC, photos courtesy of the USSEC



Kadlec inspects soybean meal that has just left the oil extractor at the City Crush Organization in Ruppang, Narayangang, Bangladesh.



Trade Still Rules



Several newly signed trade deals have provided reason for optimism among North Dakota soybean farmers, but soy industry leaders know there is still work to be done in order to grow soy demand and to gain back the market share which was lost during the trade war with China.

American Soybean Association (ASA) Executive Director Ryan Findlay and United Soybean Board (USB) Vice President of Communications and Marketing Strategy Mace Thornton joined National Corn Growers CEO Jon Doggett at the Northern Corn and Soybean Expo to address timely topics facing the corn and soybean industries.

Findlay says that ASA, the national soybean policy organization, is focused on three main issues for 2020: trade, biodiesel and infrastructure.

Trade issues have dominated the soybean landscape for the past two years. Findlay points to agreements with Japan, the passage of the U.S.-Mexico-Canada Agreement (USMCA) and a Phase One trade deal with China as successes. The Phase One agreement with China should be viewed as the beginning, not a finished product, according to Findlay.

“Even with Phase One signed, the trade war with China is still going on. We need to hold China accountable,” Findlay says. “Now, we have to figure out Phase Two and get them to

rescind their tariffs.”

With the Phase One trade deal, China has agreed to buy \$80 billion of U.S. agricultural products over the next two years. Findlay told growers that the details inside the agreement shouldn’t be overlooked.

“Eighty billion dollars of purchases is important, but looking at the long term, the guts of what’s in the agreement will be more important to farmers in this room,” Findlay contends. “Biotech trait approvals have to average 24 months, plus China has dropped some barriers to U.S. pork, beef and poultry.”

Tariffs remain in place for U.S. soybeans sold into China. The Chinese government does allow state-owned companies to purchase U.S. soy products duty free, and the government occasionally grants tariff waivers to private companies that want to buy from the U.S.

“I expect the exemptions to continue,” Findlay says. “That’s not the best way to trade. Purchases should be open to all grain traders.”

Thornton says that the USB’s checkoff-supported efforts focus on market development, new uses and getting better soybean varieties on the market. Market development efforts include work in Europe, Africa, Asia and India.

“We are seeing increase activity pivoting to Europe, a there’s a lot of chatter about India,” Thornton says. “The U.S. Soybean Export Council

is spending a lot of time looking at new areas of demand, including India, Nigeria, Egypt. They’re also establishing Soybean Centers of Excellence in several countries to tell the story of U.S. soybeans.”

Findlay and Thornton are concerned that the trade war with China has cost them global soybean market share which the country may never get back. Findlay explains that U.S. Department of Agriculture economists expected it would take 10 years or more for the United States to get its market share back from other soybean suppliers such as Brazil and Argentina.

“We’ve certainly sent a message to Brazil to plant more,” Findlay says.

“South America will command more of that market.”

Findlay states that the biodiesel industry has been hit hard by small refinery exemptions and by the federal government not upholding the volume requirements for biodiesel which were delineated in the Renewable Fuel Standard. There are state-level activities building the demand for biodiesel in several states, including Minnesota, Illinois and Missouri. There are emerging efforts to boost biodiesel use in California, Oregon and Washington. Many New England states use biodiesel for home heating oil; that product is called Bioheat.

“New York and New Jersey run municipal vehicle fleets on biodiesel, and that’s all due to checkoff investment,” Thornton says.

Thornton states that the USB directors are currently reviewing about 600 funding requests for initiatives intended to support marketing, infrastructure and research projects.

“Directors will likely fund about 150 projects, totaling about \$70-80 million,” Thornton says. “They’re all intended to make (the) soy sector better and to make your farm better.”

—Story by Daniel Lemke,
photos by Betsy Amour



North Dakota Soybean Council Executive Director Stephanie Sinner, left, and Mace Thornton of USB, right.



See For Yourself Trip Provides a New

VISION

for Biodiesel

As a new decade begins, a new biodiesel “VISION 2020” was unveiled at the National Biodiesel Conference & Expo. Fresh from celebrating the extension of the biodiesel tax credit after a two-year lapse, more than 700 attendees joined together, energized to meet new, ambitious goals and to overcome obstacles in order to further the biodiesel market’s development. As part of its ongoing effort to increase the availability and utilization of biodiesel in the state, the North Dakota Soybean Council (NDSC) sent a group of fuel suppliers, fleet representatives and a farmer leader to the conference to see for themselves the role that biodiesel plays in the fuel market and the VISION.

Heading into the conference, the See For Yourself participants noted that their experience with and knowledge of biodiesel was limited and that they were looking forward to the opportunity provided by the NDSC to learn more. At the conference, they received an in-depth education about

biodiesel, an update on federal policy successes and barriers, and an overview of state and national strategies for moving biodiesel forward in 2020 and beyond. Conference sessions covered a wide variety of topics which were important to the group, such as biodiesel fuel quality, the Renewable Fuel Standard, new diesel technology and biodiesel’s important role with low-carbon fuel policies. A vehicle display and ride-and-drive allowed the attendees to experience the latest offerings approved for use with B20 firsthand. Networking with other attendees was another important component of the conference, allowing the participants to learn from others who had biodiesel experience.

After attending the conference, the participants shared that their understanding of and confidence in biodiesel had increased greatly and that they would now look at biodiesel differently. Nathan Viergutz of Cities Area Transit in Grand Forks noted that biodiesel is a cleaner fuel choice which can be used to meet sustainability goals without the expensive



From left to right: Mitchell Reese, Andy Fjeldahl, James Johannesson, Rob Rose and Nathan Viergutz.

vehicle and fueling equipment that is needed for other alternative fuel options. Mitchell Reese of United Quality Cooperative in New Town observed that the biodiesel industry is much larger than he realized; fuel suppliers will either lead the way or will fall behind. Andy Fjeldahl, Farmers Union Oil Company of Berthold and Carpio as well as the chairman of the North Dakota Petroleum Marketers Association, was impressed by the strict quality standards for biodiesel and encouraged more biodiesel education in North Dakota for the fuel industry and end users. Trucking company Magnum LTL, Inc. already fuels with biodiesel blends in other states because of mandates and incentives; James Johannesson can see biodiesel use expanding in North Dakota as well.

Rob Rose, a soybean farmer and NDSC director from District 5 in Wimbledon, was excited to attend the conference “to learn more about biodiesel and bring back information to share with other directors and soybean farmers.” He left the conference with a new understanding of biodiesel, stating “I now understand that biodiesel production is a very refined process, and I would be very confident to use it.” Armed with a full set of notes from the conference, Rose is confident that he could talk with his local fuel supplier and others

in his community to help spread the word about biodiesel’s performance and benefits.

Biodiesel plays an important role in adding value to each bushel of soybeans grown in North Dakota. By providing the opportunity for North Dakotans to attend the National Biodiesel Conference and to see the benefits and opportunities that biodiesel provides, the NDSC is opening doors to increasing the availability and use of biodiesel in North Dakota, helping the state reach its VISION for soybean demand and soybean farmer profitability, and contributing to the national VISION for biodiesel growth which was set forth at the conference.

Vision 2020

Biodiesel, renewable diesel and renewable jet fuel will be recognized as mainstream, low-carbon fuel options with superior performance and emission characteristics. In on-road, off-road, air-transportation, electricity-generation and home-heating applications, use will exceed six billion gallons by 2030, eliminating over 35 million metric tons of CO₂-equivalent greenhouse gas emissions annually. With advancements in feedstock, use will reach 15 billion gallons by 2050.

—Story and photos by
Kelly Marczak, MEG Corp.



Nathan Viergutz and Rob Rose took a spin in a Ford F250 that is powered by B20.

U.S. Soy A Solution for Animal and Human-Health

The Soybean Industry's "Protein-First" Approach is the Most Effective Way to Feed the World Sustainably

While America's farmers are competitive, the products they produce can complement each other to nourish a growing global population.

That's the take for the soy checkoff regarding protein and its place on the plate. It's also the rallying cry of a new initiative unveiled in October at the World Food Prize celebration in Des Moines, Iowa.

"U.S. farmers understand that feeding the world falls primarily on their shoulders," says Polly Ruhland, the checkoff's CEO. "That's because protein is the foundation of a quality diet."

Conducted in partnership with the U.S. Soybean Export Council, the American Soybean Association and the World Initiative for Soy in Human Health, the Protein First initiative reinforces the critical role that U.S. soybeans play in attaining global food security.

A reliable supply of high-quality protein, soybean leaders say, is a powerful source of nutrition for people, animals and economic growth.

The subject is near and dear to Ruhland's heart.

"Soy is the ideal direct source of protein for people because it is readily available and sustainably produced," says Ruhland. "Soy contributes to protein provided in many commonly consumed foods found in our local grocery stores as well as new dietary choices gaining popularity."

Protein First communicates the benefits of U.S. soybeans as a complete plant protein. Containing an adequate proportion of each of the nine essential amino acids required in the human diet, soy serves not only as a primary source for high-quality animal feed, but also as a growing source of people's protein.

Serving nutrient-dense food is the most effective and efficient way to feed the world, Ruhland adds. Pro-



duction can readily keep pace with the changes in protein demand which are driven by growing economies and personal affluence.

"When society starts with a certain level of protein such as soybeans, they move toward additional sources as their incomes rise, including consumption of more pork, beef, poultry and fish," Ruhland says. "What's great for farmers is that these are markets for soybeans, too."

While farmers often grow multiple protein-based foods, the marketing and branding efforts directed toward consumers can sometimes turn competitive, and, at times, are even adversarial.

Ruhland rejects that philosophy. "When it comes to protein choices, I've observed the conversation subtly erode from speaking to the benefits of all protein to focus on an alleged competition between plant and animal proteins," Ruhland says. "In the grand scheme of things, this isn't a contest at all. When all proteins are part of a balanced diet and work collaboratively to nourish the world, everyone wins."

For the Protein First initiative to reach its full potential, farmers must look and think beyond domestic markets and marketing.

U.S. citizens, for example, can choose from many different protein sources. This creates competition,

and that competition can morph into pitting one protein against another one. Internationally, many people don't have a choice.

"They (people in other countries) must use the protein they can afford or is readily available," Ruhland said. "Therefore, it's best to provide all kinds of proteins. We want the people around the world to have access to the protein they need and want."

Achieving that goal will take collaboration between animal- and plant-based protein producers. Ruhland says that, by working together, farmers can answer many critical challenges,

such as nourished versus malnourished, environmental improvement versus degradation and confident customers versus doubtful ones.

From a Farmer

For John Heisdorffer, former chair of the American Soybean Association's board of directors, Protein First is more than just words on paper. The farmer from Keota, Iowa, said that the opportunity to feed the world in a nutritious and sustainable manner is a call to action.

"It's something I take very seriously, and it is intrinsically important to all U.S. soybean farmers," says Heisdorffer, who recently harvested his 48th soybean crop. "Soy is part of the larger solution to nourish our population."

Heisdorffer states that he strives, every day, to be part of the food-security solution, a commitment forged from travels to countries where he observed soy protein being fed to school children. It was the kids' main source of nourishment.

"It gives me pride to produce something in Iowa that's used throughout the world and that contributes to better and more productive societies," says Heisdorffer.

—Story and photo courtesy of United Soybean Board

USB Protein First Initiative: At a Glance

Goal: To meet the future demand for protein using methods that preserve our planet for the next generation. To nourish a global population which is estimated at 9 billion people by 2050, every form of U.S. protein, including animal protein, soy and other plant proteins, will be needed. Animal- and plant-protein producers must work collaboratively with one another for the well-being of both the world's population and our shared planet.

Fit for soy: With an adequate proportion of each of the nine essential amino acids, soy serves not only as a primary source for high-quality animal feed, but also as a growing source of people's protein.

Importance of protein: Demand for protein continues to grow. However, in some areas of the world where populations face economic challenges, there are limited options to access protein-rich diets. With those people in mind, the soy checkoff is collaborating with other agricultural organizations, such as the U.S. Soybean Export Council, the American Soybean Association and the World Initiative for Soy in Human Health, to ensure that affordable, high-quality protein such as soy has a place in people's daily diets.



CommonGround North Dakota

“Understanding Food Labels”

Presentation Helps Volunteers Talk with Consumers

CommonGround North Dakota (CGND) recently partnered with the Center for Food Integrity (CFI) to create a volunteer and non-ag consumer friendly PowerPoint presentation titled “Understanding Food Labels.” The presentation’s main goal is to assist CGND volunteers when starting conversations with non-ag consumers

about food-label marketing myths and absence type claims.

Consumers are often confused and misinformed by the marketing on today’s food labels. There are many marketing terms, such as grass fed, free range, organic, GMO free, antibiotic free and gluten free, that can cause confusion for consumers. It can make the average grocery store trip exhausting and frustrating, especially when consumers are trying to make good decisions about what to place in their grocery carts. Because of the ambiguity with some of these marketing myths and claims on food labels, consumers now, more than ever, are questioning food safety, nutrition and the process in which their food is grown.

In order to dispel the myths and claims on food labels and to communicate what these marketing terms actually mean, CGND has provided webinar training to its volunteers, teaching them how to effectively

deliver the presentation to non-ag consumers. This approximately 30-minute customizable presentation is available for CGND volunteers to utilize in their communities during events such as lunch-and-learns, service club meetings, classroom presentations or other types of activities.

During the “Understanding Food Labels” presentation, the CGND volunteer effectively leads the consumer audience through a virtual trip at an average, everyday grocery store. Consumers are taken through the produce aisle, meat aisle and dairy case as the CGND volunteer points out marketing terms on labels, such as gluten free, hormone free, non GMO and others, to better assist the audience in deciphering exactly what these food labels are trying to communicate or mean. The CGND volunteer provides information about the food-label marketing terms and also tries to relate any questions the consumer audience may have about

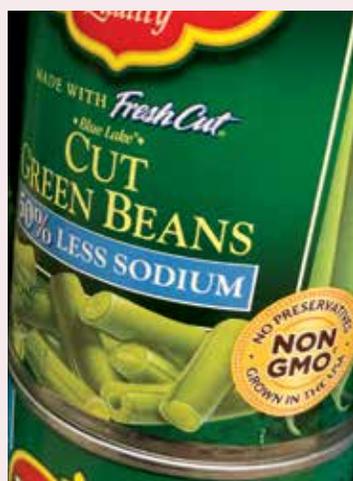


how he/she operates his/her farm.

If you would like more information about the “Understanding Food Labels” presentation or would like to schedule a CGND volunteer to give the presentation in your community, please email info@commongroundnd.com. The “Understanding Food Labels” presentation was made possible through sponsorships by Ag Country Farm Credit Services, Farm Credit Services of Mandan and Farm Credit Services of North Dakota.

CGND is a group of farmers who work to dispel myths about modern agriculture and to build trust in farming communities and farm families. If you would like more information about CGND or are interested in becoming a volunteer, please visit the website: commongroundnd.com.

—Story and graphic by Betsy Armour,
CommonGround ND



New Maps Issued for Pre-1976 U.S. FWS Easements

On December 23, 2019, the Department of Interior issued new policy guidance that prioritizes mapping of all pre-1976 U.S. Fish and Wildlife Service (FWS) waterfowl production area (WPA) easements in a new format overlaid on a high-quality aerial image. New maps list the acreage subject to the easement's restrictions against draining, filling, and burning wetland areas.

The guidance also creates the right to appeal maps if a landowner

disagrees with the location and boundaries of the protected wetland areas. Maps not appealed are likely to be considered final. To appeal, landowners must follow these steps:

1. **Within 40 days of receiving their letter, contact their local Refuge Manager with objections.**
2. If the landowner and Refuge Manager cannot agree on a revised map within 30 days, the landowner may appeal to the FWS Regional Director, who will review and make a decision within 45 days. If the Regional Director grants the appeal, the map will be revised.
3. If the Regional Director does not grant an appeal, the landowner may appeal to the Director within 30 days. The Director will review and make a decision within 45 days. If the Director grants the appeal, the FWS map will be revised.
4. If Director does not grant an appeal, a copy of the final map will be issued. The Director's decision will be considered final agency action

and the landowner may seek judicial review in federal district court.

Initial contact should be submitted in writing. Success in the appeal is likely to turn on the landowner's presentation of technical evidence demonstrating the likely location and boundaries of wetland areas on the date the easement was granted. Generally, this is a three-step process:

1. Verify whether there is a drainage facility map with the easement showing areas exempt from the easement's restrictions. This can be confirmed by reviewing the recorded easement or submitting a Freedom of Information Act (FOIA) request for all records related to the easement.
2. Aerials and light detection and ranging (LiDAR) data should be reviewed by a wetland specialist for evidence of inundation and surface water. Aerials prior to and closest in time to when the easement was conveyed are the most persuasive.

Aerials can be obtained online from the U.S. Geological Survey and State Water Commission, and from the USDA.

3. Verify the acres mapped in part two do not exceed the acres FWS purchased in the easement summary record. The summary is not a part of the easement; it is simply a log created by FWS. Courts have held, however, that the number of "wet acres" FWS purchased in its summary record is the maximum acres protected by the easement. Summary records can also be obtained by a FOIA request for all records created when the easement was negotiated.

If you have questions about FWS easements or a letter and map you have received, do not hesitate to contact the attorneys of Rinke Noonan Law Firm at 320-251-6700 or find us online at www.RinkeNoonan.com.

—Story by Kale R. Van Bruggen and Jayne E. Esch, attorneys at Rinke Noonan Law Firm



Ostlie Honored During 100th Anniversary Celebration

Rick Ostlie, a Northwood, North Dakota, farmer, was president of the American Soybean Association (ASA), from 2006-2007. He and more than 20 former presidents were honored during the celebration of ASA's 100th anniversary recently at Commodity Classic. Photos from each president's term were featured during the event. These photos highlight Ostlie's term.





Western Soybean School: Getting it Right

Dickinson March 31, Bismarck April 1, Minot April 2, 9:15am – 4pm (local time)

Join us to learn the ins and outs of soybean production in Western North Dakota. A wide range of experts from across the state will discuss soybean management for Western North Dakota. Topics include: Nitrogen fixation, Soybean & soil management, Agronomic management, Weed management, Insect management, Disease management, Grain storage, and Hands-on demonstrations. Speakers include: Joe Ikley, T.J. Prochaska, Greg Endres, Ryan Buetow, and Chris Augustin. Workshops are at the NDSU Dickinson Research Extension Center (1041 State Ave. Dickinson, ND), Burleigh County Extension Office (3713 E. Bismarck Expy., Bismarck, ND) and North Central Research Extension Center (5400 Hwy. 83 S. Minot, ND). 4.5 CEU's have been requested for Certified Crop Advisors. Event times are 9:15am-4pm (local time)

Individuals with disabilities are invited to request reasonable accommodations to participate in NDSU-sponsored programs and events. To request an accommodation(s), please contact (person or department sponsoring the event) at (phone or e-mail) by (specific date) to make arrangements.

Scan me to register!



Register Online at:

<https://tinyurl.com/ub5f7se>

Please register before March 27

Ryan Buetow 701-456-1106

Chris Augustin 701-857-7682

THE CASE FOR LIVESTOCK



Domestic animal agriculture is the biggest consumer of soybeans in the United States. Compared to neighboring states such as South Dakota and Minnesota, livestock production remains an underdeveloped industry in North Dakota.

According to the North Dakota Department of Agriculture, there are about 1.83 million beef cattle and calves in North Dakota. The state is home to 62 dairy herds and nine turkey farms that produce about 1 million birds annually. About 150,000 hogs are raised in North Dakota each year. The North Dakota Soybean Council estimates that animal agriculture delivers \$3 billion to the state's economy each year.

The North Dakota Livestock Alliance (NDLA) works to support and to expand opportunities for animal agriculture in the state. More than an outlet for grain, animal agriculture proponents advocate for an increased livestock presence as a tool for rural economic development and as a way to keep young people in rural communities.

The NDLA's second annual livestock summit drew dozens of people to the Blackleg Ranch near McKenzie in order to consider the effects of animal agriculture and how to move livestock production forward in the state. The event included a panel of experts who addressed challenges and opportunities for North Dakota

livestock because the process of expanding animal agriculture in North Dakota isn't always easy.

Overcoming History

Foster County Commissioner Pat Copenhaver lived through the community division caused by efforts to locate a dairy in the county in the late 2000s. The opposition was often vocal, but the dairy operation was eventually permitted and built. He says that the operation has become a major contributor to the community.

"It's been a great development for us," Copenhaver says. "We need to be open to these types of operations. The only way to grow is to give these ideas half a chance."

Kenton Holle owns and operates a dairy south of Mandan. He also serves on the NDLA's Board of Directors.

"I think we're gaining some traction

on this whole idea of animal agriculture in North Dakota," Holle says.

In many cases, Holle believes that challenges with building or expanding livestock facilities stem from confusion about animal agriculture. "Consumers don't know what to believe," Holle contends.

Copenhaver says that the main concerns he's heard about siting livestock facilities involve road use and odor concerns.

"If an operation wants to come in, we have to make clear that we've gotten a lot better at handling manure," Copenhaver says.

There's also the need to overcome examples of bad operators who have tainted public opinion about animal agriculture. One way to change attitudes is to highlight positive examples.

"There are places with a lot more people and a lot more hogs who can

make it work. We should be able to figure out how to do it here," Copenhaver explains. "We can use all the economic development we can get."

Larry Syverson, North Dakota Township Officers Association, agrees that bad operators can contribute to a stigma that is difficult for prospective operators to overcome in their quest for permits. He says that many North Dakota counties and townships are without specific animal agriculture ordinances.

Road use is a valid concern, Syverson says, because North Dakota doesn't tax farm buildings. In South Dakota, tax on livestock buildings helps townships pay for the road maintenance required by additional truck traffic which is tied to livestock. That mechanism isn't in place for North Dakota, so townships may not have the necessary resources to pay for repairs.

"We have to address how to pay for road use," Syverson says.

"Roads are a discussion in every state," says NDLA Executive Director Amber Boeshans. "It's become common for livestock producers to engage in a road-use agreement with the township to ease those concerns."

Economic Drivers

Ellen Huber, economic development director for the city of Mandan, is the past president of the North Dakota Economic Development Association. She says that each region of North Dakota has its own needs



Karl Hoppe, NDSU Extension, addressed feed resources at the NDLA Livestock Summit.

and wants. Some regions think about animal agriculture as a possible economic driver while others do not. She says that animal agriculture holds the potential to generate needed economic activity in the state.

“When you’re adding value to ag products and selling them, that’s adding new wealth,” Huber says.

An economic analysis by South Dakota State University (SDSU) shows that one sow is worth nearly \$2,500 over her lifetime; that one market hog is valued at over \$200 and that one dairy cow generates over \$13,500.

The SDSU research illustrates that a 5,000-sow barn requires approximately 6,250 tons of feed each year, coming from 1,090 acres of corn production and 1,077 acres of soybean production. The economic potential is immense, but prospective livestock operations need to address

the concerns that consumers and communities have.

“It comes down to education and communication,” Huber says. “You have to build trust.”

Trust is created by addressing the citizens’ past experiences as well as environmental and workforce concerns.

“Have conversations early and often with gatekeepers at the city or county level,” Huber says. “Give them experiences at comparable, well-run operations.”

Copenhaver says that the dairy in his area which generated early contention has overcome a lot of initial concerns by hosting tours and bringing the community together to see how the farm operates, how the animals are treated and how manure is managed. The family operating the dairy is active in the community, with the schools and around town.

Holle says that his family’s Northern Lights Dairy has hosted seven open houses.

“Two years ago, our open house attracted over 2,200 people,” Holle says. “It’s a chance for people to see someone who is just like them.”

Pork Challenge

Hog operations face different challenges with transparency. For biosecurity reasons, access to hog facilities is limited.

“It’s hard to break down the fear of the unknown when hog farmers can’t take people through because of biosecurity risk to their pig’s health,” Boeshans says.

Technology is helping to give consumers a clearer view of modern hog production. Boeshans says that the NDLA is partnering with the National Pork Producers Council for

a virtual reality hog-farm tour. The efforts should help to address how farmers care for each animal.

“Transparency is important because that helps to build trust,” Huber contends. For many consumers, “animal care is almost more important than nutrition.”

Boeshans agrees that open communication is vital for the success of new or expanding livestock operations because “nobody wants to see a community torn apart by misinformation.”

North Dakota animal agriculture advocates hope that, instead of being seen as a divisive issue, livestock production can be viewed as an opportunity for young farmers and as an avenue for economic development in underserved areas.

—Story and photos by Daniel Lemke

Peterson Elected USSEC Chair

Valley City, North Dakota farmer Monte Peterson (second from left) is the newly elected chairman of the U.S. Soybean Export Council (USSEC). Elections took place at the USSEC annual meeting February 25 in San Antonio. Peterson had previously served as the organization’s

vice chair. He’s also a board member for the American Soybean Association (ASA).

The USSEC board is comprised of 15 members representing various stakeholders from the U.S. soy industry. Four members are from ASA, four members are from the United Soybean Board (USB), and seven seats represent trade, industry, and state organizations.

In addition to Peterson, North Dakota soybean farmers are also represented on the USSEC board by Darren Kadlec of Pisek. Kadlec serves as a USB director.

USSEC operates a network of international offices to build a preference for U.S. soybeans and soybean products. USSEC advocates for the use of soy in feed, aquaculture and human consumption, promotes the benefits of soy use through education and connects industry leaders through a membership program.

—Story by Daniel Lemke,
photo by staff



North Dakota farmers Darren Kadlec (third from left) and Monte Peterson (far right) serve on the USSEC board.



Valley City farmer Monte Peterson (center) was elected chair of the USSEC board in February.



Darren Kadlec (far left) represents North Dakota on the United Soybean Board and the USSEC board.

Sharing the Journey

The older I get, the more I realize that everyone carries unseen burdens. It could be depression, grief, stress or a thousand other concerns that weigh silently on people's minds and hearts. I've also learned how important it is help each other share those burdens. Doing so can be surprisingly simple.

A report on CBS Sunday Morning several months ago caught my attention. It addressed attempts to combat suicide. The mechanism in this particular segment didn't involve the latest in technology, a new medication or some breakthrough treatment; rather, it focused on the importance of caring. In the 1960s, a psychiatrist at the University of California in San Francisco named Jerry Motto conducted an experiment with patients who were recently released after being hospitalized for depression and suicidal thoughts. Half of the people Motto identified received short notes periodically, just letting them know that he cared about them. The notes weren't long or elaborate, just a reinforcement that they weren't forgotten, and that Motto cared about their journey and about them as a person. The other half of the newly released patients received nothing.

Two years after the patients were released and the study began, research showed that the suicide rate among the individuals receiving the notes was half that of people who received nothing. Even though the patients were walking a seemingly lonely path, it made a difference to them that they weren't alone. Motto's research showed that nearly any personal intervention could be beneficial in preventing suicide.

The television segment highlighted a psychiatrist in Washington state who has successfully imple-

mented Motto's note-writing practice with her patients. A note or text of encouragement was well received by her patients. Why are the notes successful? Perhaps it's because the psychiatrist in the news segment believes that loneliness is killing us.

According to the American Psychological Association Monitor on Psychology, January 2019 newsletter, suicide rates have climbed substantially in the past two decades. The rate of death by suicide in the United States increased by 30 percent between 2000 and 2016.

It's obvious that stress is high in the United States, especially in farm country. Years of depressed commodity prices, difficult economics and challenging weather conditions are taking their toll on farmers. Numerous states and organizations recognize the increased need for mental health services in rural areas and have allocated additional resources to address the challenges. Those services are incredibly valuable and necessary, but they do require the individuals needing help to reach out. Sometimes, the rest of us need to reach in.

For the last decade, my wife and I have dealt with the loss of our only son. February 8, 2020, marks the 10-year anniversary of Dustin's death. He died in a car accident when he was returning to school at North Dakota State University. He was 18.

Dustin's death turned our world upside down, and the grief of his loss is still something we carry with us every day. It's often a lonely journey, but it's one that friends and family help us travel. It is truly remarkable how a caring word, a quick note or even a timely text message can lift our spirits simply by letting us know that others recognize our journey and care enough to reach out. They can't walk this journey for us, but they can walk it with us. The



Daniel Lemke
Dan is a contributing writer for *North Dakota Soybean Grower Magazine*

caring and unexpected gestures from friends are especially appreciated because my wife and I aren't likely to ask for them.

Farmers—the rest of us, too—are often independent, proud, and unwilling or too embarrassed to ask for help. At the same time, farmers are the first to step in and offer a hand when a sick neighbor needs help finishing harvest. Farmers jump in their truck when the cattle next door have gotten out, or they'll go get their tractor when the neighbor kid slides his truck into a snow-filled ditch.

Perhaps we need to be just as proactive in our willingness to look for each other's unseen struggles as we are when the need is obvious. A quick phone call, text message or a chat over a cup of coffee may be just what someone needs. Maybe that person just needs to know someone else cares because not all burdens are visible.



Soybean Directors Recognized During Commodity Classic

Several North Dakota Soybean Council and North Dakota Soybean Growers Association directors were recognized at the Soybean Ag Leader Source Recognition Breakfast at Commodity Classic February 28. These directors have taken extra steps to learn and grow as board members by completing multiple Ag Leader Source modules throughout the year. Ag Leader Source provides online training sessions in good governance practices and board members roles and responsibilities for board members.

Getting to Know the Expert



John Nowatzki
North Dakota State University
(NDSU) Agricultural
Machines Specialist

Education

I have B.S. and M.S. degrees in Agricultural Education from NDSU.

Where did you grow up?

I grew up on a farm in Cavalier County in the Langdon area.

How did you get started working at NDSU?

When I first started at NDSU, I worked on water quality. Then, the opportunity came up to work as an agricultural machines specialist. Most of my work has focused on precision ag technologies.

How has technology changed farming?

The first precision technology was guidance systems, and they were quickly adopted. Nearly every farmer uses GPS now. On the machinery side, a technology that has changed farming a lot is air seeders. This technology allows farmers to be a lot

more flexible in their planting. It's possible to plant better and more accurately.

Section control and nozzle control on sprayers, and row control on seeders and planters have changed a lot. Those are technologies that farmers can quickly do the math on to see if there is payback from using those technologies.

What are you working on currently that is most exciting?

We are starting a smart farm on the research farm at Casselton. The objective is to use the farm for technology and data-management demonstration. We're using equipment to collect planting and tillage data. We'll collect the data,

upload it to the cloud and then analyze it, using that data to make better management decisions.

What do you enjoy most about your role?

I enjoy using new technology and working with other researchers. The collaborative efforts are a real positive.

What do you like to do when you're not working?

My wife and I like to travel. I also like to hunt, fish and bike. I enjoy spending time outdoors.

—Story by Dan Lemke, photo by staff

Getting to Know Your NDSC County Representative



Keith Reinowski
Anamoose, North Dakota

Tell us about your farm.

I farm together with my brother, and we raise soybeans, canola, wheat, sunflowers and barley. Our family farm was established in 1898.

What do you like best about farming?

I just like working with land. I also enjoy working with new technology

and trying new varieties in soybean and sunflowers.

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

I did leave for college, to major in electronics. After two weeks, I decided it wasn't for me and returned back to farming.

What's most exciting about the upcoming spring season?

The last couple years, we went into spring planting fairly dry. This year, we will be heading into spring planting really wet. We've been nervous in the past planting dry, and now, we're nervous about planting wet. But I prefer to seed into moisture than into dust.

How and why did you get involved with the North Dakota Soybean Council as a county representative?

I was interested in the Council, so I decided to give it a try. It's been fun, and I have met new people, along with learning a lot through meetings and the Northern Corn and Soybean Expo.

Why are soybeans part of your crop mix?

Soybeans are good for the soil by adding a lot of nutrients in the soil. They are a good rotational crop for us, with better yields from other crops after soybeans.

If you could change something about the current operating climate for North Dakota farmers, what would it be?

I'd like to see better crop prices and less government subsidies. I'd rather raise a good crop and get a good price than receiving government programs.

What changes do you expect to see in farming over the next 5 to 10 years?

I think there's going to be a lot more advances in technology, like with driver-less tractors, which is a benefit to producers. Every year, we see more technology available in our industry.

What do you like to do outside farming?

I like driving and visiting different events, including auction sales. I do enjoy a little traveling in the winter.

If you could go anywhere, where would it be?

I haven't been to Hawaii, and I wouldn't mind visiting.

—Story and photo by staff

Keith is one of the North Dakota Soybean Council's county representatives. To learn more about serving on the North Dakota Soybean Council as a county representative or board member, visit ndsoybean.org/council-elections



Soybean industry leaders were among the guest in attendance for the USMCA signing in Washington.

Soy Industry Leaders Attend USMCA Signing

Members of the American Soybean Association's (ASA) Board of Directors from five soybean-producing states attended the United States-Mexico-Canada Agreement (USMCA) signing ceremony at the White House in celebration of the new treaty. The ASA represents soy farmers from 30 soy-producing states and is pleased to see the agreement signed into law.

"This final step by President Trump ensures soybean growers will maintain access to two of their top markets, and it will also support the poultry and dairy industries that are important to soy," said Bill Gordon, ASA president and a grower from Worthington, Minnesota.

EPA Finalizes Glyphosate Mitigation

The Environmental Protection Agency (EPA) has concluded its regulatory review of glyphosate, the most widely used herbicide in the United States. After a thorough review of the best available science, as required by the Federal Insecticide, Fungicide, and Rodenticide Act, the EPA has concluded that there are no risks of concern to human health when glyphosate is used according to the label and that the product is not a carcinogen. These findings about the human health risk are consistent with the conclusions of the science reviews

done by many other countries and other federal agencies, including the U.S. Department of Agriculture, the Canadian Pest Management Regulatory Agency, the Australian Pesticide and Veterinary Medicines Authority, the European Food Safety Authority, and the German Federal Institute for Occupational Safety and Health.

Glyphosate has been studied for decades, and the EPA has reviewed thousands of studies since the product's registration. Glyphosate is used with more than 100 food crops, including glyphosate-resistant corn, soybean, cotton, canola and sugarbeets. It is the leading herbicide for managing invasive and noxious weeds, and it is used to manage pastures, rangeland, rights of ways, forests, public land and residential areas. In addition, glyphosate has low residual soil toxicity and helps to retain no-till and low-till farming operations.

More information about glyphosate and the EPA's interim decision is available at www.epa.gov/ingredients-used-pesticide-products/glyphosate.

Biodiesel Industry Refines Vision

National Biodiesel Board (NBB) CEO Donnell Rehagen unveiled a new public vision statement for the biodiesel industry's future. The vision was highlighted at the National Biodiesel Conference in January.

Biodiesel, renewable diesel and

renewable jet fuel will be recognized as mainstream, low-carbon fuel options with superior performance and emission characteristics. In on-road, off-road, air-transportation, electricity-generation and home-heating applications, use will exceed six billion gallons by 2030, eliminating over 35 million metric tons of carbon dioxide equivalent greenhouse-gas emissions annually. With advancements in feedstock, use will reach 15 billion gallons by 2050.

The NBB plan recognizes that there is no logical path to zero carbon emissions without growing volumes of carbonless transportation fuels such as biodiesel and renewable diesel.

The NBB and partner organizations' efforts regarding federal policy resulted in some significant victories in 2019. The year's crowning achievement was reinstatement of the biodiesel tax credit that provided much-needed retroactivity for 2018 and 2019 as well as a forward-looking credit through 2022.

Made from an increasingly diverse mix of resources, such as recycled cooking oil, soybean oil and animal fats, biodiesel is a renewable, clean-burning diesel replacement that can be used in existing diesel engines without modification. Biodiesel is the nation's first domestically produced, commercially available advanced biofuel. The NBB is the U.S. trade association representing the entire biodiesel and renewable diesel value chain, including producers, feedstock suppliers and fuel distributors.

ASA at 100

What began on an Indiana soybean farm 100 years ago developed into an organization that quickly grew to be the leading advocate for soybean farmers and fostered the building of the U.S. soybean industry. The ASA is celebrating its "First Soy Century" as it recognizes its 100th anniversary throughout 2020.

The ASA's roots were formed when brothers Taylor, Noah and

Finis Fouts hosted the first Corn Belt Soybean Field Day at their operation in Camden, Indiana, on September 3, 1920. The event drew nearly 1,000 farmers and their families from six states; people were interested in discovering more about the emerging new commodity called soybeans.

The National Soybean Growers' Association—later renamed the American Soybean Association—was formed that very day. Taylor Fouts was elected as the association's first president.

In the century since those humble beginnings on an Indiana soybean farm, the ASA has focused on sustaining and improving U.S. soybean farmers' prospects and opportunities for profitability.

Throughout the years, the ASA has been engaged, committed and working diligently on behalf of U.S. soybean farmers regarding a variety of issues, including the removal of interstate commerce restrictions, development of an improved soybean grading standard and growing export soybean markets from 40 countries in the 1960s to more than 100 countries today.

The ASA provided funding for initial research that led to dozens of new uses for soy-based products: from paint to printer's ink and from plastics to building materials. The organization was also instrumental in creating the soybean checkoff while advocating on behalf of the nation's soybean farmers.

The ASA is planning a year-long celebration of its "First Soy Century" that includes events, the dedication of a historical marker on the Fouts family farm and more.

A website dedicated to the 100th anniversary is available at ASA100Years.com.





HELPING YOU DELIVER ON DEMAND

Whether it's improving soybean meal to outperform the competition or promoting the sustainability of U.S. soy, the soy checkoff has been working behind the scenes to help farmers satisfy their customers' needs. We're looking inside the bean, beyond the bushel and around the world to keep preference for U.S. soy strong. And for U.S. soybean farmers like you, the impact is invaluable.

See more ways the soy checkoff is maximizing profit opportunities for farmers at unitedsoybean.org



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Join
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fun!



7th Annual
Jamestown
NDSGA Open
Golf Tournament

Join the NDSGA for a day of fun on **July 28, 2020** at the Jamestown Country Club. Golf, lunch, social, dinner and prizes. Register yourself or a whole team by July 6 by

going to the Events tab at NDSoyGrowers.com. For more information, contact Nancy Johnson at (701) 640-5215 or nancy.johnson@ndsga.com.