

THE NORTH DAKOTA **Soybean** GROWER MAGAZINE

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The Data Evolution

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On the cover

After a long and challenging winter, North Dakota farmers are anxious to get back out into the fields to cultivate this year's crop. Many farmers grappled with decisions on what to plant in 2019 due to ongoing trade issues and low commodity prices. Regardless of the outcome of those decisions, farmers will be ready to put the seed in the ground once conditions are right.

—Photo by Wanbaugh Studios



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B

usiness in Bismarck

The legislative session has reached the Crossover point of the session where House bills that have survived so far go to the Senate and vice versa. A bill must pass both houses in order to become law. The session is allowed to last 80 days, so the legislature must wrap up its business by April 30.

Not surprisingly, the legislative session is an active time. We are following many issues that could affect farmers and landowners.

The farm-home exemption bill, 2360, has passed the Senate. This bill eliminates the test where farmers could not exceed \$40,000 in non-farm income as well as the 50 percent income requirement. Instead, the bill adopts the Internal Revenue Service's definition of a farmer which is 66 percent of gross income from the farm. This adjustment should help bring back many farmers who had lost the exemption the last several years and be a help to young farmers as well. It also helps the counties which were troubled by inconsistency and difficulty with the 3-page application form which some counties required and others did not. It is predicted that a one-page form should now suffice. There is other legislation, bill 2278, to safeguard the confidentiality of financial information as well as to require all counties to participate.

Bill 2315 would automatically post land as no trespassing, and it has been amended so that hunters are provided with some exemptions. As it sits now, landowners can designate their land as open to hunting (green), open with permission (yellow) or closed to hunting (red). That portion is dependent on a statewide, county-by-county information-technology department system which is, theoretically, to be formed and ready in the next 3 years. For now, the default will be green if producers do not provide their information, but they can always post in the traditional way as well. Bill 2315 fixes one problem which seemed to drive the bill's proponents, namely the abuse suffered during the Dakota Access Pipeline protests when signs were torn down so that no one could be prosecuted. The bill passed the Senate and may see more amendments on the House side.

On the topic of warehouse and grain inspection—an old friend that has been batted around the

last few sessions—there seems to be a consensus that some changes need to be made. Likely hastened by an apparent high-profile insolvency, there are two bills moving forward. Bill 1467 would move licensing from the purview of the Public Service Commission (PSC) to the Department of Agriculture. That bill is currently on the House floor awaiting a vote while the other measure, Bill 2346, has passed the Senate. Bill 2346 gets involved in a few ways by including all grain and oil seeds when the indemnity fund is triggered. The bill would also cut the contribution from 1/10 of 1 percent to 1/20 of 1 percent (i.e., For \$100,000 worth of grain, it would cost \$50.) should the grain indemnity fund be triggered by falling below \$3 million. As in the past, indemnity fund contributions would stop once the fund reaches \$6 million. Another grain indemnity twist in Bill 2346 allows grain sellers to receive a refund on their contributions, but then, if they suffer a loss because of an insolvency, they would not qualify for relief. Besides adding 2.25 full-time equivalent positions to work in that area, there is also a provision which allows the PSC to gain access to more financial records, along with

“ This bill eliminates the test where farmers could not exceed \$40,000 in non-farm income as well as the 50 percent income requirement. ”



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

confidentiality, to increase bonding confidence for grain buyer licensing.

Concerning water issues, the ability for the State Water Commission to cost share snagging and clearing natural waterways was taken away last session. Important to farmers, roads and bridges, this critical infrastructure topic is addressed by Bill 2139 which seeks to reinstate cost sharing. The bill has passed the Senate and has been sent to the House Energy and Natural Resources Committee where it was slated to be heard on March 1.

Also water-related in the case of agriculture is Bill 1184, which attempted to eliminate Quick Take, an important tool for water resource districts when trying to move producer-approved drainage projects forward. The current Quick Take policy is one that was slanted towards the aggrieved party to a greater degree last session; I believe that it is a reasonable dispute-resolution protocol. The bill has been amended to keep Quick Take, but also to include the threat of not being able to use it for two years if the process is abused.

For the latest legislative updates, visit the North Dakota Soybean Growers website and the Murphy's Law blog at ndsoygrowers.com/blog.

—Story by Phil Murphy

Self-Reliance

If your combine breaks down in the middle of harvest, you wouldn't expect your neighbor to call the mechanic to have him come fix it. If your tractor gets stuck in the middle of the field during spring planting, you wouldn't sit in the cab for hours hoping someone drives by and notices your predicament. If your cattle got out of the pasture, you probably wouldn't just hope they find their way back where they belong.

No, in all of those scenarios, you would take the initiative to get the problem solved yourself. It's just what we do.

As farmers, we know that no one else knows our operations as well as we do, and we wouldn't expect anyone else to make important decisions for us. When it comes to policy decisions, whether it's at the local, state or national level, we are, often, far too comfortable with the notion that someone else will take care of the problem for us. Someone else might take the lead, but we might not like the answer.

We all know that the number of people actively involved with farming is quite small. Despite agricul-

ture's importance to the state, farmers make up a very small portion of the population. Our limited numbers are all the more reason we need to make sure our voices are heard: collectively and individually.

The North Dakota Soybean Growers Association is comprised of farmers just like you. The NDSGA recognizes that, in order to affect change, people have to speak with a unified voice. The NDSGA is that voice for its members.

It's obvious, especially during a legislative session, that farmers need to be represented during policy discussions. Your fellow farmers who serve on the NDSGA board are willing to be those representatives on your behalf. If you aren't a member of the NDSGA, I strongly encourage you to become one. It's a small investment that pays off in a big way.

I also encourage you to pick up the phone and to call your legislator or local government officials when you have concerns. Let your voice be heard. Elected officials want to hear from their constituents, particularly when complex issues are being debated. No one can tell legislators how you feel better than you can.



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Working collectively is effective, but it's also important that we, as individual farmers, don't expect someone else to speak for us. All people have a voice that they must use to share stories and to convey concerns because no one can do it better.

—Story by Joe Ericson



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: _____

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Email Address: _____

Occupation (Please check all that apply)

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Do you currently grow soybeans?

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Constant Change



Farmers know that each growing season is different and that every year comes with its own challenges.

Kasey Bitz has witnessed that variability firsthand in his relatively short career as a farmer.

After graduating from college in 2012, Bitz worked for several years as a teacher before returning to his family's LaMoure, North Dakota, farm. He farms with his parents,

Jim and Connie Bitz, growing corn, soybeans, hard red spring wheat and yellow field peas while also raising cattle and sheep.

Although he's fully immersed in the farm's day-to-day operations, Bitz continues to work off the farm as an online physical-education

instructor.

"My dad said the farm will be here when you come back, but you're going to have to support yourself," Bitz says.

Bitz adds that half of the 18 boys in his high-school graduating class have returned to farming. All of them have off-farm jobs in addition to working the land.

"It's not just farming anymore. I grew up in a more traditional setting where Mom was able to be a partner on the farm," Bitz says. "Now, you need off-farm income and benefits like health insurance. Now, you are a farmer and something else."

Refining Focus

Bitz says that, over the years, his family has honed in on ways to maximize productivity while working with the soil. He says that the family practices minimum tillage, using light tillage to work in fertilizer and cut through corn stalks, and no-till on most of the remaining acres. The practice retains soil moisture and

reduces erosion.

"We always hated seeing ditches full of dirt in the winter," Bitz explains.

In addition to minimum tillage, cattle graze on the corn stalks, with the resulting manure helping to build the soil's organic matter.

Bitz says that, while his father always maintained the need to "farm smarter," they've become more systematic in making that happen.

"Years ago, we used to look at the farm as a whole to see how it performed, but now, we focus on getting the most out of each acre," Bitz says. "Instead of the entire farm being in the red or black, now we know acre by acre."

Bitz says that advancing technology is giving farmers better tools to maximize production. The Bitz family works with a crop consultant and farms by zones which includes fertility plans and prescription planting based on a precise seeding rate. Because some of the family's farmland is irrigated, Bitz says that his farm also works with irrigation zones. His family has even considered using in-ground sensors to



Kasey Bitz, Logan Ferry, Chris Brossart and Jeremiah Udem participated in Soy Leadership College in January.



Kasey Bitz and Monte Peterson were among the delegates developing policy at the Commodity Classic.

monitor soil moisture tied to the irrigation system.

“Dad knew the land and knew which areas were highly productive, but now, we are looking at prescriptions to know where we can bump

things up,” Bitz says.

Leadership Development

Although he is not yet 30 years old, Bitz is already immersed in leadership roles. He serves on the

North Dakota Soybean Growers Association’s Board of Directors. He’s also the North Dakota Farmers Union policy chair and is on the National Farmers Union policy committee. Bitz was part of the American Soybean Association’s (ASA) Young Leader program. He was also selected for Rural Leadership North Dakota’s eighth class; the group includes farmers, business owners, city and county officials, healthcare and bank personnel, and more.

Bitz was among 26 people chosen for North Dakota State University Extension Service’s leadership-development program. Participants will spend 18 months developing skills to help them shape the future of their organization, community and state. The program consists of in-state seminars with experts on topics such as leadership, economic development and agriculture; features tours of agricultural and community businesses; and includes a trip to Washington, D.C., to meet with agricultural, business, and governmental leaders. In February, the group also went on a trip to Chile in order to learn about international agricultural and community issues.

“I enjoy talking to people in new areas to find out what concerns

them,” Bitz says. “Because the focus is on rural North Dakota, we’re learning how we can make an impact on the communities in which we live.”

Bitz says that participating in leadership training as well as being active in various groups has allowed him to enhance his understanding of the issues facing North Dakota and beyond.

“Probably the most valuable thing is the networking,” Bitz contends.

“We were in Bowman learning about North Dakota State University research there. We’ve been to Bottineau. We’ll be in Watford City. Those visits have given me an opportunity to network and talk to people in new areas.”

Staying involved and aware of the issues facing North Dakota is important, Bitz says. He’s also used his knowledge and voice to connect with legislators on policy issues facing North Dakota farmers.

“Policy is a crazy thing sometimes,” Bitz says. “We need to have strong policy to protect our farms.”

Bitz also acknowledges that there are challenges, which include connecting with shifting consumer perceptions.

“We will have to deal with changing consumers and learn how to spread our message to those consumers,” Bitz says. “If we don’t tell our story, someone else will, and we may not like what they’re saying.”

While there may be challenges, Bitz is optimistic for the future of agriculture in North Dakota thanks to diverse crop options as well as the farmers’ knowledge and ability to regularly grow good crops in an ever-changing world.

—Story by Daniel Lemke,
photos by Daniel Lemke and staff



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My Invaluable Experiences Being a Farmer-Leader

April 1st will mark my sixth and final year serving on the North Dakota Soybean Council (NDSC).

My time as a board member has been very rewarding and extremely educational, with many invaluable experiences I will always remember.

Before becoming a board director, I had previously served on the NDSC research committee as a non-board advisory member, so I was familiar with the organization. Being part of the research committee peaked my interest in becoming involved with the NDSC. I was also looking to become involved with a commodity group to do my part as a producer to represent our industry and to learn more about how the checkoff worked.

Looking back at what I know now about the NDSC and the soybean checkoff, I really had no idea what the NDSC did back then. I understood the basics of the checkoff and the concept, but did not fully understand all ways the checkoff benefits us as producers. Now, I completely understand the benefit of the soybean checkoff and how the very small portion of each bushel's sale will continue to make a HUGE difference in the future of our soybean industry through education, market development and research.

The six years sure flew by, but over the years, I've experienced so many invaluable experiences. The NDSC has three committees on which board members sit: research, market development and communications. When I first started on the board, I sat on the communications committee, which includes producer-education programs. I learned how the NDSC is committed to keeping growers informed about how checkoff dollars are invested for growers' benefit. Whether it's a new development in soybean research, an upcoming educational opportunity or a milestone for soybean exports, communication is a key element for each checkoff investment. Ensuring that North Dakota producers receive the most current education about key topics that affect operations is also a top priority for the NDSC. Therefore, the NDSC continues its annual sponsorship of many meetings, seminars, and other

pertinent and timely education opportunities throughout the year.

I also sat on the NDSC's research committee, and I have been chairman of the committee since 2016. This committee identifies farmer priorities, sets the NDSC's research objectives and solicits studies to meet these priorities. On the research committee, I learned how complex the soybean plant's growth, development and management really is. Research is one of the most important efforts that the NDSC supports. We pride ourselves in investing in research that is scientifically sound and practical.

My favorite experience while on the board was participating in the See for Yourself program in the Pacific Northwest. Seeing how our checkoff is invested and how our soybeans start the journey to overseas customers was very educational and interesting. I highly recommend that my fellow North Dakota soybean farmers apply for and participate in this great opportunity. See page 33 for more information about 2019's See for Yourself program.

The best part of being on the NDSC board has been the people with whom I have had a chance to meet and work. Other board members with whom I have served over the years have become true friends.

I would recommend that any producer who has even a bit of interest or curiosity about the soybean industry should jump in and get involved. Whether on the North Dakota Soybean Council; the North Dakota Soybean Growers Association, the legislative and advocacy organization for soybeans in our state; or national boards, such as the United Soybean Board, getting involved as a leader is a great opportunity to not only learn, but also to promote something that is near and dear to all of us: agriculture.

Last, I would like to thank the staff members at the North Dakota Soybean Council for all their hard work and dedication. Their organization, professionalism and guidance made serving on the NDSC a great experience. Thank you!



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A Fond Farewell

to a Friend,
Gentleman and
Respected
Leader



On Wednesday, January 30, 2019, the North Dakota Soybean Council lost an admired friend and

esteemed board member. Michael D. Muhs, 44, of Langdon passed away at his home after battling cancer.

The NDSC extends its deepest condolences to the Muhs family. Mike was a very kind man who was always ready with a smile. He was a dedicated board member who admirably represented his fellow soybean producers in northeast North Dakota.

"Mike was a good man, and I consider myself fortunate to have had the opportunity to get to know

him," says Joe Morken, NDSC chairman. "I am thankful for his service to the North Dakota soybean industry. It is unfortunate when anyone loses their battle with cancer, but it is especially sad when a man of Mike's age loses the battle. He will be deeply missed."

Michael David Muhs was born November 26, 1974, in Langdon, to William and Katherine Muhs. He grew up on the family farm and attended school in Langdon, graduating in 1993. He started Muhs

Construction and built homes in the area while farming with his dad. On April 8, 1995, he married Cheryl Kram at St. Michael's Church in Wales. He was farming and was a salesman for Pioneer Seed. Along with sitting on the NDSC board, he was a member of the Langdon Hockey Boosters and had been coaching his children's hockey teams for over seven years. He was also a member of the Wales Volunteer Fire Department, a member on the Osnabrock Elevator board and a past member of the Cavalier County Crop Improvement Board. Muhs was very active in the community, never knew a stranger and was loved by all who knew him.

He is survived by his wife of 23 years, Cheryl; his children: Jacob (Kellie Hetler), Andrew, Daniel, and Elizabeth; his parents, William and

Katherine Muhs; and many other family members.

"Mike was an enthusiastic and dedicated board member," says Stephanie Sinner, NDSC executive director. "We all so enjoyed working with him and getting to know him. He was a great asset to NDSC, and he will be greatly missed."

—Story by Staff, photos by Wanbaugh Studios and Betsy Armour



Matt Gast, NDSC secretary, took a moment to recognize and to remember Mike Muhs at the 2019 Northern Corn and Soybean Expo in February.

“He will
be deeply
missed”



Mike Muhs of Langdon, North Dakota was elected to the NDSC in March 2017, and represented soybean farmers in Cavalier, Walsh and Pembina counties.

Winter Trade Mission

Builds Demand for North Dakota Soybeans



Four North Dakota Soybean Council (NDSC) board members represented North Dakota soybean farmers

throughout southeast Asia (SEA) during the winter months in order to increase the demand for North Dakota soybeans. The trade missions complement the NDSC's efforts during harvest when it hosted over 80 soybean-buying companies from 14 countries. These NDSC board directors worked alongside the U.S. Soybean Export Council (USSEC), the World Initiative for Soy in Human

Health (WISHH) and Northern Soy Marketing (NSM) on the missions which are aimed at providing technical support and building relationships between the farmers and end users.

"The soybean checkoff has been doing a lot of work promoting and networking in the SEA countries of the Philippines, Malaysia, Thailand, Vietnam and Cambodia the last few years," says Perry Ostmo, a Sharon,

North Dakota, farmer and NDSC board member. "We are seeing increased exports from the Pacific Northwest (PNW) region because of the growing preference for U.S. and North Dakota soybeans. These markets are small relative to China, but collectively, I am confident they will be our next success story for North Dakota soybean farmers. We are expecting somewhere north of

275 million bushels of soy exports to this region for marketing year 18-19 from the U.S."

Throughout the missions, the NDSC carries key messaging for North Dakota soybean farmers and focuses on the importance of purchasing soybeans with complete and high essential amino acid (EAA) profiles, not just using crude protein values. The Critical Amino Acid Value (CAAV) is the sum of five critical, essential amino acids as a percentage of crude protein. CAAV is a protein-quality measurement which allows buyers to evaluate the natural balance and gross levels of limiting essential amino acids in soybeans or soybean meal. CAAV provides a threshold where the probability of increased performance is likely, and the addition of expensive synthetic amino acids can be minimized. Additionally, the NDSC highlights North Dakota's consistent and efficient transportation infrastructure as well as the low foreign-material values.

Ostmo, along with Daniel Mock, a Braddock, North Dakota soybean farmer and NDSC board member, kicked off the winter missions in The Philippines. The Philippines is comprised of a series of islands in the Pacific Ocean and is quickly becoming a successful market for North Dakota soybeans. The Philippine and U.S. soybean-trade relationship has grown from 14.5 million bushels to over 73.5 million bushels in the last five years. The Philippines currently makes half of its whole soybean purchases from the Pacific Northwest (PNW), most of which would likely come from the North Dakota region.

"It's important we build these relationships with our international customers," says Ostmo. "Simon Enterprises is one of the fastest-growing soybean importers in the Philippines. Their growth means they need more soybeans, and we want those beans to come from North Dakota. By visiting their crushing and feeding opera-



Daniel Mock, second from the right, inspects soybeans at NIKE Tofu plant in Yangon, Myanmar.



tions, we can better understand and meet their needs.”

Mike Langseth, a Barney, North Dakota, farmer and NDSC board member, traveled to Malaysia in order to offer technical support to various soybean processors. Langseth worked with farmers from Minnesota and South Dakota as well as Dr. Seth Naeve of the University of Minnesota, presenting on the economic effectiveness of examining EAA in addition to crude-protein values when making a purchase decision for feed rations. The mission was designed to show the quantifiable economic benefits for using high-CAAV meals in feed formulations as well as the environmental benefits for utilizing high-CAAV soybeans. Langseth emphasized that a diet using meal from a lower crude-protein soybean with a naturally higher CAAV can contribute to a healthier animal and a cleaner environment.

“The market has been undervaluing our beans for years, and by encouraging our customers to buy based on essential amino acids rather than crude protein, we are helping improve their bottom line and driving a preference for U.S. soybeans,” says Langseth. “After our meetings in Malaysia, we hosted several EAA

seminars in Vietnam and Thailand which included a wide swath of animal nutritionists and soybean traders from leading importers, feed manufacturers and integrators. The nutritionists, especially, were very receptive since most of them were already formulating their feed-based amino acids, however, the EAA was not as familiar for many traders, but they are always interested in a good deal, so I am confident that we will see more U.S. beans moving into these countries soon.”

Daniel Mock most recently returned from the markets of Cambodia and Myanmar; he worked with aquaculture farms, tofu processors as well as poultry and swine feed mills. A highlight of the mission included launching a strategic partnership between the Cambodian and U.S. governments titled the Commercialization of Aquaculture for Sustainable Trade (CAST). The CAST project is being facilitated by the American Soybean Association’s WISHH program.

“CAST is designed to accelerate the production of fish for the Cambodian market and develop a lasting aquaculture industry,” says Mock. “I was very impressed with their eagerness to learn about North Dakota



Mike Langseth, middle, meets with animal nutritionists and soybean manufacturers at an EAA seminar in Bangkok, Thailand.

soybeans and their desire to work with us in the future. They are entrepreneurs who are well-positioned to grow the commercial demand. Ultimately, the project means increased sales of U.S. soybeans to Cambodia to be used as fish feed.”

The WISHH program focuses on trade and long-term market development for U.S. soybean farmers, while fueling economic growth and value-chain development, and recognizes that the developing nations of today are tomorrow’s customers for U.S. soy and soy protein. WISHH has been enhancing the nations’ protein intake through market development, education and research since 2000.

“I believe it is critical for us to continue to educate the fish farmers, swine and poultry industries on the benefits of purchasing from North Dakota and the PNW in Cambodia and Myanmar,” says Mock. “The farmers and processors need help understanding that vaccinating their swine and using modern processing methods for food and feed will provide healthier and cleaner food for their end users. WISHH’s in-country representatives are almost like our extension agents here at home, and that education piece is vital for growing these markets.”

Dan Spiekermeier, a Sheldon, North Dakota, farmer and NDSC board member, along with USSEC Vice Chairman Monte Peterson, a Valley City farmer, will be back in Myanmar and the Philippines during the week of March 18 for the Southeast Asian Soyfood Symposium and the Ag Supply Chain Conference. The Soyfood Symposium is focused on increasing awareness and knowledge about recognized science associated with the U.S. soy advantage. The Ag Supply Chain Conference is designed to target and to engage buyers and end-users of raw feed ingredients who are using or considering soy for their operations.

“These trade missions are critical pieces in the supply chain,” says Spiekermeier. “Whether it is soybeans for feed, food or industrial products, we want to be the preferred choice for sourcing those soybeans. North Dakota has a competitive advantage to soybeans grown elsewhere in the world, and by providing technical support to buyers and building relationships, we are ensuring that we have a market for North Dakota soybeans to go to and are adding value to our operations here at home.”

—Story by Staff; photos courtesy of USSEC, WISHH and NSM



Daniel Mock and Perry Ostmo greet representatives from Everlast Agro Corp. who supply 1.2 million eggs a day to fast food chains in the Philippines.

Corn and Soybean Expo a Hit with North Dakota Farmers

Hundreds of North Dakota farmers and agribusinesses joined together to get the latest updates on important

topics such as trade, weed management and farm stress during the 2019 Northern Corn and Soybean Expo at the Fargodome in Fargo. More than 600 participants from across the state braved snowy conditions to take part

in the second annual event which was held February 12 and was organized jointly by the North Dakota Soybean Council (NDSC), the North Dakota Soybean Growers Association (NDSGA), the North Dakota Corn Utilization Council (NDCUC) and the North Dakota Corn Growers Association (NDCGA).

“Our turnout was very good, especially considering the weather and a lot of poor road reports,” says Jamestown, North Dakota, farmer and NDCGA board member Ryan Wanzek.

The Northern Corn and Soybean

Expo featured general-education presentations and breakout sessions as well as a tradeshow with more than 80 exhibitors.

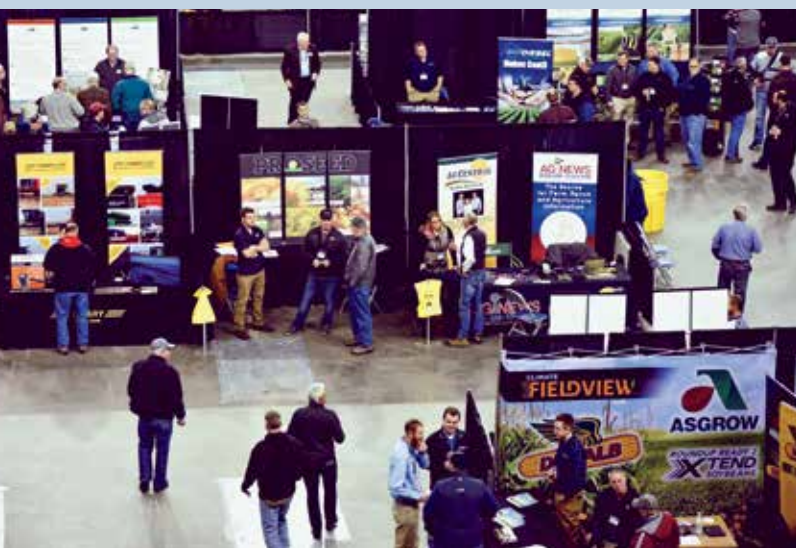
With a March 1 deadline looming for a trade agreement to be reached between the United States and China before further tariffs would be imposed on Chinese goods, international trade was the focus of several presentations. United States Soybean Export Council CEO Jim Sutter, National Corn Growers Association Public Policy Director Lesly McNitt and North Dakota State University (NDSU) Distinguished Professor

William Wilson offered their global perspectives during an international trade hot-topics panel.

NDSU Extension Crops Economist and Marketing Specialist Frayne Olson also delivered an update about the current market and trade conditions. Olson stepped in for announced speaker Chip Flory who was unable to attend due to the inclement weather.

“Trade talk is obviously big right now. A lot of farmers are concerned about that, both in the corn and soybean industries, so that’s one of our biggest issues,” Wanzek says.

This 2019 event is the second year where North Dakota’s corn and soybean organizations jointly put on the one-day meeting. The combined





resources help the organizations tackle broader issues and attract more widely known speakers.

“People come in, and they want to hear what these experts have to say,” says Valley City farmer and NDSC Secretary Matt Gast. “Trade and marketing are always hot topics.”

“It allows us to cover bigger topics and get more bang for our buck,” Wanzek adds. “This event is for the growers, and most of us are out there growing both corn and soybeans.”

Gast says that he heard very positive feedback from farmers who liked the diversity of topics, with a Palmer amaranth panel, a water-management session and a weather-trend overview with DTN meteorologist Bryce Anderson.

“We’ve had a lot of positive feedback on the trade show and the flow,” Gast says. “No two farms are alike, so

we try to cover a broad spectrum of topics so everyone can relate.

Both the NDCGA and the NDSGA held their annual meetings and discussed policy issues to be addressed in Washington, DC, and Bismarck. Those issues include Farm Bill implementation as well as tax and transportation concerns.

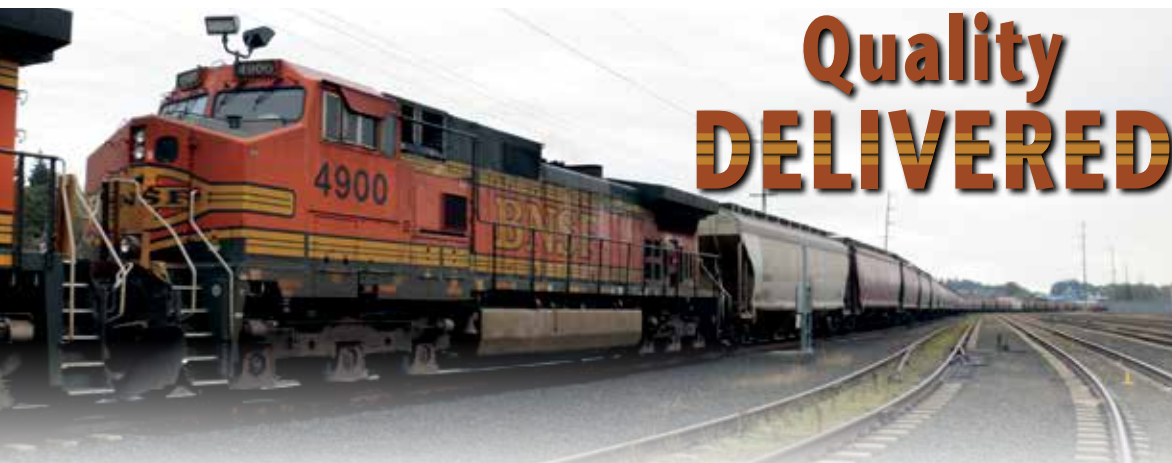
Hundreds of farmers also participated in a dicamba-application

training session following the Corn and Soybean Expo.

Farmers are encouraged to mark their calendars for next year’s 3rd Annual Northern Corn and Soybean Expo at the Fargodome. It will be held February 4, 2020.

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





Quality DELIVERED

The BNSF rail cars lurched and screeched to a halt as the powerful locomotives that had pulled the 114 cars

some 1,500 miles came to rest in the eastern Washington rail yard. The bulk cargo, soybeans which originated in Gwinner, North Dakota, arrived safely at the TEMCO terminal in Kalama, Washington, ending the domestic portion of a journey that began in the fields of eastern North Dakota and would end somewhere in Asia.

Delivering high-quality soybeans to overseas markets requires multiple layers of protection, ensuring that quality is maintained.

Close to Home

North Dakota farmers planted an estimated 6.9 million acres of soybeans in 2018 according to the USDA National Agricultural Statistics Service. About 71 percent of the state's soybeans are destined for markets outside the United States. North Dakota soybeans can be shipped to Asia in as little as 3 weeks. Beyond being able to fill Asian soybean orders faster than nearly anyone else, safeguards are in place to ensure that North Dakota farmers deliver a consistently high-quality product to their customers.

Delivering quality soybeans begins on the farm as farmers fine tune their combines to harvest soybeans without damaging the seed, allowing too much foreign material into the hopper or losing soybeans out the

back of the combine. Ground and fan speed, as well as sieve settings, play a role in maintaining soybean quality at harvest.

Once soybeans are harvested and are delivered to a grain elevator, the quest to deliver consistent, high-quality soybeans enters the next phase.

At grain elevators such as the Alton Terminal in Hillsboro, North Dakota, samples are pulled from every truck or train car delivering soybeans to the facility. Probes extract

random samples that allow inspectors to grade the beans. The samples are drawn by North Dakota Grain Inspection (NDGI) employees who impartially grade the soybeans.

"Grain inspectors grade the soybeans when trucks are weighed," says Mark Wild, Alton Terminal grain merchandiser. "We know the results by the time the trucks are ready to unload, so we know what bins to unload the soybeans."

Soybeans are evaluated for test

weight, damage, splits, discoloration and moisture. The U.S. Department of Agriculture (USDA) Federal Grain Inspection Service (FGIS) has established five soybean grades. Number 1 and 2 soybeans are high enough quality for export because they have minimal damage and contain little foreign material. Lower-quality soybeans, including numbers 3 and 4, are kept segregated as are the lowest grade of soybeans: sample grade. Some lower-grade soybeans can be cleaned or blended with higher-quality beans in order to meet export specifications.

NDGI conducts the third-party testing on grains at the state's elevators. NDGI is a private company that operates under a designation from the USDA.

"The government holds us in compliance," says Kia Mikesch, NDGI vice president. "We test trucks and provide an unbiased grade for grain contracts. It also helps elevators determine how to handle their incoming grain."

"The grading gives us a handle on what we're buying," Wild adds. "We also know what we have to sell."

Wild says that the Alton Terminal works to keep soybeans clean. A cleaner is in place, along with screens at the top of each grain leg, to help remove excessive foreign material and to minimize fines.

Outbound

Alton Terminal sends trainloads of soybeans to major buyers in the Gulf of Mexico and the Pacific Northwest. Even though incoming soybeans have been checked and graded, NDGI also inspects and grades each rail car leaving the terminal. This evaluation verifies that buyers are getting what they ordered.

"They will know they have an unbiased grade that goes between the buyers and sellers," Mikesch says. "They will use the numbers that we provide to verify that what they're buying is within contract specifications."



Grain inspectors in Washington pull samples from every soybean shipment bound for export.



Cargo of all types is shipped from the Pacific Northwest via the Columbia River.

Quality Assurance

The rail cars which arrive at Kalama after leaving North Dakota are drawn into the TEMCO rail onloading house. Here, a specialized system pulls rail cars through like an automobile in an automated car wash. A crew member maneuvers a buggy on a track to open the rail cars' hopper doors, sending the soybeans into the pit below. The soybeans are then conveyed into storage bins.

The TEMCO terminal in Kalama

is located on the Columbia River. The river channel and TEMCO terminal can handle the largest ocean-going vessels, including the 229-meter long BTG Matterhorn. This Panamax vessel is capable of carrying over 2 million bushels of grain. Before a single soybean is loaded on the ship, the cargo is, again, inspected.

Prior to being loaded on a cargo vessel, soybeans are moved from in-house storage bins to export bins. Once the beans are in the export bins,

the Washington State Department of Agriculture (WSDA) takes one more look at the soybean quality.

Samples are pulled and inspected for phytosanitary issues such as the presence of bugs or mold. Samples are also tested for moisture. An inspector then hand checks samples for damage or discoloration. Out-of-specification soybean shipments can be rejected, however, the main purpose of the inspection is to ensure that trade is maintained.

"Our role is essentially that of a referee," says Philip Garcia of WSDA's Commodity Inspection Division. "We maintain the markets by ensuring the quality of the grain. When a foreign buyer buys a particular commodity, we make sure that the grade and the quality that they want is what they get when the shipment arrives overseas."

Garcia says that it's mandatory for all agricultural commodities which are bound for export to be inspected. The WSDA operates as a federally delegated agency, so the quality standards for ports in Washington are the same as at every other U.S. port. Shipment certificates from the WSDA are admissible in a court of law if there is a dispute between buyers and sellers. This additional safeguard ensures that there are no unwanted surprises.

"Buyers appreciate the fact that we're here," Garcia says. "The exporters do, too, because we're protecting their interests as well as those of the farmers in the Midwest. We're ensuring that their soybeans are of



Soybeans are conveyed from storage bins and loaded onto cargo ships through massive spouts.

top quality and they're making it to the market."

Completing the Journey

Hampered by rain and rail delays, it took several days for the North Dakota soybeans that arrived by train in Kalama to be loaded onto the BTG Matterhorn. Eventually, the cargo holds were filled and closed as the ship was cut loose and headed back to sea for an undisclosed destination. Regardless of the end point, the buyers waiting on the other end have the assurance that the North Dakota soybeans were rigorously tested to ensure the delivery of high-quality soybeans.

To learn more about the quality assurance and see a video about the process, visit bit.ly/GrainGradingND19.

—Story and photos by Daniel Lemke



Soybean samples are hand tested by grain inspectors to make sure grain quality matches contract specifications.

The Data Evolution



Technology is pervasive in society because mobile devices, tablets and even smart watches are considered

everyday gear. Advanced technology is as prevalent in agriculture as any industry.

Farm equipment has evolved to include data-gathering technology on

nearly every type of implement, including combines, planters and sprayers. The goal of all this mechanical wizardry is to help farmers be more efficient and productive. The key is

getting the data which are collected to make sense.

Dan Frieberg is the CEO of Premier Crop Systems, a Des Moines-based firm that provides farmers with

agronomic decision support based on data collected from their fields.

“A few years ago, when commodity prices were higher, a lot of farmers used that income to invest in upgraded equipment, much of which came with the latest technology,” Frieberg says.

Generating data doesn’t guarantee that farmers make management decisions with that information.

“Many farmers are looking for someone to help them make sense of what they have because they’re not always using it to their best advantage,” Frieberg adds.

For example, Frieberg says that as many as 80 percent of growers have the capability to do variable-rate planting, yet less than 20 percent actually do. He says that some farmers don’t fully use the technology they have or the data they gather because people are not convinced that the effort pays.

“Everything agronomic is economic,” Frieberg contends. “Data management does pay, and we can prove that it does. We measure whether what we do works not only in generating higher yields, but also in lowering a farmer’s breakeven cost in each part of each field.”



Data collected by farmers is most valuable when it is used to make better management decisions.

Soil-fertility maps and yield data, for example, can show which areas have the potential to be highly productive. Selectively matching inputs to potential can help farmers maximize their costs.

"It's not about saving money on inputs but investing those inputs with variable rate technology to get the most from fields," Frieberg says. "It's all about where in the fields it makes sense to push."

Data as an Asset

Frieberg says that his company is straightforward about the fact that farmers own their data and should treat it as a business asset. To that point, he says that it's important for farmers to only share their information with a partner they trust. Because farms are complex businesses, often managing millions of dollars, farm data are a tremendous asset that farmers can use to make important management decisions.

One challenge for maximizing

value is attention to data quality.

Frieberg says that farmers can generate bad data, including yield information. If equipment isn't properly calibrated and updated, the information they generate may not be completely accurate. If farmers or managers don't take the time to properly set up or to maintain their technology, the results won't help them in their efforts to constantly improve.

"Once growers understand how they can use the information they generate to make decisions, they care a lot about the quality of their data and become a great partner in making sure we get it right," Frieberg says.

Future Needs

To keep up with ever-changing ag technology and industry needs, North Dakota State University (NDSU) now offers a new precision-agriculture major and minor in order to educate students to be the farmers, ranchers and ag technologists of the future.



The data generated over the course of the year is one of the farm's biggest business assets.

The major started during the Spring 2019 semester. A key component of the new major is to teach students how to manage, analyze and use large amounts of digital data in order to increase production, enhance profit and better protect the environment.

"Agriculture technology is changing," says Xin "Rex" Sun, an NDSU assistant professor of agricultural and biosystems engineering. "Artificial intelligence and big data play big roles in present and future agriculture. The industry needs future generations to be data analysts and technicians, but also to be the next generation of farmers."

NDSU is among a growing number of higher-education institutions that recognized the need for trained precision ag technologists.

Sun says that the majority of farmers are interested in utilizing ag technology, but after they gather the data, growers aren't always sure how to get the most from the information. One of the main purposes of NDSU's new precision-ag degree is to train professionals who can help local farmers with technology and data-processing methods.

"A big benefit of this major is to train students and farmers to deal with numerous data that is generated from the farm, so they know how to process it and make better decisions for higher yield or higher quality," Sun says.

Sun says that there are currently nine students in the major and minor, but more are likely to enroll now that the degree is in place. Most students

are interested in the major because they're from a farm and want to bring an added skill set back to help their family operation produce more and better-quality food.

"They want to bring that precision-ag knowledge back to their own farm," Sun says.

The program will have a strong experiential learning component, with field experience in areas such as sensors, mapping, data collection and cloud computing.

Industry collaborators also made it clear that they need trained workers. Businesses that generate or analyze farm data need skilled employees who can help farmers and others get value from evolving technology. Sun says that machinery companies, seed and fertilizer firms, agronomy businesses and agriculture-insurance companies are looking for students versed in the field. Technology companies involved with software, sensors and robotics, unmanned aerial systems, cloud computing and data science could also present career opportunities for the program's graduates.

The precision-agriculture major gives students a double benefit, according to Sun. Students can take what they learn back to their farm or use that knowledge to get an off-farm job.

"They'll be able to use those skills as a farmer or as a career," says Sun.

To learn more about the NDSU precision-agriculture major, visit www.ndsu.edu.

—Story by Daniel Lemke,
photos by United Soybean Board

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SPRING PLANTING Indecision

Ryan Pederson admits that he's as undecided about next year's crop-planting intentions as he's ever been.

Pederson, from Rolette, North Dakota, is like many of his fellow farmers who are uncertain about what they'll plant in 2019.

"Normally, under 5 percent of my acres are undecided," Pederson says. "This year, I'm about 15 percent undecided. That doesn't sound like a lot, but if every farm in North Dakota is in the same boat, that's a lot of undetermined acres."

Pederson usually splits his acreage in a 50-50 mix of cereal grains and oilseed crops, following up crops such as corn and wheat with soybeans or canola. This year, he may skew more heavily to cereal crops.

Or he may not.

Farmers typically have the bulk of their planting intentions planned well before spring because of diversification, weed management and disease control. Thanks to challenging prices for nearly all ag commodities, uncertainty about trade agreements and crop insurance values, some farmers may wait until the last minute to decide what to plant.

"It puts strain on a lot of things," Pederson says.

Because wet field conditions prevented him from applying anhydrous ammonia last fall, Pederson has

added planting flexibility heading into the 2019 growing season.

North Dakota State University Extension Crops Economist and Marketing Specialist Dr. Frayne Olson says that flexibility is key because so much market uncertainty remains.

"2019 is one of those years where you'll want to be as flexible as possible, so if something positive happens, you can respond," Olson says.

Cloudy Forecast

Olson says that there is a lot of uncertainty among farmers about what to plant in the coming year. He says that posted prices for harvest delivery on most crops are near or below breakeven points. With no clear price

winner evident for the year ahead, farmers with planting flexibility will be in a position to respond to market opportunities when and if they arise.

The past several years, Olson says that farmers' bottom lines were helped by above-average yields, but growers can't plan on those kinds of yields every year.

"Budgeting with average yields and today's harvest delivery prices means most farmers would be at or below breakeven," Olson says. "Right now, it's very hard to say which crop has the most upside potential."

Olson says that passage of the U.S.-Mexico-Canada Agreement could affect markets as could negotiations with Japan, a large U.S. corn and

wheat buyer.

"There is a lot still up in the air," Olson admits. "As negotiations come together, they could make a big difference in the market and in what farmers plant."

Moving Ahead

Olson says that farmers need to spend some time closely analyzing their crop budgets in order to help choose which crops make the most financial sense. Examining and determining which inputs are necessary and which ones could be avoided without negatively affecting yield will help the bottom line.

"Most farmers have already done this, but it's important to re-evaluate to make sure they're spending money in the right places and that the money they are spending will get returns," Olson explains.

Managing inputs is important to profitability, Olson contends, but so is diversification.

"Soybeans had been a slam dunk, but there's been a shift. I'm not saying farmers shouldn't plant them because they work in rotation, but growers need a balanced system because we don't know what will happen," Olson says.

“While he recommends flexibility, Olson doesn't want farmers to drag their feet. Growers should lock in their seed and fertilizer prices as soon as possible.”

Diversification also includes being as efficient as possible with labor and equipment needs, Olson adds.

If a trade deal is struck with China, Olson believes that all crops would likely benefit. If no deal is made, soybeans could be hardest hit. Having diverse crop enterprises allows for marketing flexibility.

"We have to be realistic," Olson says. "There is upside potential, but there is still downside risk."

Olson also encourages farmers to be more aggressive in their marketing efforts, particularly in forward pricing. Looking at futures contracts for harvest delivery could give farmers the opportunity to sell crops at an acceptable price. Olson says that elevators typically use the November contract for soybeans, the December contract for corn and the September contract for spring wheat. Prices may not be what growers want, but the prices may be enough to spur some sales.

"Profit margins will be tight, so we have to go back to the way we

marketed in the early 2000s," Olson says. "It's been a while since we've had to deal with a situation like this. It's back to the future."

Olson says that the soybean futures contract has shown surprising resilience since the U.S. imposed tariffs on Chinese goods and China retaliated with duties on U.S. products, including soybeans. Since last fall, the futures contract has been on an upward trend. Soybeans have climbed a dollar above post-tariff lows for 2019 harvest delivery.

"It's still not a great price, but given the size of the crop, I'm pretty impressed," Olson adds.

In addition to trade negotiations, crop-insurance prices may also be a determining factor in what farmers do with their flexible acres. Those prices are set based on discovery in the month of February.

"When we see the crop-insurance prices, that will be a decision-making tool for me and others," Pederson says. "If the guarantee is different

for one crop versus another, it may encourage us to plant more of that crop."

While he recommends flexibility, Olson doesn't want farmers to drag their feet. Growers should lock in their seed and fertilizer prices as soon as possible. Olson says that planting conditions in other parts of the U.S. could affect the cost and availability of fertilizer, so it's best not to wait. Purchased seed can either be held until next year or returned.

"I'm not recommending that people procrastinate," Olson explains. "They may need to buy more seed for a crop than they're going to put in the ground, but if something happens

that presents an opportunity for a certain crop, they can react."

Pederson says that he's over-bought seed, knowing he will likely have to return some. He's remaining flexible so that he can wait as long as possible to make planting decisions based on the best economics.

"I have the seed bought, but what I plant might not get decided until the seed goes into the ground," Pederson says.

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



Pederson says he may not know what he'll plant on some acres until it's time to put the seed in the ground.

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NDSU Extension and Ag Rresearch

Provide Big ROI to Farmers

In 1887, the North Dakota Agricultural Experiment Station (NDAES) was created in an effort to advance

agriculture in the United States through research which first emphasized soil minerals and plant growth. Then, in 1914, North Dakota State University (NDSU) Extension was created in order to communicate research to the public. Today, the NDAES studies all things important to North Dakota agriculture, includ-

ing livestock, crops, soils, grasslands and range management.

NDSU is North Dakota's land-grant university. Did you know that NDSU also has an additional two-part responsibility to North Dakotans? The North Dakota Agriculture Experiment Station conducts agriculture research at the main

station in Fargo as well as at seven research-extension centers around the state; NDSU Extension is committed to meeting the educational needs of North Dakota and emphasizes strengthening agriculture, stimulating communities, developing youths' potential, building strong families and protecting the environment.

NDSU Extension is a trusted source of accurate and unbiased information which isn't always available from other sources

According to a study conducted by NDSU's Department of Agribusiness and Applied Economics, the return on investment (ROI) for public agricultural research and Extension services in North Dakota for 1960 to 2011, 50 years, was 24.9 percent per year for farmers and consumers. Additional studies by 30 universities nationwide reported that the ROI for agricultural research and Extension generates benefits which average 40 percent per year and last several decades.

Keith Peltier, chairman of the State Board of Agricultural Research and Education (SBARE), explains that the ROI of funds is not seen immediately.

"On the average, it takes 7 years to see benefits of the first research dollars," says Peltier. "By year 15, farmers

see a lot of the benefits. It's a long process that will definitely pay off for producers."

Success Stories

"A perfect example of conducting agriculture research and sharing the results to the farmers happened in the early 1990s," says Peltier. "There were over 6 million acres of summer fallow of small grain in mostly western North Dakota, which was common practice."

Extension agent Keith Brown and producer Dick Roland were interested in eliminating fallow acres and replacing the traditional half-wheat and half-fallow rotation with a more diverse crop rotation in western North Dakota. Brown and Roland discussed their interest with Agriculture Experiment Station Specialists Blaine Schatz of the Carrington Research Extension Center and Kent McKay of the North Central Extension Center, Minot, to conduct research on soil health; reduced tillage; pulse crops; and other crops such as sunflowers, canola, and corn.

"The research was a success, and this information was shared with North Dakota farmers," explains Peltier. "Today, western North Dakota is thriving, with diverse ecosystems with small grains and legumes, and less than 300,000 acres are summer fallow. The research helped put 6 million acres back into production, which adds \$200 per acre to the economy. That equates to \$1.2 billion per year. Over the last 20 years, that results in \$20 billion added to North Dakota's economy."

North Dakota livestock producers also see an ROI from Extension and research, which includes efforts with beef-cattle nutrient requirements. The "2016 Nutrient Requirements of Beef Cattle" study, published by the National Academy of Science, utilizes data from NDSU and other land-grant universities to develop feeding recommendations for beef cattle. Dr. Joel Caton, NDSU Animal Sciences,



Joe Breker of Havana knows the benefits of cover crop and no-till farming.



played a key role on the committee. The feeding recommendations are utilized worldwide by producers, nutritionists and scientists to more accurately formulate beef-cattle diets. Conservative estimates for North Dakota indicate a 5-percent improvement in feed efficiency, which could save North Dakota ranchers more than \$25 million in feed costs annually.

Soybean cyst nematode (SCN) is the most-destructive soybean pathogen and the number-one yield-robbing soybean pest. It can be found in at least 31 states. SCN can cause soybean yield losses of more than 30 percent.

Since 2013, the North Dakota Soybean Council has teamed up with Dr. Samuel Markell, NDSU Extension plant pathologist, to offer free SCN sampling kits to farmers. About 3,000 SCN samples have been processed, thanks to NDSU Extension's county offices distributing the kits and helping growers identify and manage SCN. The value of planting resistant varieties when SCN is present is about a 40-percent yield increase.

For more than 23 years, NDSU Extension has provided farmers and industry with educational programs about precision agriculture. North Dakota producers who use all kinds of precision-ag technologies see an \$88 per acre benefit, compared with producers not using them.

"Those are huge returns for farmers," says Peltier. "The SBARE board takes into account these types of benefits when we rank our

research priorities."

According to a 2015 study conducted by Dr. William Wilson, NDSU distinguished professor of agribusiness and applied economics, 53 percent of North Dakota's spring-wheat acreage was sown to varieties developed by the North Dakota Agricultural Experiment Station.

"A variety released from NDSU's spring-wheat breeding program has an estimated economic impact to the state ranging from \$69 million to \$284 million over the period it remains in the marketplace, compared to other varieties," says Peltier.

Sarah and Jason Lovas of Hillsboro stopped raising wheat many years ago.

"In the '90s, when we were plagued with such wet weather, Fusarium head blight, or head scab, came into play and completely devastated the crops," says Sarah Lovas. "We didn't have varieties of wheat that could handle it well, and we didn't have fungicides that could help us manage it either."

The Lovas Farm began raising wheat again 4 years ago. The Lovases experienced good yields but only 12 percent protein content. They learned about an old study by Carrington Research Extension Center Director Blaine Schatz and Extension Specialist Greg Endres. Applying 10 gallons per acre of 28-0-0, plus 10 gallons per acre of water post-anthesis, boosts protein 0.5 to 1 point.

"Thanks to this valuable research, we implemented Carrington's suggestions 3 years ago," reports Sarah



4-H youth assist at Banquet in a Field event in Prosper, North Dakota

Lovas. "For 2016 and 2017, our average yield was about 88 bushels per acre, with 14.5 percent protein. During that time, the average profit for this protein-enhancement application was \$10 per acre, which doesn't sound like much. But if the 20 million acres of cropland in North Dakota experienced similar results, that would be \$200 million a year into our economy."

Future of North Dakota Agriculture

Agriculture is in every county in North Dakota. One in four people is employed in the agriculture sector.

"4-H is a great program and an important aspect of NDSU Extension, too," says Peltier. "I call the 4-H youth our 'feeder system' for agriculture."

North Dakota 4-H youth develop life skills of teamwork, decision making, critical thinking and public speaking by engaging in a variety of learning experiences. Beginning at the elementary-school age, youth in 4-H become involved as active, engaged

citizens as well as leaders in their local clubs and communities. The youth grow as citizen leaders by finding and using their voice to address local issues and needs as well as participating in discussions and programs that benefit others.

"4-H youth are two times more likely to participate in science, technology, engineering and mathematics (STEM) activities," explains Peltier. "Compared with their peers, youth involved in 4-H programs are two times more likely to be civically active, two times more likely to make healthier choices and four times more likely to give back to their communities."

"If we are interviewing at our seed company for a position, we will select a 4-H or FFA alumnus every time," explains Peltier. "By making investments into 4-H youth programs, we are making a huge investment in our future for North Dakota agriculture."

—Story by staff, photos by Creative Treatment, Wanbaugh Studios and Betsy Armour



Dr. Sam Markell of NDSU takes a soil sample to test for SCN.

To learn more about NDSU Extension and the North Dakota Agriculture Experiment Station, and to follow their events, research and projects, be sure to visit their websites and to follow them on social media.

ag.ndsu.edu/extension

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North Dakota Soybean Council Engages on Biodiesel



As part of its ongoing effort to increase the availability and utilization of biodiesel in the state, the North

Dakota Soybean Council (NDSC) recently provided the opportunity for a group of North Dakotans to experience the National Biodiesel Conference and to learn more about the biodiesel industry. The conference included a wide variety of educational sessions, a diesel vehicle ride-and-drive, and two panel discussions featuring federal policy insiders and convenience-store operators. Participants also had many opportunities to network with biodiesel stakeholders from across the country in order to increase their understanding of the various facets of the biodiesel industry.

The theme of this year's conference was ENGAGE, and that is what

NDSC did with guests from various parts of the diesel supply chain. The goal was to learn more about the biodiesel industry and to ENGAGE in conversation. Perry Ostmo, NDSC director from Sharon, and Harrison Weber, NDSC staff, attended the conference not only to learn about the national and regional biodiesel markets, but also to better understand how they can work with North Dakota fuel suppliers to actively sell biodiesel and to make it easier for North Dakotans to purchase and use the product.

Guests of NDSC included Luke Krueger, Farstad Oil in Minot; Jamie Reese, Western Choice Cooperative in Killdeer; Randy Kylo, owner of

KRB Gravel in Mayville; and Robert Betteridge, a diesel instructor at Williston State University. By the end of the conference, the attendees agreed that they did not realize the biodiesel industry was so large with such a diverse national reach. Betteridge commented that biodiesel was more widespread than he thought: "I thought it was more localized," says Reese. "I had no idea that biodiesel had this sort of support."

Many attendees had heard negative reports from people who tried biodiesel 10-15 years ago. Reese learned that "biodiesel has a spec standard just like gas or diesel coming out of the refineries." He felt that biodiesel was a good product that may even go through more testing than petroleum products. Krueger had heard the stories, too. He was in a unique market with half in Minne-

sota where biodiesel is required and half in North Dakota where it is not required. Krueger said, "I've had the opportunity to work with biodiesel in Minnesota for 10 years and have had no issues at all. If I can convey that to my customers on the North Dakota side, we can move the needle in that state."

Ostmo has been using B20 the last 3 years with no issues. He begins using it in spring and continues until mid-October when he switches over to straight No. 2. He hopes other farmers will do the same, saying, "I hope farmers will try it. I get satisfaction out of helping the industry that soybean farmers helped establish."

Soybean farmers founded the National Biodiesel Board, and today soybean farmers from across the country hold many leadership positions and continue to invest in the industry. More than half of all U.S. biodiesel is made from soybean oil while the other half comes from other renewable sources. Industry surveys have shown that the biodiesel industry contributes at least 63 cents to the price of a bushel of soybeans. Requesting biodiesel from fuel suppliers and using it on the farm is one way all North Dakota soybean farmers can ENGAGE in supporting the future of biodiesel and the added value it provides.

—Story and photos
courtesy of MEG Corp.



From left to right: Robert Betteridge, Transportation Technology Instructor at Williston State University; Randy Kylo, president of KRB Gravel; Luke Krueger, branch manager of Farstad Oil, Inc.; Harrison Weber, NDSC director of market development; Jamie Reese, general manager of Western Choice Cooperative, Killdeer, ND; Perry Ostmo, NDSC board member.



NDSC Director of Market Development Harrison Weber updates the group on NDSC's biodiesel projects and ongoing programs.



Nurses and staff happily receive Babysoy onesies/body-suits at Sanford Medical Center in Bismarck.



North Dakota Soybean Growers Association Legislative Director Scott Rising, on behalf of the NDSC, drops off a box of Babysoy bodysuits at St. Alexius Medical Center in Bismarck.

North Dakota Soybean Council Donates **BABYSOY BODYSUITS** to Newborns for the Holidays

For the 2018 holiday season, the North Dakota Soybean Council (NDSC) donated over 500

Babysoy bodysuits (onesies) to parents of newborn babies across the state. Bodysuit donations were made to Sanford Medical Center, Bismarck; St. Alexius Medical Center, Bismarck; Jamestown Regional Medical Center; Altru Hospital, Grand Forks; Trinity Health, Minot; Sanford Medical Center, Fargo; and

Essentia Health, Fargo.

Made from Azlon from soybeans, or what is commonly referred to as “soybean protein fiber,” these colorful and adorable bodysuits are soft and earth friendly. Soybean protein fiber is a sustainable and botanical textile fiber that is made from renewable and biodegradable natural resources: the

leftover soybean pulp from tofu and soymilk production.

“Making these donations to hospitals is always a perfect way to spread fun holiday cheer, share our industry and promote one of the many uses of soy,” says Stephanie Sinner, NDSC executive director. “The NDSC is proud to, again, donate Babysoy

onesies and bodysuits to North Dakota newborns this past Christmas season.”

Soybean fiber is a soft, light and smooth protein fiber. It is smoother than cashmere and has the same moisture absorption as cotton, but with a better moisture transmission, making it more comfortable on the skin. It is hydroscopic, air pervious, soft, smooth and dry, and it has superior warmth retention that’s comparable to wool.

—Story and photos by staff



Suzie Soybean, along with NDSC Director of Finance Molly Fern, fourth from right, and NDSC Communications Director Suzanne Wolf, third from right, visited Essentia Health in Fargo to donate Babysoy bodysuits for newborns.



On behalf of the North Dakota Soybean Council, Suzie Soybean and her friends, Molly Fern and Suzanne Wolf, donated Babysoy bodysuits and onesies to Fargo’s Sanford Family Birth Center on December 19, 2018.



Inaugural North Dakota Livestock Alliance Summit is a Great Success

promoting animal agriculture in North Dakota



The North Dakota Livestock Alliance (NDLA) hosted its first annual Livestock Summit on January 16, 2019,

at Stiklestad Learning Center in Ransom. Summit Emcee Mick Kjar, host of Farm Talk on Ag News 890, guided the 100 attendees and 6 media outlets through a day of thought-provoking presentations and panel discussions, followed by guided tours of nearby livestock operations.

The event attendees were from many different professions, including producers of all species of animal agriculture, crop farmers, rural community leaders, economic-development professionals, NDSU Extension and livestock-industry stakeholders.

"We are overjoyed to see so many people excited about the future of livestock development in our great state," says Amber Boeshans, executive director of the NDLA.

After greetings from summit emcee Mick Kjar and NDLA Chairman Craig Jarolimek as well as a video greeting from North Dakota Governor Doug Burgum, the sessions began with a panel discussion focused on turning livestock-development

concepts into reality. The panel was moderated by Kjar, and the panelists were Mark Messer of Beaver Creek Farms, Richardton, North Dakota; Alan Qual of Qual Grain and Dairy, Lisbon, North Dakota; and Bruce Froslee, a consultant for the Ransom County Multiplier pig barn by Englevale. The panelists discussed their diversified crop and livestock operations as well as their experiences during the expansion and construction of their new livestock facilities.

Later, John Breker, a soil scientist with AGVISE Laboratories, took the stage to discuss manure nutrient management and how manure can improve soil health and can financially benefit your farm. Another panel discussion followed, focusing on the financial incentives and programs available to North Dakota's livestock industries. Moderator Dr. Charlie Stoltenow of NDSU Extension guided the discussion with panelists Kyle Froslee of AgCountry Farm Credit Services, Fargo; Jason Wirtz

of the North Dakota Department of Agriculture; and Jim Leier of the Bank of North Dakota.

Before breaking for lunch, North Dakota Commissioner of Agriculture Doug Goehring addressed the group and discussed some developments from this year's legislative session. Immediately following lunch and delicious gelato provided by special guest Duchessa Gelato of Carrington, North Dakota, attendees enjoyed a creative and fun entertainment session from Rodney Nelson, a cowboy poet from Almont, North Dakota.

In the later afternoon, guests loaded on a bus to participate in a guided tour of Qual Dairy by Lisbon. Qual Dairy recently added a robotic-rotary milking parlor, an incredible new technology.

Along with a tour of the new milking system, attendees were guided through the freestall barn to see, firsthand, the nutrition, manure management and animal-health practices that the Qual family uses

to ensure the comfort of its cows and the success of its farm.

Then, the buses took attendees for a windshield tour of the new Ransom County Multiplier pig barn by Englevale, North Dakota. Parking right by the driveway, the bus opened its doors, and several guests braved the cold to step outside and experience the air quality only a few feet away from 2,500 pigs. Excitedly, the guests stated that the odor was so minimal that it was nearly non-existent, which answered many of their questions regarding livestock development in rural North Dakota.

Thank you to all of the event sponsors. The platinum sponsors were Hubbard Feeds and Midwest Dairy. Also, thanks for the dairy-tour snacks go to DairiConcepts of Pollock, South Dakota, and Cass Clay Kemps of Fargo, North Dakota.

For further event information, please contact the North Dakota Livestock Alliance, or visit the organization's website at ndlivestock.org.

—Story and photo by
Amber Boeshans, North Dakota
Livestock Alliance



U.S. Soy Advantage Meetings Continue in Southern Europe



In February, the U.S. Soybean Export Council (USSEC) organized three more buyers' meetings in southern

Europe: Milan, Italy; Santiago, Spain; and Lisbon, Portugal.

The European Union is the second-largest importer of soybeans after China and is the largest importer of soybean meal. Imports total approximately 12 million tons of soybeans and 21 million tons of soybean meal.

Southern Europe is very important to the EU's soybean crushing industry because Spain, Portugal and Italy make up 50 percent of Europe's total soy crush.

In the last six months, U.S. soy exporters significantly increased their soybean business in Europe, and practically all soy crush in this area utilized U.S. soybeans during this period.

Through December 2018, U.S. soybean exports to Europe totaled 4,799,700 metric tons, equaling 28 percent of the total U.S. exports during this marketing year. Included in that European total is 1.3 million tons which were imported by Spain; 514,000 metric tons which were imported by Italy; and 354,000 metric tons which were imported by Portu-

gal. These three countries account for 13 percent of the total U.S. soybean exports.

The Experience Today's U.S. Soy Advantage meetings shared how the U.S. soy industry is working to collaborate with EU consumers in order to achieve the objectives of quality and sustainability.

The meetings were attended by more than 40 people in Italy, more than 70 people in Spain, and more than 50 people in Portugal. These

individuals represented the largest companies in the feed, import, crush and animal-agriculture industries in each area.

USSEC Vice Chairman and American Soybean Association Director Monte Peterson, a North Dakota farmer from Valley City, presented the U.S. farmers' perspective. Brent Babb, USSEC regional director-EU/Middle East North Africa (MENA), discussed sustainability. U.S. exporters were represented by Daniel Secondi



USSEC Vice Chairman Monte Peterson.

from Perdue as well as Javier Massó and Joao Roda who were working in Spain and Portugal for Bunge.

The agenda also included specific, detailed discussions. USSEC consultant Dr. Gonzalo Gonzalez Mateos spoke about the value of soy origin, following the research he has done over the last 15 years that highlights the advantage of using U.S. soybean meal. Lola Herrera, USSEC consultant, put numbers to this advantage, comparing different soybean-meal origin replacements, including the added value due to quality. Taking into account that attendees were also interested in markets and prices, Robert Bresnahan from Trilateral presented on soy and commodity prices along with market trends to wrap up the meetings.

In Portugal, the U.S. ambassador in Lisbon, George E. Glass, participated in the Experience Today's U.S. Soy Advantage meeting. In Santiago, Jennifer Clever, agricultural attaché for Spain, opened the meeting.

The USSEC collaborated to organize meetings with local feed associations in each country: Assalzoo (Italy), AGAFAC (Spain) and IACA (Portugal).

—Story and photos by
Jen Del Carmen, USSEC

EU Soy-Crush Capacity by Country

Germany	3.676
Spain	3.450
Italy	2.706
Netherlands	2.536
Portugal	1.585
Romania	.792
France	.759
U.K.	.730
Greece	.594
Croatia	.570
Poland	.475
Finland	.200
Denmark	.110
Estonia	.072
Austria	.066
Bulgaria	.030
Sweden	.015
Czech Republic	.003
Total	18.369



Celebrate Soybean Oil During April Soyfoods Month



Although soybean oil doesn't get as much press as coconut or olive oil, it's more widely consumed than

one might think. Consumers may not realize that, when they purchase a bottle of "100% vegetable oil," it's actually soybean oil. If soybean oil's role in American diets has gone largely unrecognized, that has been changing over the last couple years.

Soybean oil is part of a healthy diet. In 2017, the U.S. Food and Drug Administration (FDA) approved a petition that allows farmers and food manufacturers to use a heart-health

claim on packaging, menus and more. The claim states that eating 1.5 tablespoons of soy oil per day may reduce the risk of coronary heart disease when replacing saturated fats and not consuming more calories. In addition, the American Heart Association has gone on the record to discuss the heart-healthy benefits of the fats found in soybean oil.

For decades, food manufacturers have selected soybean oil for its

versatility and competitive pricing. Soybean oil's neutral flavor and well-balanced fatty-acid profile make it a desirable ingredient for a variety of applications from baked goods to salad dressings.

Liquid soybean oil is low in saturated fat, contains no trans fat and is high in poly- and monounsaturated fats. Soybean oil is the principal source of omega-3 fatty acids in the

U.S. diet and is also the primary commercial source of vitamin E.

While soybean oil has been a staple in American kitchens and in food service for decades, the growing recognition of its benefits may finally focus the spotlight on this healthy source of dietary fats. These positive movements for soybean oil will primarily help in U.S. markets, but the checkoff will use the claim to position U.S. soy in international markets where health-conscious decisions are also being made.

—Story, photos and recipes courtesy of the Soy Nutrition Institute, TheSoyNutritionInstitute.com

Wholesome Soy, Berry Pancakes

Ingredients

1½ cups white whole-wheat flour
½ cup oatmeal, quick cooking
2 tablespoons baking powder
1½ cups vanilla or plain soymilk
4 eggs
2 tablespoons brown sugar, packed
2 tablespoons soybean oil
4 cups fresh blueberries, divided
Maple syrup (optional)

Directions

Combine flour, oatmeal and baking powder in a medium bowl. Whisk

the soymilk, eggs, brown sugar and soybean oil in a large bowl until blended. Add the flour mixture to the soymilk mixture; stir just until blended. Stir in 2 cups of berries. Heat a large skillet over medium heat; brush lightly with soybean oil. Pour ¼ cup of batter into the hot skillet; cook until bubbles begin to burst. Turn and continue cooking for 1 to 2 minutes until golden. Repeat with the remaining batter. Serve with the remaining berries and maple syrup, if desired.

Wild Green Salad with Raspberry-Walnut Vinaigrette

Ingredients

½ cup raspberries, fresh
½ cup soybean oil
½ cup raspberries, fresh
¼ cup walnuts, toasted and chopped
¼ cup balsamic vinegar
¼ cup water
3 tablespoons red onion, minced
2 teaspoons sugar
¼ teaspoon salt
⅛ teaspoon black pepper
6 cups mixed, wild greens
¼ cup Gorgonzola cheese, crumbled
¼ cup walnuts

Directions

To make the dressing, place all the Raspberry-Walnut Vinaigrette ingredients in a food processor or blender. Process until smooth; refrigerate. Makes 1¼ cups dressing. Place greens in a large bowl. Pour ½-cup Raspberry-Walnut Vinaigrette dressing over the salad; toss until blended. Sprinkle cheese, walnuts and raspberries over the salad. Serve immediately.





Easter is Right Around the Corner

New, Promising Skin Health

Easter is the time of year to enjoy ham, delicious fresh salads and spring vegetables along with Easter baskets filled with chocolate eggs and marshmallow Peeps. It is the time of year when we look forward to green grass, daffodils and warmer temperatures.

Many Easter traditions include breakfast or brunch. It is great to find recipes that can be prepped or prepared ahead, so the cook's time can be spent with family and guests. Kids make holidays fun, so why not make some special foods to enjoy along with the Easter-basket goodies?

Make the egg bake the night before, and the frittata is quick, easy and satisfying. Soyfoods are part of these recipes and blend well with

familiar ingredients, such as ham and eggs. The pops are made ahead; they are fun and delicious.

With the onset of warmer weather, reminders about sunscreen are prominent. The sun can be harsh on both men and women's skin. There is new, promising research that suggests consuming soy products can protect both young and mature women from wrinkles. Also look for products that have soy in them; your skin will be radiant with fewer wrinkles.

Start adding soy to a healthy lifestyle for many health benefits, including skin health.

—Story, photos and recipes courtesy of Linda Funk, The Soyfoods Council



Overnight Egg Bake

Ingredients

- 6 eggs
- 2½ cups plain soymilk
- ¾ teaspoon salt
- 1½ teaspoons dry mustard
- ¼ teaspoon onion powder
- 7 slices white bread, crusts removed, cubed
- 1½ cup shredded cheddar cheese
- 1½ cups soy crumbles

Directions

Preheat oven to 350° F.

In a medium bowl, beat eggs, milk, salt, dry mustard and onion powder.

Place bread cubes in a greased 9 x13-inch dish or greased 10-inch round dish, sprinkle with cheese and soy crumbles. Pour egg mixture over bread mixture. Cover; refrigerate overnight or for at least 6 hours. Bake for 50 to 60 minutes or until set and golden brown.

Yield: 6 servings.



Edamame Ham Frittata

Ingredients

- 2 tablespoon olive oil
- ½ cup chopped ham
- ½ cup chopped onion
- 1½ cups cooked linguine
- 1½ cups cooked edamame
- ¼ teaspoon garlic salt
- ⅛ teaspoon pepper
- 12 chopped kalamata or black olives
- ½ cup crumbled feta or queso fresco cheese
- 5 eggs, beaten
- ½ cup grated pepper-jack or asiago cheese

Directions

A frittata is nothing more than an open-faced omelet and is, in fact, much easier to make.

Preheat the oven to 350° F.

Heat the oil in a large oven-proof skillet over medium heat. Add the ham and onion; sauté 3 minutes. Add linguine; cook 2 minutes. Add edamame, garlic salt and pepper; cook 2 minutes. Sprinkle with olives, and the feta or queso fresco cheese. Pour the eggs over the cheese. Cover and cook over medium-low heat for 4 minutes or until the eggs are set. Cover the skillet, and place it in oven; bake 10 minutes. Sprinkle with pepper-jack or asiago cheese; bake 2 more minutes or until the cheese is melted. Cut into wedges.

Yield: 6 servings.





The Shifting Tides of Global Trade

North Dakota farmers are feeling the repercussions of the United States' ongoing trade war with

China and are hopeful that ongoing negotiations can yield an agreement to jumpstart lagging exports. Drastically reduced exports to their largest export customer have left farmers with more questions than answers about how to profitably market soybeans and what to plant in 2019 if a trade agreement isn't reached.

U.S. Soybean Export Council (USSEC) CEO Jim Sutter says that, in a typical year, 60 percent of U.S. soybeans are exported. The U.S. Department of Agriculture estimates that only 52 percent of the U.S. crop was exported in 2018, which contributes to a large oversupply of soybeans.

When China applied retaliatory tariffs on U.S. soybeans about nine months ago, North Dakota growers felt the brunt of that decision.

"U.S. soybean acreage grew to match China's demand," Sutter says. "China's appetite was a critical part of what drove North Dakota's acreage increase."

Negotiators for both countries have engaged in face-to-face meetings over the past few months, trying to reach an agreement that would remove tariffs and pave the way for resumed trade. Sutter says that agriculture discussions are going well, but that's just part of the overarching agreement that must be crafted with China.

"Trade issues regarding soybeans are relatively easy; we want them to revert to their previous purchases," says Dr. William Wilson, NDSU distinguished professor of agribusiness and applied

economics. "Intellectual property theft and forced technology transfer issues are monumental and are a lot more difficult to hammer out."

Sutter believes that the biggest factors in reaching an agreement boil down to President Donald Trump and China's President Xi Jinping.

"I'm optimistic that Trump and Xi want to get something done. That's important to get our exports back in shape," Sutter says.

Eyes Elsewhere

While China is the big fish in the soybean export pond, Sutter says that the USSEC is working to increase the demand from current U.S. soybean customers while identifying and developing new buyers.

Sutter says that exports to non-China destinations are up 80 percent over last year. In Europe, for example, the U.S. soy market share grew from 35 or 40 percent in previous years to nearly 80 percent in 2018. Taiwan made its first purchase of U.S. soybeans from the Pacific Northwest in 13 years.

"Long term, we are looking at areas that have large populations, increasing economies and low protein consumption," Sutter explains. "That included countries like India, Nigeria, Pakistan and Bangladesh. There is growth in the Asia subcontinent."

"Global soy-demand growth is

pretty robust due to increased urbanization and more women in the work force," Wilson states. "That increases the demand for more convenience foods and higher-quality food."

North Dakota is well positioned to serve the Asian subcontinent through ports in the Pacific Northwest, according to Sutter, and that market option could help ease the pain of what was lost with China.

India has an estimated population of over 1.3 billion people. Sutter says that India also has a growing poultry production industry as the nation works to feed its people.

"India is a big target for the U.S. and every other soybean-producing country," Wilson says. "Not only will we have to grow demand, but also navigate trade barriers. India is on everyone's radar, but it's difficult to get in."

"We think they'll (India) consume a lot of soy," Sutter adds. "Right now, there are barriers, but if their demand grows, they'll remove those barriers because they need the soybeans. We're not selling a luxury item. We're selling food."

The U.S. soybean industry worked in China for well over a decade, building demand before China imported any U.S. soybeans. Sutter says that India could grow into another success story.

"They (India) could become our customers, but it may take 10 years. It did with China," Sutter says. "It took



Soybean shipments to China have slowed dramatically while trade to other U.S. customers is strong.

them (China) 12 years before they started buying.”

Regaining China

While the USSEC and others focus on growing new and current markets, most soy-industry leaders recognize that it would be a boost for farmers and others if a trade agreement with China is reached.

“It would be better if we can get China back in the fold,” Sutter admits. “We’re going to have to cast our net wide if we’re going to make up for China.”

Farmers and market observers are concerned that, the longer the trade dispute goes on, the greater the risk

for long-term damage to the Chinese market.

“If the U.S. stays locked out of China, that encourages our competitors to grow. That worries me more,” Wilson says. “China has the tendency to retaliate against non-reliable suppliers. The number-one priority is to convince China that the U.S. is still a reliable soybean supplier.”

Sutter says that the USSEC has continued its education programs in China so that the U.S. will be there when trade to China resumes.

China has turned to Brazil, Argentina and other soybean-producing countries to fill the bulk of the Chinese soybean needs. Some purchases

of U.S. soybeans have been made, but the pace is well behind normal. U.S. exports typically peak in November through March, following harvest. With South American farmers now heading into their harvest season, it remains to be seen if U.S. exports pick up or fall flat.

Transportation and logistics had been a U.S. export advantage, but eight new port facilities in Brazil have been announced and could help lessen Brazil’s logistical challenges, increasing the country’s competition with the United States.

NDSU Extension Crops Economist and Marketing Specialist Dr. Frayne Olson says that politics are

overriding all the supply-and-demand factors, contributing to the ongoing trade war.

“My opinion is that this trade war was never about ag issues,” Olson says. “Yes, we’ve had our issues, but this particular trade war did not happen because of agriculture.”

Agriculture may not be the root cause of the trade dispute, but farmers are feeling the effect. Most growers are hopeful that a trade agreement with China and increased demand for U.S. soybeans in other countries will spike the demand for North Dakota soybeans.

—Story and photos by Daniel Lemke

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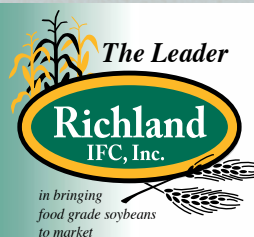
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In 2018, many North Dakota farmers experienced difficult harvest conditions due to unpredictable

weather, including more than a foot of October snow. The ramifications of those harvest challenges are still being felt.

For some growers, a condensed harvest window meant that soybeans were put into storage with a wide range of moisture content. Some growers were able to wrap up harvest in a timely fashion, while others did what they had to do just to get crops in the bin.

“It’s extremely variable,” says Dr. Ken Hellevang, North Dakota State University Extension engineer. “Some farmers put soybeans in at 12 percent moisture. Others were much wetter,

coming in as high as 20 percent.”

Hellevang says that the typical market moisture for soybeans is 13 percent. If farmers plan to store soybeans into the spring or summer, he says that moisture levels should be at 11 percent. According to Hellevang, the reason to store soybeans at lower moisture levels is because of the soybean’s makeup; 11 percent moisture in soybeans is equivalent to 13 percent in corn and wheat. Storing soybeans at 13 percent isn’t low enough to preserve their quality long term.

“Farmers would never think of trying to store wheat through the summer at 15 percent. Soybeans at

13 percent would be the same,” Hellevang says.

Hellevang says that soybean quality can quickly degrade if the crop is not properly stored. Research shows that, when stored at 12-percent moisture in 70-degree temperatures, soybean oil quality degraded in less than 4 months.

“If farmers are going to sell their soybeans by May or June, it probably won’t be an issue. If soybeans aren’t going to be marketed until July or August, the free fatty acids in the beans may be affected,” Hellevang says.

Know What’s in Store

Hellevang says that the first thing farmers should do is pull a sample from their bins and test for moisture. Because cold soybeans can fool moisture meters into giving a false reading, Hellevang recommends placing the beans in a sealed container, such as a plastic bag; bringing the sample indoors; and letting the soybeans rise to room temperature before testing.

Any soybeans that are over 15 to 16 percent moisture should be dried in a high-temperature dryer.

“If growers wait to try to dry the soybeans with just warm air, the beans will spoil before they dry,” Hellevang explains.

Lower-moisture soybeans can be dried by running fans when the average outside air temperature reaches

40 degrees. Hellevang says that, in North Dakota, 40-degree readings usually occur in April. A minimum airflow rate of 1.0 cubic foot per minute per bushel is required.

Cold air is the farmers’ friend. It keeps soybeans frozen, which prevents them from spoiling. It doesn’t take long for temperatures to become an issue.

“As we get later into the winter and early spring, solar energy starts to be a concern. Bin roofs and southern bin walls may start to warm beans up,” Hellevang says. “Monitor the beans near the top and on the south wall. If they are starting to get into the 35- to 40-degree range, run fans to cool them down.”

Hellevang says that enough warming can occur in March and April to cause hot spots to develop, but the air isn’t warm enough to be used to air dry the beans. Higher-moisture beans will have to be mechanically dried in order to have storage life because spoilage can occur in a matter of days. Hellevang recommends that, as temperatures warm, soybeans stored at 15 to 16 percent moisture should be checked every 2 weeks. Higher-moisture beans should be checked weekly.

If farmers are forced to dry soybeans in a high-temperature dryer, fires are a very real concern. Hellevang says that most manufacturers recommend cleaning the dryers daily to keep grain flowing and to reduce fire risk.

—Story by Daniel Lemke,
photos by Wanbaugh Studios



Many North Dakota farmers were forced to store soybeans at high moisture, making grain management vitally important.

Join Us For the 7th Annual Soybean “See for Yourself” Program July 8-12, 2019



Are you interested in learning more about how your checkoff money is used for North Dakota's soybean industry? Where do your soybeans go after you leave them at your local elevator? Participate in the 7th Annual **See For Yourself Program** with the North Dakota Soybean Council and have your questions answered!

Apply today for one of the 15 farmer seats open for the 2019 program to Portland, Oregon and the Pacific

Northwest to learn more about the journey our North Dakota soybeans take to the end customer. Learn about checkoff investments in rail and water transportation, soy biodiesel, new uses of soy, and tour shipping ports where North Dakota soybeans leave for world markets. Experience first-hand the systems in which the North Dakota Soybean Council farmer leaders invest to ensure market stability for your soybeans.

- See For Yourself: July 8-12, 2019 – Portland, Oregon
- Open to North Dakota soybean producers who have not previously participated
- **Participants are reimbursed for airfare, lodging, meals and most expenses**
- Must be 21 years of age at date of application
- Application must be submitted by 4:00 p.m. April 8, 2019 to be considered
- Each applicant must apply separately



Apply online at ndsoybean.org

Questions, please contact Kathy Wiltse at
(701) 566-9300 or kwiltse@ndsoybean.org

Getting to Know the Grower



Jeremiah Undem and his family, Oakes, North Dakota

Tell us about your farm.

Our farming operation is located northwest of Oakes. My wife and I represent the fifth generation of her family to farm this land. The farmstead was originally homesteaded in 1910 by my wife's great-great grandfather.

I farm in a partnership with my wife's father and two other partners, who are father and son, and together, we primarily grow corn and soybeans.

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

No. Having not been raised on a farm, I never would have thought that farming would be an option for me. When the opportunity to carry on my wife's family legacy presented itself, we knew we couldn't pass it up.

Now that I'm in it, I can't imagine doing anything else with my life.

What do you like best about farming?

I like the ebb and flow of the seasons of farming, so no two days are exactly the same, but each season has a beginning, middle and end. Every season is a fresh start.

What's most exciting about the upcoming growing season?

The new Enlist technology that may be available to us.

What has changed most about farming since you've been involved?

Seed technology has changed the most. From the variety of chemical packages available now to superior

genetics, our farm is seeing higher yields, on average, than in years past.

Why are soybeans a part of your crop mix?

Because there's always been a market demand for them and they're very adaptable to our region.

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

I was tapped on the shoulder by a local friend who served on the North Dakota Corn Council because the board was looking for different people to get involved.

I said yes because being educated about what's happening at the state and federal level is important to me, and we do need younger farmers to step up and get involved.

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

Generational shifts not only in our own organization, but also in the landowners from whom we rent. I anticipate that we'll be dealing more with the non-farming heirs of our current landowners and that lack of connection to the land is going to be tricky to navigate.

If you could change something about the

current operating climate for North Dakota farmers, what would it be?

Right now, North Dakota farmers would most benefit if resolutions could be achieved with the Chinese tariffs on soybean exports because over 70% of our soybean production was exported there in 2017.

What do you like to do outside farming?

I enjoy watching my kids in all their activities, spending time with my family and sneaking in a round of golf as often as I can.

If you could go anywhere, where would it be?

Australia.

If you could add equipment or technology to your farm, what would it be?

Right now, I'd want to expand our grain-handling facility. It would be nice to have more options for storage.

What's the one piece of farm equipment or technology you wouldn't want to be without?

The information available to me on the Precision 20/20 monitor on my planter.

—Story by staff, photo courtesy of Jeremiah Undem

Bean Briefs

USDA Supports Soybean-Marketing Efforts

United States soybean-marketing efforts have gotten a boost thanks to funding through the U.S. Department of Agriculture's Agricultural Trade Promotion (ATP) program. The ATP was created to assist U.S. agricultural exporters in developing new markets by helping to mitigate the adverse effects of tariff and non-tariff barriers imposed by other

countries.

The American Soybean Association applied for the funds through the USDA's Foreign Agriculture Service and received more than \$21 million of the \$200 million that were awarded to 57 organizations. The funding will be used to support efforts by the U.S. Soybean Export Council (USSEC) to build preference for U.S. soy around the world.

USSEC works in dozens of coun-

tries to build U.S. soy demand. Those efforts have become increasingly critical as trade issues with China linger.

"ATP funds are very important to the U.S. soybean industry in its efforts to diversify demand from China," says USSEC Senior Director for Soy Marketing Paul Burke. "For several years, the U.S. soy industry has had a strategic goal to diversify its export demand. The injection of USDA tariff-mitigation market-development

funds into USSEC's diversification strategy is very timely."

Burke says that the ATP program is a 3-year effort. The USSEC will immediately invest to promote soybean exports from the Pacific Northwest (PNW) ports and will have these efforts completed this year. The USSEC has already completed its market assessments for new

—Continued on page 34

Getting to Know the Expert



Joe Ikley, NDSU Assistant Professor and Extension Weed Specialist

Where did you grow up?

I grew up 20 miles west of Baltimore, Maryland. I didn't grow up on a farm, but I helped out a local farmer who produced corn; soybeans; and small, square hay bales so that I could hunt deer on his land.

Tell us about your education.

I earned my undergraduate and M.S. degrees at the University of Maryland, and my Ph.D. in Weed Science from Purdue.

Why weed science?

I started in agronomy. Then, my undergraduate advisor knew the

extension weed scientist needed some help, so I started working with him while I was still in college. I started as an intern, then worked as a technician while I earned my master's degree.

You recently moved here, what do you think of North Dakota?

I like it here. The weather's not as bad as people said it would be. Sure, it's cold, but I like that it gets cold and stays cold so you are better able to acclimate.

How much of an issue is weed management for North Dakota farmers?

There are issues farmers have to deal with, including waterhemp in the east, and kochia is a statewide problem. We do have some resistance issues with them. Marehail is an issue in no-till, and it's becoming a problem wherever there is no-till.

Palmer amaranth got here last year, so that's something we'll have to keep our eyes on.

What can farmers do to best manage their weeds?

Scouting is very important, especially if they're trying to control waterhemp or Palmer amaranth, because identification is so important. Rotate modes of action and use diversity in crops to stay ahead of the weeds. Economics is always an issue, so it's a balance of controlling weeds and staying profitable.

What do you like to do away from work?

I like to hunt and fish. I'm looking forward to ice fishing. I like to read and watch movies, so there's a mix of indoor and outdoor activities.

—Story by Dan Lemke,
photo by staff

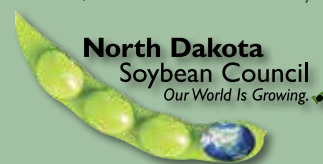
DO YOU HAVE WHAT IT TAKES?



North Dakota Soybean Council Seeks Soybean Farmers Interested in United Soybean Board Nomination



- North Dakota has four board seats on the United Soybean Board (USB). In 2019, three of North Dakota's four director positions are open for nomination.
- All checkoff paying soybean producers in North Dakota are eligible to apply.
- To be considered for the national leadership positions, farmers must complete and return the required nomination paperwork to the North Dakota Soybean Council (NDSC) office by or before 4:00 p.m. on Monday, April 1, 2019. Nominees will be required to travel to Fargo to participate in an in-person interview with the NDSC Executive Committee.
- This position is open to all individuals without regard to race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information.
- The farmer-directors of USB oversee the investments of the soy checkoff to maximize profit opportunities for all U.S. soybean farmers. For more information about USB, visit their website at unitedsoybean.org.



Questions? Call:

(701) 566-9300

To download nomination paperwork, visit:

bit.ly/USBnd19

—Continued from page 32

demand-growth opportunities and is identifying market partners in order to implement its long-term market-development programs. These projects will be completed by 2021.

“The recent collapse of Chinese imports of PNW soybean vessels exemplifies the necessity of this effort,” Burke adds. “In terms of long-term demand development, USSEC will direct a majority of the funds to develop demand for U.S. soy in highly populated, rapidly developing markets that have large opportunities for growth in per-capita protein consumption.”

Examples of these markets include Bangladesh, India, Pakistan, Nigeria and Myanmar. Industry-development programs were successfully used to develop the market in China more than 30 years ago. Burke says that the USSEC will use ATP funds to create new, long-term demand for U.S. soy in these future markets.

U.S. Soy Approved for EU Biodiesel

The conservation practices required for U.S. soybean production meet European Union (EU) sustainability standards, and biodiesel produced from documented soybeans can now be used in the EU, the European Commission has announced.

The EU requires biofuels to meet a set of sustainability criteria outlined in its Renewable Energy Directive (RED). The U.S. soy industry has its own sustainability guideline, the Soybean Sustainability Assurance Protocol (SSAP). With this announcement, the EU acknowledges that the SSAP meets the EU’s rigorous RED requirements.

Davie Stephens, a soybean grower from Clinton, Kentucky, and American Soybean Association (ASA) president said, “U.S. farmers have long prided themselves on adopting newer and better methods for producing high-quality soybeans that are

grown responsibly and sustainably. The SSAP sets a high standard that demonstrates that commitment, and we are pleased that the EU Commission has recognized our efforts by opening the door for SSAP-certified soybeans to be used in EU biodiesel.”

The United States is the leading supplier of soybeans to the EU. While this announcement only applies to soybeans exported for biodiesel, the ASA sees it as a positive step for enhancing the EU market and validating the quality of the SSAP initiative.

Aquaculture Advances in Cambodia

American Soybean Association (ASA) World Initiative for Soy in Human Health (WISHH) leaders joined Cambodian and U.S. government officials and partners in Phnom Penh to launch a strategic partnership that will grow trade and the development of Cambodia’s important aquaculture sector. Cambodia’s Minister of Agriculture, Forestry and Fisheries Veng Sakhon and Chargé d’affaires of the U.S. Embassy in Cambodia Michael Newbill officiated the launch ceremony for the ASA/WISHH’s U.S. Department of Agriculture (USDA)-funded Commercialization of Aquaculture for Sustainable Trade (CAST)-Cambodia project.

CAST will accelerate the production of high-demand fish species for the Cambodian market and will develop a lasting aquaculture industry. The five-year CAST project is an example of WISHH’s enterprise-driven development approach. A key aspect of the project strengthens local production of high-quality feed and fish. CAST makes it possible for Cambodia’s private sector and universities to work closely with U.S. soybean growers and businesses as well as academic and non-governmental organizations.

Newbill, the U.S. Embassy’s ranking representative in Cambodia, said, “The CAST project is unique because

it uses an abundant resource—soy—and utilizes it as a feedstock for Cambodia’s growing aquaculture industry. This project means increased sales of U.S. soybeans to Cambodia. The result will be increased production of a locally raised high-quality protein source that Cambodians will enjoy eating and greater ties between our two countries.”

Cambodia’s gross domestic product (GDP) has risen by more than 7 percent per year since 2011, increasing the demand for animal- and aquaculture-sourced protein. CAST’s anticipated local economic effect exceeds \$300 million during the project’s life, and Cambodia’s aquaculture-industry demand for soybean protein is projected to reach 100,000 metric tons per year by 2030.

U.S. Soy Sets Export Record in Market Year

Farmers’ investments in international markets produced strong results during the 2017-2018 marketing year despite trade dynamics developing as the export period closed. The official marketing year runs from October 1 to September 30. Exports during the 2017-2018 marketing year would not have been largely affected by the tariffs introduced by China because shipments abroad normally take place after harvest.

According to the U.S. Census Bureau, U.S. soybean farmers exported a record-breaking 2.6 billion bushels of U.S. soy and soy products, valued at more than \$28 billion, during the last market year. The U.S. also set a new record high for the combined volume of the whole soybeans, soybean meal and soybean oil which was exported in 2017-2018, with soybean-meal exports accounting for the greatest growth.

Derek Haigwood, a soybean farmer from Newport, Arkansas; chairman of the U.S. Soybean Export Council (USSEC); and a director for United Soybean Board (USB), said that he expects to see the effect of

trade issues in the 2018-2019 marketing year.

The USSEC recently initiated the “What it Takes” strategy to increase U.S. soybean demand worldwide and to mitigate export losses to China. The program provides opportunities for industry experts and farmers to remind buyers about the intrinsic feed value of U.S. soy, mainly its exceptional amino-acid content, the United State’s reliable transportation system and sustainable farming practices.

“Particularly at a time when global trade flows have dramatically changed, it is critical that we ensure access in all markets that want to purchase U.S. soybeans and soy products,” states Haigwood.

Keith Tapp, chair of the USB and a farmer from Sebre, Kentucky, says that the dedication to opening new soy markets has been and will remain a priority for USB investment and support.

“Our work to build the preference for U.S. soy is more important than ever,” Tapp says. “Soy production is growing worldwide, and we continue to work across borders, industries and disciplines to find and develop markets for U.S. soy products.”

In 2017, the U.S. soy industry launched an effort to shift a sizable portion of its efforts to markets where there is significant future potential due to factors such as large populations, improving economic conditions, and currently low per capita protein and oil consumption. As a result of the coordinated work by these three soy organizations through programs such as WISHH and “What It Takes,” sizable export growth was seen in developing markets, including Pakistan, Egypt and India. Globally, demand is forecast to grow by about 15 million tons in 2019, according to economists at the USSEC.

—Story by staff

Soybean Crushing Facility Planned for the Region

A new 21-million bushel-per-year soybean-processing facility planned for Crookston, Minnesota, could

offer North Dakota farmers another domestic outlet for their soybeans.

In January, Epitome Energy, LLC, based in Red Wing, Minnesota, announced its intention to build a 21-million-bushel, soybean-solvent extraction facility; a 30-million-gallon biodiesel facility; and a mechanical soybean-extraction plant that includes a specialty oil-refining operation in northwest Minnesota.

"After an exhaustive search process, we are excited to announce this new project will be located in Crookston," says Dennis Egan, owner of Epitome Energy. "Northwest Minnesota has long been underserved in the area of value-added

processing for the soybean growers. Over 1.8 million acres of soybeans are planted in the 10 counties surrounding Crookston, making this a strategic location for a project of this size."

The project's goal is to enhance soybean growers' profitability and to offer market stability by providing a year-round processing location for their crops, adding value to the local economy.

A study conducted by University of Minnesota Extension shows that, once a plant is operational, the local soybean-market basis gap will close by as much as 20 cents per bushel.

The university study indicated this

project will generate \$322.8 million in new economic activity and will support 330 new jobs once it is fully operational. The plant will support 80 to 100 direct jobs and will have an estimated payroll and benefits of more than \$5 million.

For Manvel, North Dakota, farmer Logan Ferry, the potential to have a processing facility in the region is intriguing because it should open up a new market opportunity and help with local prices.

"It brings in a whole new direct market, so our basis should improve," Ferry says. "It should bring different opportunities for marketing for the whole region. There's a lot of soybeans in that area on each side of the river, so it definitely would have a positive impact."

Soybeans are now a predominant crop grown in northwest Minnesota and eastern North Dakota. The growth with the soybean supply highlights the economic importance of projects that will expand the value-added processing of agricultural products in this region and will diversify the markets into which crops are sold.

The bulk of North Dakota soybeans are exported or transported outside the state. Having a processing facility nearby would help keep some of that value closer to home. Farmers, including Ferry, could have another

market which is hungry for their soybeans.

"Having a local processor is probably one of the better scenarios that could happen because we would have the ability to bring our soybeans directly to the end user instead of all of our soybeans having to be shipped away," Ferry says.

The 11 Minnesota counties affected by this facility produced more than 58 million bushels of soybeans in 2017, according to the U.S. Department of Agriculture's National Agriculture Statistics Service. That production is approximately four times the soybeans needed for a crush facility of this size.

Substantial soybean production also takes place on the North Dakota side of the Red River. The Epitome Energy project is projected to provide the opportunity to unlock additional value through improved margins on more than 21.5 million bushels of soybeans and access to new value-added markets from 471,000 tons of soybean meal per year, and more than 30 million gallons of annual biodiesel production.

Egan says that Epitome Energy is currently meeting with potential partners and investors in order to put the final plan in place.

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



Logan Ferry

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