

THE NORTH DAKOTA **Soybean** GROWER MAGAZINE

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on the Farm
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Biodiesel Boost: The Air and Animals Benefit from Biodiesel

The nation's only commercially available advanced biofuel is bringing clean-air benefits to the masses

while providing economic benefits to soybean and livestock farmers.

Nationwide, the market for biodiesel is about 2 billion gallons per year. U.S. consumers used about 2.1 billion gallons of biodiesel in 2015. According to the Environmental Protection Agency, using the cleaner-burning fuel reduced America's carbon emissions by at least 18.2 million metric tons, equal to the

annual greenhouse-gas emissions of 3.8 million cars. This reduction is more emissions than there are from all the cars in Colorado and Connecticut combined.

For North Dakota soybean farmers, the news is a little more personal. Research from Informa Economics estimates that biodiesel has added \$0.63 of value to each bushel of soybeans because of the increased demand, regardless of where the biodiesel production takes place.

While the majority of the nation's biodiesel production is derived from soybean oil, North Dakota's production is canola-based. The ADM plant in Velva, North Dakota, produces about 85 million gallons of biodiesel each year.

Rolette, North Dakota, farmer Ryan Pederson has represented canola on the National Biodiesel Board (NBB) for eight years. He also serves on the North Dakota Soybean Growers Association board. He recognizes the impact that the industry has on the markets for both crops.

"Anytime we can use what we

produce locally, we're bound to return economic benefits," Pederson says. "The challenge now is getting the infrastructure so suppliers can access biodiesel."

The biodiesel industry supports thousands of domestic, green-energy jobs from lab technicians to engineers to truck drivers. The NBB estimates that more than 62,000 jobs are supported by biodiesel production.

Animal agriculture also benefits from a successful biodiesel industry. Because of the value derived from the oil, biodiesel helps keep the cost of meal affordable for livestock producers.

Soybean oil and meal are co-products from oilseed crushing; they are produced in fixed proportion to one another. Alan Weber, a partner with M4 Consulting, says that additional demand for one co-product, such as oil for biodiesel, will simultaneously result in a greater supply of meal, leading to downward price pressure.

Informa Economics estimates that livestock producers pay \$21 per ton less for soybean meal due to

increased biodiesel production and usage. The NBB says that North Dakota livestock farmers paid over \$433,000 less annually for meal because of the additional oil value that was driven by biodiesel.

"More demand on animal fats for biodiesel has led to increased value of those fats," Weber says. "The price of animal fats is not the primary driver in determining the prices paid for feed cattle, market hogs or poultry, but they do affect the profit margins in these industries by increasing the byproduct's drop value."

Weber says that analysis conducted by Centrec Consulting Group in September 2014 illustrated how the biodiesel demand increased inedible tallow prices by more than \$0.10 per pound. The NBB estimates that biodiesel earned North Dakota livestock producers an additional \$840,000 because of the increased demand for fats.

Utilizing the meal for livestock and the oil for biodiesel helps soybean farmers capture as much value as they can from their crops.

"We have to use what we produce to get the best economic returns," Pederson adds.

—Story by Daniel Lemke,
photos by Wanbaugh Studios



Casselton, North Dakota farmer Joe Morken fuels his tractor with a soy-based, biodiesel blend.



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n the cover

As harvest approaches, safety issues are magnified for farmers like Dana Dagman, who farms with her husband Travis near Enderlin, North Dakota. Long days and sometimes treacherous conditions can put farmers one step from danger.

—Photo by Wanbaugh Studios



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Reading the Market Signs

August is an important month for soybean development. Vegetative growth is mostly

complete, and the plants shift their energy to the reproductive stage and start making yield.

August can also be a key time for soybean markets. Farmers focus on the weather and how it will impact crop development. The U.S. Department of Agriculture (USDA) releases its first yield calculations for the year, a report that is closely watched and often hotly debated. That report is one of many actions that can impact the soybean price.

Volatile Markets

North Dakota State University Associate Professor and Crop Economist Dr. Frayne Olson says that soybean markets have been volatile for much of 2016. For example, from March 1 to June 6, soybean prices jumped \$2.74 per bushel. While that growth was welcomed by farmers, Olson expects market swings to continue until harvest.

"Volatility will continue to rule," Olson says. "Unfortunately,

that makes marketing extremely difficult."

As crop development progresses, farmers will have a clearer picture of their estimated yields. Those estimates are key considerations for deciding whether to sell soybeans or if it would be more profitable to store the crop. Olson says that the trend for the past several years has been a strong soybean export demand at and shortly after harvest.

"In August, farmers are generally focused on production, but as we move into harvest, farmers will need to decide how much to sell and how much to store," Olson says. "Storing for a short time is usually a good thing."

Olson says that, as farmers move into harvest, the markets shift from soybean production to soybean demand. The export demand typically peaks in mid-November and runs through March, which is when South American soybeans are harvested and hit the markets.

Because the majority of the state's soybean crop is shipped

overseas, North Dakota prices are very sensitive to the export demand. Olson explains that prices at harvest time tend to be soft but often rebound quickly once harvest is done. Understanding that marketing cycle can help farmers decide whether to sell or to hold. Olson recommends that farmers who store soybeans move the crop by the time that Brazilian and Argentinian beans are harvested; otherwise, growers are taking a gamble.

Hints and Indicators

Grain marketing may be an inexact science, but Olson contends that there are indicators that give farmers and grain marketers an inkling about where the markets may be headed.

In commodity marketing, a carry refers to the difference in price bids for two different forward-delivery months. A positive carry, with prices for a distant future month's delivery higher than nearby futures prices, indicates that

farmers may be able to get a favorable return by storing the grain.

Another signal of what the market may hold is the basis level, the cash price for local delivery minus the futures price. North Dakota farmers typically face a negative basis. The deciding factor for choosing to sell or to hold may be how negative the basis has become.

"The basis is usually widest at harvest, which discourages farmers from selling right off the combine," Olson adds. "A wider-than-normal basis may provide farmers with a strong incentive to store. If the basis at harvest is smaller than for one to two months in the future, that could be incentive to sell."

On-farm storage capacity and individual cash-flow needs are significant factors that farmers need to consider before marketing decisions are made. Olson says that indicators such as the carry and basis level may help influence what to do with the 2016 crop. "The market is trying to tell us something; are we paying attention?"

—Story by Daniel Lemke,
photo courtesy of the
United Soybean Board



Craig Olson, President North Dakota Soybean Growers Association

Crushing Plant Will Boost Value

Soybeans have, once again, proven to be a staple crop across the state, with almost 6 million acres planted during the 2016 crop year. Growth in acres has moved North Dakota near the top of soybean producing states. Currently, more than 90 percent of the crop leaves the state as whole beans. Most are bound for China and Southeast Asia by way of the Pacific Northwest.

As a relatively new major crop, the opportunity to add value in North Dakota hasn't been feasible in the past. Now, with ample production in the state, it's important for the growth of the industry that we look at all opportunities that can and will arise to add value to our soybean crop closer to home.

Right now, the biggest opportunity that producers have to add value would be through soybean crushing. A fully-operational soybean crush plant could process a portion of our state's soybean production, providing an additional market for farmers and opening the door for growers to increase the value of their product. We've seen that happen with corn, where processing plants producing ethanol and dried distiller's grains have added value to the crop and provided local livestock

producers an affordable feed ingredient.

More than a quarter of corn produced in the 2014-15 marketing year was used in North Dakota. Over half of the sunflower produced in North Dakota is used in state and almost 50 percent of canola is used here. Processing has added significant value to these crops, which has been good for farmers and good for the state's economy. At the same time, local soybean utilization has only reached about seven percent.

While soybeans are classified as an oil crop, the meal produced during the crushing process is a high-quality livestock feed used for poultry, swine and cattle. The oil can be used for cooking or for a number of industrial uses, including biodiesel production. As you can read in the story on page 2, biodiesel provides an important economic benefit to all soybean producers. Because it is the nation's only commercially available advanced biofuel, biodiesel is now being used in California to help meet carbon reduction goals.

Soybean exports are vital. However, local processing would also go a long way to adding value to soybeans while diversifying the market opportunities for North Dakota soybean farmers. There is a great opportunity to have a soybean crushing plant in our state, with positive benefits affecting all of agriculture.



Membership Application

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

Name: _____
Spouse: _____
Date of Birth: _____
Farm/Company Name: _____
Address: _____
City, State, Zip: _____
County: _____
Phone: _____
Cell: _____
Email Address: _____

Do you raise:
 Cattle Hogs Poultry Dairy

How did you hear about NDSGA? (Please circle one)
Recruited in person; Recruited by phone, Magazine;
Internet; Mailing; Radio; Event; Other

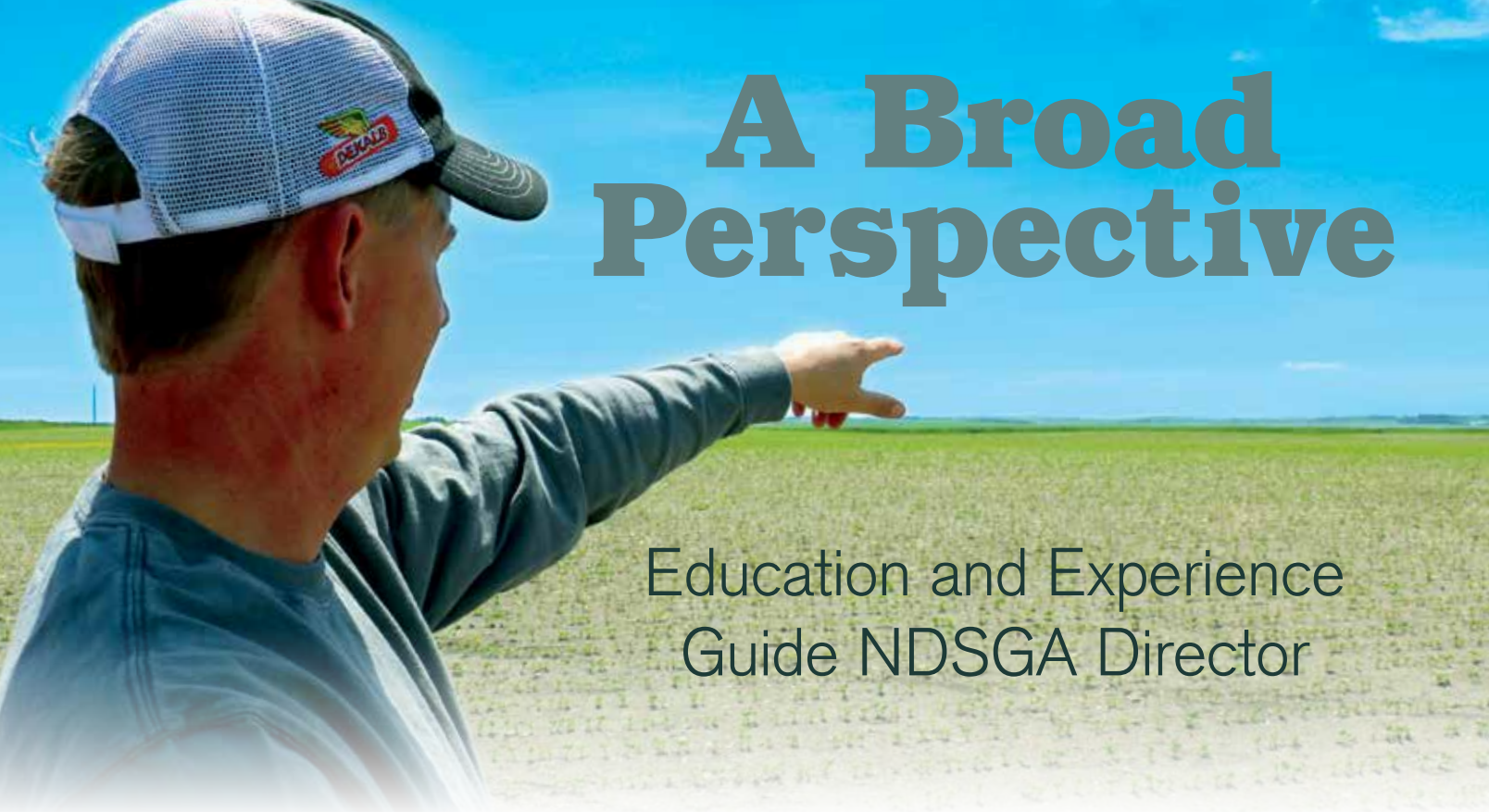
3-Year Membership \$200 1-Year Membership \$75
 Check enclosed (please make checks payable to NDSGA)
 Credit Card: Visa / MasterCard / Discover / American Express
Card Number: _____
Expiration Date: ____/____ CVC: _____

Name on Card (Please print): _____
Signature: _____

Occupation (Please check all that apply)
 Farmer Retired Agribusiness
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Do you currently grow soybeans?
 Yes No
Soybean Acres: _____ Total Acres Farmed: _____

Mail application with payment to:
North Dakota Soybean Growers Association
1555 43rd Street S., Suite 103
Fargo, ND 58103



A Broad Perspective

Education and Experience Guide NDSGA Director

Returning to farm after college was no sure thing for Rolette, North Dakota farmer, Ryan Pederson.

Pederson grew up on the family farm and left to pursue a degree in agriculture economics at North Dakota State University. Then, he received a master's degree from Purdue University in Lafayette, Indiana. An internship with the Foreign Agricultural Service in Singapore offered additional education experiences beyond the classroom.

"I wasn't sure I wanted to come back to farm," Pederson admits. "The industry side of things really intrigued me. It was a tough decision, but I'm glad I decided to come back."

Pederson did return to his farming roots and now raises multiple crops, including soybeans and canola, with his father Dale. He also shares the farm with his wife and three young children.

Farming Better

Pederson farms in what he calls a transition area. Located in

the northern-most tier of North Dakota counties, Pederson says that farmers just a couple miles west of him work diligently to conserve moisture. Where he farms in Rolette County, conditions are generally cool and wet, so some form of tillage is necessary to dry out the soil.

Pederson is in the third year of doing some no-till production on his farm. He's working with his soil conservation district and the Natural Resources Conservation Service to see how no-till farming can work in his area. He's also incorporating cover crops for some parts of his production. Pederson has his own

test plots that help him make production decisions for future years.

"I'm inquisitive by nature," Pederson says. "Plus my Grandpa did a lot of experimenting trying to figure out a better way to farm."

Pederson says that it's important for farmers to be conservationists. He says that, unlike tractors which can be fixed when they're broken, land can't be replaced.

"Fifty years ago, land that I farm had low spots and sloughs that you could fence off and run a few cattle on it to get some value from those small plots," Pederson says. "Then, for a while, we went fence row to fence row. Now, technology

is helping us get back to farming differently and better. That's helping us to farm each piece of land to its fullest potential."

Pederson believes that, in the future, how he farms may look very different from how he operates today as farmers look to maximize efficiency and productivity.

"I think technology will advance to the point that, in 10 years, we may grow certain crops because they perform better in specific areas of our farms," he says.

Fully Involved

After he returned to the farm, Pederson wasted little time becoming active in the agriculture industry. Pederson served 12 years on the Northern Canola Growers Association (NCGA), including 4 years as its president. He's also been the canola representative on the National Biodiesel Board (NBB) for 8 years. Two years ago, he joined the North Dakota Soybean Growers Association (NDSGA) Board of Directors.

“Technology is helping us get back to farming differently and better. That's helping us to farm each piece of land to its fullest potential.”

Involvement with leadership positions has helped Pederson gain a fuller view of the industry. Having served on several boards, he says that most commodity organizations have a common focus and goal; they just have different perspectives.

"Agriculture is prominent in North Dakota, but it isn't widely understood outside of the farming community," Pederson contends. "We have to make sure we have the same focus and goals."

Pederson says that many discussions about modern agriculture can be difficult, particularly in an era when so much information, and misinformation, is spread to non-farmers.

"It can be tough to drive the conversation," he says. "But if we can't drive the conversation, we at least need to be able to respond."

Working with legislators is one way that Pederson says farmers can be involved with conversations

about agriculture. Groups such as the NDSGA work to develop relationships and become trusted information providers to lawmakers.

"If they're getting questions about farm-related issues, hopefully, they can trust us to give them true feedback and be someone who can provide answers for them," Pederson says.

Pederson says that, through his work with the NCGA and the NDSGA, he has learned to enjoy working on ag policy with legislators in Bismarck and Washington, D.C. He's learned about how the process works and about the importance of becoming a trusted voice.

"Policy isn't exciting or glamorous; it's mostly frustrating," he says. "But we need to be there, or someone else will. Sometimes, the best work we do is preventing things from being done to us."

Discussions about policies such as genetically modified organism

(GMO) food-labeling laws can draw farmers into conversations about modern farming practices, including the use of biotechnology. However, Pederson believes that farmers need to be willing to respond.

"Scrutiny on us as farmers won't

get any less," Pederson says. "We need to do a lot of educating on why we want to do things the way we do."

—Story and photos
by Daniel Lemke

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Rolette farmer Ryan Pederson got a taste of global agriculture before returning to his North Dakota roots.

Dear Valued Soybean Producers,

While the farming life draws images of fresh air and beautiful scenery, your farms are not exempt from certain hazards. In fact, according to the National Safety Council, agriculture is the most hazardous industry in the U.S. You are exposed to hazards such as chemicals, dust, electricity, grain bins, hand tools, machinery/equipment, silos and toxic gases. Every year, thousands of farm workers are injured, and hundreds more die in farming accidents. According to the Occupational Safety and Health Administration (OSHA), the following factors may increase your risk of injury or illness:

- **Age:** Injury rates are highest among children age 15 or under and adults over 65.
- **Equipment and Machinery:** Most farm accidents and fatalities involve machinery. Proper machine guarding as well as doing equipment maintenance according to the manufacturers' recommendations can help prevent accidents.
- **Protective Equipment:** Using protective equipment (such as seat belts on tractors) and personal protective equipment (such as safety gloves, coveralls, boots, hats, aprons, goggles and face shields) could significantly reduce farming injuries.

- **Medical Care:** Hospitals and emergency medical care are typically not readily accessible in rural areas near farms.

You can improve your farm safety by increasing your awareness of farming hazards and by making a conscious effort to prepare for emergency situations, including fires, vehicle accidents, electrical shocks from equipment and wires, and chemical exposure. Minimize hazards by carefully selecting the products you buy in order to ensure that you provide good tools and equipment. Always use seat belts when operating tractors, and establish and maintain good housekeeping practices. Other steps you can take to reduce illnesses and injuries on the farm are as follows:

- Read and follow the instructions in equipment operator's manuals and on product labels.
- Inspect equipment routinely for problems that may cause accidents.
- Install approved rollover protective structures, protective enclosures or protective frames on tractors.
- Make sure that the farm equipment's guards are replaced after maintenance.
- Review and follow instructions on the material safety data sheets and on the labels that come with chemical products; communicate information on these hazards to your workers.
- Take precautions to prevent entrapment and suffocation that is caused by the unstable surfaces of grain storage bins, silos or hoppers. Never "walk the grain."
- Be aware that methane gas, carbon dioxide, ammonia and



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hydrogen sulfide can form in unventilated grain silos; manure pits can suffocate or poison workers or can explode.

- Take advantage of safety equipment, such as bypass starter covers, power take-off master shields and slow-moving vehicle emblems.

The benefits of improved safety practices include reduced worker fatalities, injuries and illnesses as well as lower associated costs, such as workers' compensation insurance premiums, lost production and medical expenses. Please keep yourself—and the people around you—safe during the upcoming harvest season.

I wish you a very productive, profitable and safe harvest season!



CommonGround North Dakota attended KFGO's Summer Picnic in their Fargo studio parking lot June 9th with an exhibit. CommonGround volunteer Vanessa Kummer of Colfax organized the exhibit for volunteers to talk to picnic guests about food, farming and North Dakota agriculture. Volunteers also answered questions and addressed myths and misinformation surrounding food and farming. North Dakota Soybean Council Marketing Communications Intern Elli Lemm of Hillsboro hands an excited picnic guest a prize for playing the trivia wheel.



NDSC Seeks Leaders to Represent North Dakota Soybean Farmers

In early 2017, the North Dakota Soybean Council (NDSC) will be seeking four soybean farmers to serve on the NDSC Board of Directors. They will represent fellow soybean farmers and the industry.

How Do the Elections Work?

The process is conducted by mail ballot. Soybean farmers who reside in counties that are up for election in 2017 will receive instructions regarding NDSC's election process via mail after January 1.

Roles and Responsibilities of the NDSC County Representatives

- Representatives serve as a liaison between county soybean farmers and the NDSC Board of Directors.
- If possible, the representatives attend educa-

tional and leadership opportunities that are held in their county and sponsored by NDSC.

Roles and Responsibilities of the NDSC District Representatives

- Elected county representatives move on to a district election where a district representative is elected to serve on the NDSC Board of Directors. NDSC board members' responsibilities include, but are not limited to,
 - Attending at least four board meetings a year (held in Fargo).
 - If assigned to participate on a board committee, attending all scheduled committee meetings.
 - If appointed by the board to represent NDSC on outside boards or committees, attending all scheduled meetings at the NDSC's expense.

- Attending/participating in educational and leadership opportunities sponsored by the NDSC.

Areas of Focus for the Soybean Industry

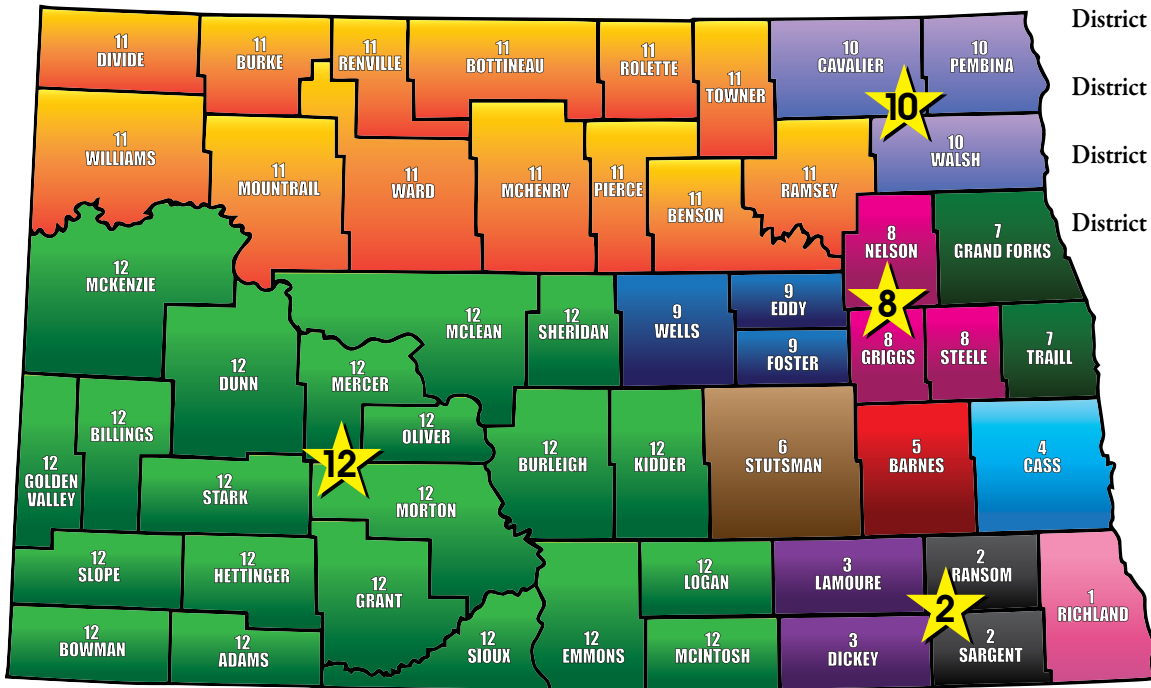
As an elected representative for the NDSC, you will help guide the North Dakota soybean industry in the areas of domestic and international marketing, research, transportation, producer education, communications and consumer awareness.

If you have questions regarding the election process, please feel to contact the NDSC office at 1-888-469-6409 or by email at dbeitelspacher@ndsoybean.org.

—Story by staff

Elections will be held for the following districts:

Districts with a star will have elections in 2017.



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



NDSC CEO Participates in Trade Mission to Mexico

Diana Beitelspacher represented the North Dakota Soybean Council (NDSC) on a trade mission to Torreon, and Queretaro, Mexico, on July 10-15, 2016. This mission highlighted the Mexican market and included industry presentations as well as tours of feed mills, dairy farms and shuttle stations. Other participants included Karen Long, project coordinator for the International Marketing Department of the Iowa Soybean Association; Chuck White, a soybean and corn farmer as well as a member of the Iowa Soybean Association; Glen Von Seggern, senior merchandiser with Ag Processors, Inc. (AGP) in Omaha, NE; Pedro Jimenez, AGP representative in Mexico; Fernando Jimenez, AGP representative in Mexico; and Scott Ritzman, international marketing consultant with Mishek, Inc. based in Omaha, Nebraska.

July 11: Visit to Simon Bolivar of the Gilpo Group in Torreon. Simon Bolivar uses 1,000 metric tons of soybean meal monthly. This family owned business is one of the largest feed and dairy producers in this region of Mexico. They produce 35,000 metric tons of feed every month, and 10 percent of this amount is used for their own

livestock consumption. They have 18,000 dairy cows and operate the largest dairy farm in the area. They prepare their feed using grains, pastas, vitamins and minerals, 90 percent of which is imported. Simon Bolivar has 5 silos with a capacity of 6,000 tons for storing sorghum and corn; 9 silos with a capacity of 600 tons for storing beets, broken corn and soybean hulls; and 3 silos with 750 tons of storage for raw materials, including sorghum, whole corn and pelleted soybean hulls. Simon Bolivar also supplies 20 percent of the energy required to run the facility by processing manure and using the generated gas as an energy source. In addition to the agribusiness division, the Gilpo Group operates a transportation division that services many companies in the region, a real estate division and an entertainment division.

July 12: Visit to the Ferrogranos Shuttle-Train Facility in Torreon. Ferrogranos provides services by rail and truck. The company receives 12 unit trains per month: mostly soybeans, corn, wheat, DDGs, barley, canola meal and soybean meal. The company has a loading capacity of 1,000 metric tons/hour. There are two elevators that can take in and discharge at the

same time. There are 14 silos with a grain-storage capacity of 180,000 metric tons. There is a rearing and loading capacity of 700 tons/hour. Each hopper has a capacity of 150 metric tons. The company has 7 warehouses that can store 35,000 metric tons and is building another 3 warehouses to reach a 50,000 metric-ton capacity. There are four rail tracks (7 kilometers of railway-track capacity) that can receive two unit trains at the same time. Ferrogranos has 55 trucks to ship grain and meal to customers and is buying 12 more trucks. The company replaces trucks every 5 years to ensure quality, safety and security.

July 12: Visit to Rancho Lucero Shuttle Station in Torreon. The station can unload a unit train in 24 hours. The company also has dairy farms and feed lots, and is a strong producer in the region. The company has 17,000 milking cows and produces 600,000 liters of milk per day. There are 120,000 steers in a feed lot. The company's milk fills 50 percent of Dannon's requirements to produce yogurt. Dannon uses one million liters of milk per day at their facility. Rancho Lucero uses the protein from the milk produced for baby formula and sports drinks.

The company makes and uses its own feed; 2,000 metric tons of feed is produced per day for the dairy and beef cattle. Rancho Lucero also has 700 acres of greenhouses and raises peppers, tomatoes and cherry tomatoes.

July 13: Travel to Queretaro, Mexico, to visit Ganaderos Asociados de Queretaro (GAQSA). The company is the second-largest milk-producer cooperative in Mexico with 64 members (60 dairy producers and 4 swine producers). The cooperative purchases approximately 400 metric tons of AGP Amino Plus and 400 metric tons of soy-hull pellets. GAQSA has a 35-year-old laboratory onsite where the cooperative does most of its own ingredient testing and analysis. GAQSA also works closely with Cumberland Lab in the state of Washington to assist with testing and analysis. The cooperative produces 14,000-15,000 metric tons of feed per year and has the capacity to produce over 20,000 metric tons of feed/year. The cooperative is at the beginning of the supply chain and is working to increase business



Mexico is a large U.S. trading partner and purchaser of soy products for livestock, and dairy production.



NDSC CEO Diana Beitelspacher stands in front of a mountain of soybean meal.

with other suppliers. GAQSA has a 25-car rail and owns its own rail facility. There are 27,000 milking cows within the cooperative. They receive their soybean meal primarily by truck.

July 14: Visit to Pilgrims, a broiler producer. The company receives its soybean-meal shipments at the Ferrogranos facility; the meal is used at Pilgrims' broiler farms in Torreón. Pilgrims purchases about 20,000 metric tons of soybean meal per month. The company also has broiler farms in Veracruz and Queretaro. The four product lines are as follows:

1. Pre-Starters
2. Starters
3. Development
4. Final Stage

Pilgrims produces 1,500 metric tons (MT)/day (about 40,000 MT/month) of feed. Soybean meal is critical for the feed formulation (2,800 MT/week of soybean meal is used at this facility). The company uses trucks and rail cars at this facility. Pilgrims can load 250 metric tons per hour at the rail facility and can unload 120 MT/hour at its trucking area. The company runs simple tests of the soybean

meal through its lab to check for quality and to analyze for moisture, protein, fat, essential amino acids, texture, weight and fiber. More complex testing is conducted at an outside laboratory. The soybean meal must not exceed 12 percent moisture content.

Pilgrims has 3,000 metric tons of soybean meal stored in its warehouse, yet there is no storage capacity to take soybean meal from the unit trains. Pilgrims has seven feed plants in Mexico that produce 14 million broilers per week. The company is the second-largest broiler producer in Mexico and has 25 percent of the country's business. Pilgrims has three mills running at maximum capacity.

Today, Pilgrims is part of the JBS Group, a Brazilian company that also acquired Tyson Foods. JBS is the largest animal-protein company, with more than 250,000 employees worldwide and a presence on five continents.

July 14: Visit to Nutec. The company's main operation is swine feed, although pet food and horse feed are also produced. Nutec uses up to 700 metric tons of soybean meal per month, with the average being 300 MT. The company works with 100 distributors and ships its products by container through Veracruz, Mexico, to Ecuador, Panama, Costa Rica, Peru, Guatemala and other Latin American countries. Nutec purchases very small quantities of canola meal and even fewer DDGs because they are suspect of the quality. Essential amino acids are important to the company, and it tests for them. Nutec conducts research with swine and dogs, examining such things as digestibility, feces quality, fit consumption and weight gain.

Nutec produces 3,500 metric tons of feed per month for dogs,

cats and horses at its feed mill. The company has 65 percent of the business in Mexico for piglets' pre-starter meal. Nutec purchases 30,000 metric tons of corn per year; most of the corn is grown domestically. Nutec also uses wheat, sorghum

and rice for pet meal; depending on the price, the company also utilizes barley. Poultry meal and pork meal are also key ingredients for Nutec's products.

—Story and photos by Staff

Intern Joins North Dakota Soybean Council

Elli Lemm has joined the North Dakota Soybean Council (NDSC) as the marketing communications intern. Lemm began her internship in June.



Lemm is a senior at North Dakota State University; she is majoring in agricultural economics, with minors in animal science and agricultural communications. She is the vice president for the NDSU Saddle and Sirloin club and was the 90th Little International Queen. Lemm also serves as the secretary for the NDSU Ag Ambassadors as well as the North Dakota Junior Hereford Association. Lemm was the 2015 North Dakota Hereford Queen.

"We are excited to have Elli on our team," says NDSC CEO Diana Beitelspacher. "She has a great passion for agriculture and for continuous learning. Elli has been a tremendous asset in helping us plan special events, writing magazine articles, developing presentations and posting NDSC-related information on our social media sites. Her energy and enthusiasm is contagious. She is a wonderful addition to our talented team of employees!"

Lemm grew up on a diversified farm near Hillsboro, North Dakota. She has been working on the family farm her entire life. She helps with planting, harvesting and working with the cattle. Her other work experience includes serving as the summer intern for Red River State Bank in Halstad, Minnesota, and working as a greenhouse employee for Valley Tissue Culture, also located in Halstad.

Lemm summarized her experience: "Working for the North Dakota Soybean Council has been a wonderful opportunity. I am thankful to be able to serve the North Dakota soybean farmers and have thoroughly enjoyed my time here. I am excited to continue helping out in any way that I can."

—Story and photo by staff

The 4th Annual “See For Yourself” Program Showed North Dakota Soybean Farmers How Their Checkoff Dollars Work

Each year, approximately 72 percent of North Dakota’s soybean crop is transported by rail to the Pacific Northwest (PNW), where it is shipped overseas to international customers. A group of North Dakota soybean farmers who wanted to know more about their customers beyond the elevator and the soy checkoff’s role in marketing U.S.

soy to customers participated in the North Dakota Soybean Council’s (NDSC) “See for Yourself” program in Portland, Oregon, on July 12-15.

Portland, along with the PNW, is a crucial port for exporting North Dakota soybeans to China and southeast Asia. The group toured the Port of Kalama, the Export Grain Terminal (EGT) and the Tacoma Export Marketing Company (TEMCO). Participants also toured the Cloud Cap Organic Dairy Farm; the Bonneville Lock and Dam; and TriMet, Portland’s city transportation hub, where the farm group learned how city buses run on biodiesel. The group also met with Ryan Lamberg, executive director of the California Biodiesel Initiative; Kristin Meira, executive director of the Pacific Northwest Waterways; and Captain Paul Amos, a Columbia River bar pilot. The farmers participated in an Engage Training session with Krista Stauffer, a volunteer farmer-leader with the Center for Food Integrity.

“Our annual ‘See For Yourself’ program is an excellent opportunity for North Dakota soybean producers to engage directly with the programs their checkoff dollars



The Tacoma Export Marketing Company (TEMCO) is a joint venture of Cargill and CHS, located at the Port of Kalama in Kalama, Washington. The facility was built in the 1960s. After a recent TEMCO expansion, the facility has the capacity to move 200 million bushels of grain per year. While the North Dakota group was visiting, a large Panamax ship was docked to load corn that was bound for Japan.



North Dakota soybean farmers gained a better understanding about their checkoff activities and how the North Dakota Soybean Council is committed to increasing the profitability of their soybeans.

fund,” says NDSC Director of Market Development Stephanie Sinner. “For North Dakota, transporting our soybeans to export markets is a critical piece of our story. This program is an opportunity to see all the pieces in action, including meeting the important folks who help get North Dakota soybeans to our customers around the world. We enjoy getting to know our soybean farmers from all over North Dakota as we travel together and participate in the industry tours.”

The delegation of North Dakota farmers included Troy and Bobbie Uglen, Northwood; Matt Gast, Valley City; Kent Bartholomay, Enderlin; Bonnie Halvorson, Sheldon; Travis and Dana Dagman, Enderlin; Dennis Sletten, Ryder; David Leavitt, Mohall; Vincent Kubischta, Hope; Raymond Martinson, Milnor; Wayne Feltman, Grafton; Bryan Dean, Velva; Lucas Bina, Lankin; Leroy Thomas, Minot; Jack Formo, Litchville; and Sharon Harold, Willow City. The trip was coordinated by Stephanie Sinner and NDSC Director of Finance Molly Fern. Cody Rogness, video producer for AgWeek TV, attended and provided daily video/audio footage.



The Bonneville Lock and Dam’s primary functions are electrical power generation and river navigation. The dam was built and is managed by the United States Army Corps of Engineers.

Are you interested in seeing these locations for yourself or learning more about your checkoff investments? Join us next year for NDSC’s Annual “See For Yourself” program. Watch for more information in future North Dakota Soybean Grower Magazine issues, or give us your email address to be added to the email list and be the first to learn about these opportunities. To get on the email list, contact swolf@ndsoybean.org.

—Story and photos by Staff



Oregon’s clean-fuel policies are helping drive the advanced biofuel industry. North Dakota soybean farmers saw Portland’s city buses successfully using biodiesel.



Why would North Dakota growers switch to or add food-grade soybeans?

New webinar series helps guide growers' decisions

Each year, more North Dakota growers add, as a part of their crop rotation, or switch to food-grade soybeans. In fact, state acres have increased 20 percent during the last five years.

These growers' reasons are diverse yet center on three key areas that are each addressed in a new series of webinars: economics, identity preserved (IP) programs and export demands. The three webinars were produced by the Northern Food Grade Soybean Association and the North Dakota Soybean Council.

As with most farming decisions, the main reason growers choose food-grade soybeans is because the crop can add significant profits for the operations. To illustrate this impact, the first webinar features Dr. Frayne Olson, crops economist and marketing specialist at North Dakota State University, Fargo. Using this compelling data, he compares the economic aspects of growing conventional soybeans with growing food-grade soybeans (figure 1).

Figure 1: Cost and Returns Comparison per Acre

	2014		2015	
	Conventional SB	Food SB	Conventional SB	Food SB
Average Yield	37.50 bu.	33.50 bu.	42.01 bu.	38.41 bu.
Average Price	\$9.85/bu.	\$13.74/bu.	\$8.47/bu.	\$11.12/bu.
Total Direct Expenses/Acre	\$315.33	\$309.20	\$303.80	\$323.99
Total Overhead Expenses	\$69.92	\$68.04	\$66.33	\$59.77
Net Return	-\$15.96	\$83.01	-\$14.25	\$43.51

Dr. Olson also discusses management considerations, such as pest control, cross-contamination and record keeping, plus contract provisions, counter-party risk, federal crop insurance and other economic factors of growing food-grade soybeans.

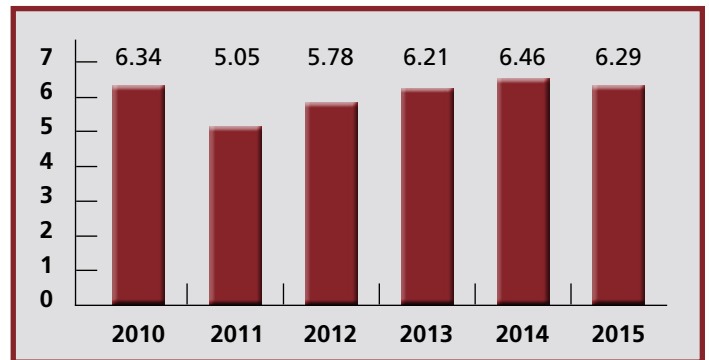
The second webinar addresses third-party identity-preserved (IP) inspections. North Dakota State Seed Department (NDSSD) Commissioner Ken Bertsch, Fargo, shares information about the advantages of IP in food-grade products, including soybeans. He also details grower responsibilities and the requirements for food-grade soybeans from pre-plant through harvest, testing and storage. Bertsch explains the process for securing IP product labels, IP program fees and IP program results for North Dakota growers (figure 2).

Nearly every grower who has added or switched to food-grade soybeans mentions that the change adds value to the farm by raising food the world needs. The third

Figure 2: Costs and Results

Example: 200 acres IP Production, 40 bu. clean seed yield	
Field Inspection (100 acre split)	\$300
Final Certification Fee (at 40 bu./acre, 8,000 bu.)	\$320
Testing Fee (hilum + PCR)	\$250
Audit and Sampling (3 hours)	\$276
Reports and Documents (4)	\$40
Facility Inspection	\$100
Total	\$1,286
Cost Per Bushel	\$0.16

Figure 3: Non-GMO Production Increases 20% in Five Years



webinar in this series highlights the growing export demand for U.S. non-GMO, food-grade soybeans. U.S. Soybean Export Council Marketing Director Marypat Corbett,

St. Louis, Missouri, explains the global importance of soybeans as food, including worldwide staples such as tofu, soymilk and soy sauce. She shares production-increases information (figure 3).

Corbett also explains export growth and projections, plus the forecasted production growth of food-grade soybeans. Her information clearly shows that there is major potential for North Dakota growers.

All three new webinars are now available to view at www.FoodGradeBeans.com.

—Story and graphs provided by the Northern Food Grade Soybean Association



Funded by the North Dakota soybean checkoff.

U.S Soybean
Quality Symposium



A Quality Message

Three-State Effort Highlights the True Value of Midwest Meal

Southeast Asia offers tremendous market potential for soybeans and soybean meal. While China

imports the lion's share of the soybeans, numerous other nations in the region are experiencing significant economic growth and an expanding middle class. With that growth comes the desire for an improved diet containing more protein, such as pork, poultry and

fish, all of which thrive on diets rich in soybean meal.

Growing animal-agriculture industries in the region are drawing strong competition from soybean-producing countries that are hoping to capture a piece of the feed market. A three-state effort to promote

the quality of soybeans grown in South Dakota, North Dakota and Minnesota is designed to give buyers plenty of reasons to choose the northern-grown soybeans.

A New Measure

Crude protein has long been the measure that buyers use to determine meal quality, a negative for northern-grown soybeans that typically have lower crude-protein levels. However, research has shown that dietary crude protein is not an indication about a feed's protein quality. Instead, protein quality is based on the presence and balance of the feed's essential amino acids. Those same northern-grown beans with lower crude protein boast an essential amino-acid value that helps animals perform at their best.

A delegation of researchers, industry representatives and farmers brought that soybean-quality message to buyers and nutrition-

ists in Vietnam, Thailand and Sri Lanka. The delegation, representing North Dakota, South Dakota and Minnesota, is part of an effort to get potential soy customers to look beyond crude protein and to examine the essential amino-acid balance.

"The basic message is they need to understand what the active component of their soybean meal is, and instead of buying synthetic amino acids to replace soybean meal, they should be evaluating the qualities that they already have in their soybean meal and buy accordingly," says international marketing consultant Peter Mishek.

Measuring the critical amino-acid value (CAAV) is another tool to help determine the meal's quality. The CAAV is determined by adding the percentages of lysine, threonine, tryptophan, methionine and cysteine; that sum is divided by the total amino acids. Technologies such as near-infrared spectroscopy can help users understand the meal's composition. Measuring the meal's CAAV helps buyers and nutrition-



The essential amino acids message captured the attention of buyers in Vietnam.



ists obtain additional information about the quality of the meal they're buying.

"What we're doing is giving them a way to use the technology they have in their facilities to evaluate other products like distillers dried grains or synthetic amino acids," Mishek says. "We're asking them to go back, and in addition to crude protein, use some of the new tools that this project has put together for them."

Receptive Audience

The essential amino-acid message, which the three states have been promoting for several years, is starting to gain traction. The effort takes the natural benefits of soybeans from northern states such as North Dakota, Minnesota and South Dakota and then highlights them for potential customers.

"Quality is becoming a huge factor in these developing countries," says Craig Pietig, director of exports for AGP. "They need to feed as efficiently as they can. Some of our customers in major markets have said that there's an 'it' factor they never could measure when

they feed U.S. meal. I think that factor could be what we're discovering here with the amino acids."

U.S. meal frequently costs more per ton than meal from India or Argentina. For some buyers, price is a difficult hurdle to overcome. Efforts such as essential amino-acid outreach are helping the buyers realize that price doesn't equal value.

"I was in Vietnam three years ago, and buyers then were very focused on price," says Starbuck, Minnesota, farmer Paul Freeman. "The market has matured there, and they're seeing more value in the quality of U.S. soybeans and finding it fits what they need, so price is less of a factor."

While the essential amino-acid message is based on science, the overall intent is to market soybeans from the Dakotas and Minnesota by setting the product apart. Educational seminars targeting the meal's buyers and users gives additional information to evaluate the quality of the meal they're buying. Once buyers recognize the value of meal grown in northern states, those soybeans will hopefully become the preferred source.



Soybean quality seminars in Thailand drew large crowds.

"To some of the buyers, it was a new message, and to other buyers, it was a reinforcing message, but it's a message that we need to keep repeating and focusing on because the quality is something that we give them of value," Freeman says.

A Marketing Factor

"The proof is in the pudding," Mishek says. "We've had a rather large increase in purchases in Thailand where we've done numerous sessions. In markets where we have had repeated contacts, we've seen increases in purchases. This is not a scientific program; this is a marketing program, and the only way we'll be able to tell if it's gaining traction or not is whether they buy tons of soybean meal."

Purchases of U.S. soybeans and meal are growing in the region, including those made by companies in Vietnam and Thailand. Local marketers say that nearly 100 percent of the meal entering Sri Lanka is from the U.S., with much of the product originating in the Upper Midwest.

Testing for the balance of essential amino acids isn't an industry standard yet, but it is becoming increasingly common. Measuring the critical amino-acid value gives one more indication about the quality of the product being purchased.

"We have a few customers right now that we test for amino acids; then, we give them a full run down on the shipments of their meal," Pietig says. "It's not quite a trade term yet or part of a contractual agreement, but it is something the buyers can use to make a decision when they're evaluating whether to buy U.S. or Argentine or Indian meal."

In addition to Vietnam, Thailand and Sri Lanka, essential amino-acid educational sessions were held in Indonesia, Malaysia, the Philippines, China and Taiwan in 2016.

To learn more about the value of essential amino acids, visit www.woyeeaa.com.

—Story and photos by Daniel Lemke



The Midwestern delegation visited Gold Coin Feed in Colombo, Sri Lanka, which uses only U.S. soybean meal in their rations.

In The Blink of an Eye

Farm Accidents Still Trouble Agriculture

It certainly wasn't the way Brent Kohls had envisioned spending his New Year's Eve. Instead of reveling with

friends and ringing in 2016, Kohls was at a Fargo hospital, waiting for an orthopedic surgeon to repair his foot which had been badly injured just hours earlier in a grain-sweep auger accident.

Kohls was cleaning out the last of the grain in a bin on his farm near Mayville, North Dakota, something he had done hundreds of times. Kohls grew up in Wheaton, Minnesota, as the son of a grain-elevator manager. Even at a young age, he had helped unload bins and was comfortable with the process.

Kohls disengaged the mechanism that engages the sweep and climbed into the bin. While standing inside the bin, he reached for the electrical box outside the bin to power up the motor. The sweep, located behind him, sprang to life and caught Kohls. The sweep's transmission had not fully disengaged, putting him directly in the auger's path.

"It was one of those things," Kohls admits, "you get in a hurry, and you've been doing the same thing a long time, you don't always take the precautions that you

should."

The sweep hit with such force that it knocked Kohls down, severed the big-toe tendon in his foot and chewed into his calf. The

sweep also tore off his pants and one boot. Fortunately, an emergency stop kept the sweep from making a full rotation, possibly again catching the already injured Kohls who was then lying on the bin's floor.

"Fortunately, I was able to get out of the bin and get a ride into town," Kohls recalls. "We got to the hospital in Mayville and then took an ambulance ride to Fargo because I needed an orthopedic surgeon to fix the tendon."

Kohls spent New Year's Eve in the recovery room and was discharged the next day. He spent six weeks on crutches and another month in a protective boot. Although he still has some flexibility issues as a result, he was back working full speed before the spring's field work began.

Still Dangerous

Despite continuous efforts by equipment manufacturers and the agriculture industry as a whole to improve safety, farming remains a dangerous occupation.



Mayville farmer Brent Kohls survived a close call while cleaning a grain bin.



After several months in a cast and walking boot, Kohls was ready for spring field work.

According to the National Safety Council, agriculture is the most hazardous industry in the nation. The Occupational Safety and Health Administration (OSHA) says that, every year, thousands of farm workers are injured by and hundreds more die from farming accidents.

The National Institute for Occupational Safety and Health (NIOSH) says that farmers have a very high risk for fatal and nonfatal injuries. Farming is one of the few industries where family members who often share the work and live on the premises are also at risk for fatal and nonfatal injuries.

The NIOSH reports that approximately 1,854,000 full-time workers were employed in production agriculture in the United States in 2012. That year, 374 farmers and farm workers died from a work-related injury, a fatality rate of 20.2 deaths per 100,000 workers. Tractor overturns were

the leading cause of death for these farmers and farm workers.

According to the NIOSH, every day, about 167 agricultural workers suffer a lost-work-time injury. Five percent of these injuries result in permanent impairment.

Bill Gross knows all about the impacts that farm accidents can have. Gross founded North Dakota-based Farm Rescue in 2006 to provide planting, harvesting and haying assistance for farm families that have experienced a major injury, illness or natural disaster. Farm Rescue provides the necessary equipment and manpower to plant, harvest or hay at affected family farms, free of charge. Farm Rescue has helped nearly 400 farm families, primarily in North Dakota, Minnesota, South Dakota and Iowa. The group recently began providing assistance to farm families in Montana.

Farm accidents not only impact the person who is injured, but

Gross says that they also put entire farm operations in jeopardy.

“Depending on the severity, it can affect their entire livelihood now and into the future,” Gross says. “Farming is tough. A lot of farms don’t have hired hands, and fewer family members are farming, so accidents and illnesses put a great deal of hardship on those families.”

Gross says that more than half of the injuries to which his organization responds come as a result of falls. Farmers can be injured falling from buildings, ladders, grain dryers or even farm implements. The second-most common cause of injuries that Gross sees is all-terrain vehicle (ATV) use.

“Any given year, 5 or 6 of our cases come as a result of ATV accidents,” Gross says. “Many of these accidents are quite severe. We’ve seen farmers paralyzed, and some have had head injuries.

“Farmers are normally careful operating big equipment, but can end up being very seriously injured due to

falls or ATV accidents,” he adds.

Because of farming’s very nature, hectic times, such as planting and harvest, put stress on farmers. There can be particularly dangerous times during the busy farming seasons.

“As it often happens, farmers don’t have a lot of people working with them; they’re working long hours; they’re tired; they’re fatigued and often in a hurry,” Gross says. “It’s not uncommon for farmers to work alone, which is particularly bad news if a severe accident happens.”

Young Ones, Too

Safety extends beyond farm operators and hired hands. Farm kids are also at risk. According to the NIOSH, in 2012, an estimated 14,000 youth were injured on farms; 2,700 of these injuries were due to farm work.

Farm Safety for Just Kids is a national organization that was

—continued on page 18



Not fully disengaging this unloading auger contributed to Kohls’ close call.



Kohls knows even familiar tasks can turn dangerous if farmers don't pay attention.

—continued from page 17

formed by a farm mom who lost her 11-year old son in a grain-wagon accident while he was helping the family with harvest. Allie Sagness of Bowbells, North Dakota, heads the Mid Dakota Chapter of Farm Safety for Just Kids, working to educate youth about safe farm practices through events such as safety days and school packets.

"Farming is the only job where

people take their kids to work with them," Sagness says. "Construction workers don't, but it's much more common in farming. Kids are right there in the yard, and so many things can happen."

Sagness says that, nationally, 38 kids are injured by farm accidents every day, although research shows that the rate of childhood injuries is declining. She says that about one-fourth of the child-related farm accidents involve machinery

and that an increasing number involve kids riding ATVs.

"It's important to give kids age- and size-appropriate tasks," Sagness adds. "Keep young kids away by having child care or fences. Older kids have to have the correct training, and give them the information they need to do a safe job."

Whether farm activities involve adults or children, safety experts agree that it's important for farmers of all ages to pay attention and

not to take shortcuts. Brent Kohls knows that familiar tasks can become hazardous.

"Take the extra step. It's all about being cognizant of what you're doing," Kohls says. "There are things every day that farmers take for granted where something bad could happen."

—Story and photos by
Daniel Lemke

Farm Rescue's Harvest Application

Farm Rescue is now accepting applications to assist farmers who are impacted by illness, injury or natural disaster for the 2016 harvest. Applications can be completed at www.farmrescue.org or by contacting Farm Rescue at 701-252-2017.

Farm Rescue founder Bill Gross says that many farmers don't want to ask for help, so friends and neighbors can make referrals on behalf of someone else. Gross says that the following assistance can be provided to farmers and ranchers:

- Planting assistance
- Harvest assistance
- Haying assistance
- Dedicated trucking and hay hauling

All Farm Rescue assistance is free for the impacted farmers and is made possible through donations and volunteers.

Staying Safe on the Farm

Farming may be a hazardous occupation, but farmers can play a major role in staying safe. These reminders from OSHA may help reduce the risk of something unfortunate happening on your farm.

- Use seat belts when operating tractors.
- Read and follow the instructions in equipment manuals and on product labels.
- Inspect equipment routinely.
- Discuss safety hazards and emergency procedures with workers.

- Make sure that guards and protective equipment are in place.
- Take precautions to prevent entrapment in grain-storage bins, silos or hoppers.
- Be aware that methane gas, carbon dioxide, ammonia and hydrogen sulfide can form in unventilated grain silos and manure pits.
- Take advantage of all safety equipment, such as bypass starter covers, power take-off master shields and slow-moving vehicle emblems.

Farm-Safety Funding Sought



Farm safety remains a serious issue across North Dakota, and it will be a topic of discussion during the 2017 legislative session in Bismarck. North Dakota State University (NDSU) Extension hopes to add capacity for statewide safety education in an effort to reduce the number of injuries and fatalities that occur as a result of farm accidents.

During the off session, the State Board of Agriculture Research and Education (SBARE) held a series of listening sessions across North Dakota to take testimony

on funding needs for NDSU Extension and the North Dakota Agricultural Experiment Station. SBARE makes priority-funding recommendations that the state legislature will consider when it convenes in January. Among the NDSU Extension priorities recommended by SBARE is funding for farm-safety education.

“During the sessions, we heard some powerful testimony about the need for increased education in on-farm safety in North Dakota,” says Dr. Chris Boerboom, director of the NDSU Extension Service.

“Farm fatalities and injuries are unacceptable because many can be prevented with proper care and attention.”

Dr. Boerboom says that funding for the farm-safety position is one of NDSU Extension’s highest priorities because there is a need that cannot be ignored.

“For us to provide a concerted effort to address farm safety we should have a specialist to concentrate on helping to prevent farm-machinery and ATV accidents that are too frequent with adults and kids across North Dakota,” Dr. Boerboom contends.

Compelling testimony about the need for farm safety was provided by a number of individuals who have been impacted by farm accidents, including one farmer who lost an arm. In a tragic twist, former SBARE board member and state legislator James Kerzman of Mott, North Dakota, was killed in a farm accident in June of 2015, further punctuating the need for safety-education resources.

“Farm safety is definitely a concern of ours,” says Mike Beltz of Hillsboro, North Dakota, who chairs the SBARE board. “We can recommend to the legislature, and they will decide what to fund, but

we know it’s a high priority for Extension.”

Despite technological advancements and safety features with farm equipment, agriculture remains an inherently dangerous occupation as farmers work to care for crops and livestock.

“As one individual who spoke at a session put it, we need to have a culture of safety on the farm,” Dr. Boerboom adds. “Some workers haven’t been around equipment of this size and don’t understand the inherent dangers. Some haven’t worked with livestock to understand those risks. There’s a really big need out there that we could respond to in a better way than we can right now.”

Given the budget constraints facing lawmakers, Dr. Boerboom knows that funding for the on-farm safety-education position will be weighed against other priorities. With limited resources, legislators will face some difficult decisions.

“We know the state’s fiscal constraints, but SBARE has identified this need, and we hope that legislators will understand the importance,” Beltz says.

—Story by Daniel Lemke, photo courtesy of Wanbaugh Studios

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2016 Banquet in a Field Impacts Awareness About Food And Farming



Third annual event connected 144 consumers with North Dakota growers and producers

A perfect North Dakota summer evening served as an ideal backdrop for the third annual Banquet

in a Field. This unique meet and greet event, creates an opportunity for volunteers to sit down with non-agricultural influencers to converse about sustainably grown food and farming.

The 2016 event, brought together 144 guests and volunteers to the middle of Julie and Carl Peterson's farm, located at Peterson Farms Seed, Harwood, North Dakota, where they were treated to a multi-course meal. The fare was prepared with 12 North Dakota crops, three meats along with honey and dairy products. The home grown ingredients were put together onsite by local-chefs and food-writers Tony and Sarah Nasello, together with NDSU Meat and Animal Science. Event staff included 28 CommonGround volunteers and 11 North Dakota FFA members, including state officers and six members of a Sargent County 4-H club as servers.

The purpose of the Banquet in a Field event is to create an opportunity for conversations about food

especially how it is raised or grown, which ultimately provides an educational opportunity that eliminates

fear or misinformation.

"In our third year of hosting this evening, I continue to be surprised



NDSC Director Levi Taylor of Ypsilanti represented soybeans at Banquet in a Field.



Funded by the North Dakota soybean checkoff.



at the questions about technology and science in agriculture, particularly GMOs,” says Julie Peterson, whose farm has served as the event location each year. “Ultimately, these conversations – and the opportunity to share a meal – are all about ensuring that consumers can enjoy food without fear.”

The event was organized by CommonGround North Dakota, a group of farm women volunteers working to bring clarity to discussions about food and farming. Of

the 144 invited guests who were served, 116 are not involved in agriculture. The 28 farmers and ranchers at the banquet openly fielded questions and discussion about food and their personal experience.

Prior to the sit-down dinner, guests toured crop plots to learn more about each crop and tasted appetizers featuring the food grown in those fields. Other activities included a sweet corn shucking contest between rancher, Jeff Dahl of

Gackle, and Aaron Wimmer who is a jeweler in Fargo. Guests ended the night with a bag of biotech sweet corn to take home from hosts Julie and Carl Peterson.

The 2016 event was sponsored by the North Dakota Soybean Council (NDSC) and the North

Dakota Soybean Growers Association, along with the following groups: AgCountry Farm Credit Services, Flint Group, Napoleon Livestock, North Dakota Beef Commission, North Dakota Corn

—Continued on page 22



Mary and Wyman Sheetz answered questions about the lamb industry.



Julie and Carl Petersen hosted the Banquet in the Field at their farm in Harwood, N.D.



Jenny Rohrich answered questions about sunflowers and served up tasty sunflower nut brittle.

—Continued from page 21

Council, North Dakota Lamb & Wool Producers Association, North Dakota Pork Council, North Dakota Wheat Commission, Northharvest Beans, Peterson Farms Seed, Sarah & the Lost Italian,

Northern Crops Institute, North Dakota Barley Council, Northern Plains Potato Growers Association, Midwest Dairy Association, North Dakota Honey Producers, Red River Valley Sugarbeet Growers Association, and NDSU Meat Science. “NDSC was very proud to help



Guests at Banquet in the Field had an opportunity to view modern farm equipment up close and personal.



Tony and Sarah Nasello created outstanding fare using North Dakota products for guests at Banquet in the Field.



Guests took advantage of a social media station.

organize, sponsor and participate with this event again this year,” says Suzanne Wolf, NDSC communications director. “Since food-purchasing decisions are personal, it’s understandable for more consumers today to ask questions and seek out more information on their food supply. Sometimes; however, they receive incorrect information. NDSC understands the importance of and need for CommonGround North Dakota and events like Banquet in a Field.”

CommonGround North Dakota is a group of volunteer farm women working to bring clarity to dis-

cussions about food and farming. The program is about starting a conversation between women who grow food and the women who buy it, a conversation based on personal experience as farmers but also on science and research.

To learn more about CommonGround North Dakota, visit fb.com/commongroundnorthdakota. To become involved in CommonGround North Dakota, contact Suzanne Wolf at swolf@ndsoybean.org.

—Story by Flint Group, photos by Betsy Armour and Alisha Nord



Ronda Throener answered questions about canola.



Tri-tip was prepared the NDSU Meat Science Department.



FFA state officers and members along with 4-H members served the guests.



Jeff Dahl, at left, and Jim Bitz discussed the beef industry.



Soybean Oil Now Used to Make Conveyor Belting

There Are Many Benefits When Soybean Oil in Rubber Compound Replaces Petroleum Oil

Soybean farmers may soon be using a soy-oil based conveyor belt in their equipment. TerraTech, a

product developed by WCCO Belting, Wahpeton, North Dakota, is now being manufactured. These belts are the company's first sustainable technology and benefit soybean farmers themselves.

The soy-oil rubber technology will first be released in the form of rubber belting to two channels: agricultural original equipment manufacturers (OEMs) for the option to fit new models and WCCO distributors to supply farmers with replacement parts. The products that have completed testing, RAPTOR draper belts, baler belts and conveyor belts, which use a range of $\frac{1}{3}$ of a bushel to 1.5 bushels of soybeans per belt, will be available for purchase in 2017.

WCCO Belting recently completed its final development

and testing phase for this new patent-pending rubber compound. Now, soybean oil is used in place of the aromatic (petroleum-based) oil within the rubber used to manufacture rubber conveyor-belting products. The project was derived from WCCO's desire to further differentiate its products in a way that benefits its end-users, the farmers. Beyond rubber-belting applications, with the support of WCCO's longtime rubber-com-

pound vendor and partner on the project, the businesses will be working together to encourage the rubber industry to seize the potential behind using agricultural oils in the compound-mixing process.

A 62-year-old family business, WCCO engineers custom rubber belting for crop preparation and harvesting applications in the global agricultural equipment industry and light industrial belting industry for material handling operations.

WCCO's patented RAPTOR draper belting, used to harvest soybeans in swathing and combine harvest-header applications, is sold to every major original equipment manufacturer (OEM) in the world. Thus, there is a unique, mutually beneficial relationship because WCCO and its farmer customers rely on the company's belting products to harvest soybeans and because WCCO relies on its customers' products (soybeans) to manufacture its belting.

Knowing that the rubber-tire market was experimenting with soybean-oil usage in rubber tires, WCCO turned to its rubber compound vendor to discuss using agricultural oils (soy) within the rubber for its conveyor belting in a way that doesn't compromise the technical specifications. In late 2012, the first phase of the project began when the North Dakota Ag Products Utilization Commission

“WCCO is the first and only company to develop and launch this type of product.”



awarded WCCO a prototype grant with the desire to create wealth and jobs by developing new and expanded uses for the state's agricultural products.

With the funding, WCCO and its rubber vendor examined the physical properties of the soy-oil rubber compound in comparison to WCCO's current equivalent aromatic oil compound. The engineers obtained exceptional test results. By replacing the aromatic oil with soy oil in the proper proportion, there is a moderate increase in abrasion resistance while maintaining all other physical properties. Alongside tensile strength, tear strength and puncture resistance, abrasion resistance is a main feature and benefit that the rubber-belted industry promotes.

The second phase of the project commenced in mid-2014 when WCCO investigated the processing characteristics of the soy-oil rubber compound. This phase determined

if the soy-oil rubber was viable through the various belting production stages: the mixing of the rubber compound; the calendaring process (performed by WCCO's wholly owned subsidiary CSI Calendaring, Inc.); and the extruding, molding and vulcanizing procedures completed by WCCO internally. The principal investigator of the project, WCCO's Senior Product Development Engineer Mark Beyer, determined that the soy-oil rubber compound successfully matched the processing benchmarks set by the current compound made with aromatic oil.

The United Soybean Board (USB) granted WCCO soybean checkoff funds to complete the third phase of the project with the goal of growing demand in the industrial market to enhance profitability for U.S. soybean farmers. The final



phase was designed to judge whether soy-oil rubber-belted products performed to the industry's specifications. WCCO focused on testing its main three product lines for the initial launch: RAPTOR® draper belting for combine harvest headers and swather equipment, baler belting for baler equipment and conveyor belting for tube-conveyor equipment. The products performed as predicted with favorable results.

To the benefit of their farming customers, agricultural OEMs are willing to evaluate sustainable, soy-based materials to replace petroleum. In 2014, USB published a website article titled "From Beans to Machines: John Deere Supports Industrial Uses for Soy." Within the article, John Deere's global manager of materials engineering and technology was quoted, "If soy-based materials perform equally and there is a cost parity, why not do the right thing?" This attitude strengthened WCCO's confidence in providing the rubber-belted market with its new soy-oil rubber compound as well as other more

sustainable and more environmentally friendly, rubber conveyor products.

Following adoption by the agricultural belting industry, the soybean-oil rubber technology will be promoted to other belting industries in the light industrial, construction and recycling markets. Looking to the future, WCCO Belting will work to publicize the technological development to North America's custom rubber-compound mixers to license for use in other applications.

WCCO Belting has always been known for innovation, and with the introduction of TerraTech, the company will, once again, revolutionize the global rubber-belted industry. The soybean-oil rubber technology is the first of many more sustainable discoveries that the company will introduce in the years to come. Please visit wccobelt.com for more information about the soybean-oil rubber technology, the company and its products. Remember to contact your local agricultural equipment dealer in 2017 to support this new use.

—Story by Karley Serati, WCCO Belting. Photos courtesy of WCCO Belting



Lifelong Health Tips for Children

It's a shocking statement that makes most parents take notice: According to the U.S. Surgeon General,

because of unhealthy eating habits, physical inactivity and increasing rates of obesity, we may see the first generation of children that are less healthy and have a shorter life expectancy than their parents.

Today, about one in three kids living in the U.S. is overweight or obese, a rate that more than tripled from 1971 to 2011. This problem is about much more than the number on a scale – children who grow up at an unhealthy weight have a high risk of developing a broad range of health problems that previously were reserved for adults, including heart disease, type 2 diabetes, and premature death.

Over the last several generations, changes intended to make our lives easier and better have engineered physical activity out of our daily lives and encouraged unhealthy foods sold in larger portion sizes. In short, we've created environments in which the healthiest choice isn't always the easiest one, and those environments are having an impact on our kids.

Every parent wants the best for their child. Childhood obesity is now the number one health concern among parents in the U.S., topping drug abuse and smoking. In order to raise healthy kids, parents

can advocate for an environment for their children where the healthy choice is the easy choice.

Children who eat healthy foods, stay active, and limit daily screen time are more likely to maintain a healthy weight and have the potential for lifelong health.

Here are some tips to help:

Offer more Fruits & Veggies!

Kids develop their taste preferences and eating habits early in life, so offering kids fruits & veggies at every meal and snack helps them create a lasting habit. A great way to get your kids to eat more produce is to let them help select and prepare items. Also you can add fruits & veggies to foods your child already likes. For example, offer blueberry pancakes, fruit slices over a favorite cereal, chunks of bell pepper in a salad, or shredded veggies over rice.

Another idea is to make eating fruits & veggies into a game by encouraging kids to "eat their colors." Eating a variety of brightly colored foods provides more nutrients in greater variety.

Rethink that Drink

Kids are sweet enough. Sugary drinks like fruit drinks with added sugar, sports drinks and soda are the largest source of added sugars in the

diets of children as young as two. Making the switch from unhealthy drinks to healthy ones cuts calories kids don't need, helping children grow up at a healthy weight.

The best choice between meals?

Good old H₂O. A great way to make drinking water more fun is to put it in a fun cup or water bottle or to add fruit. By simply adding your favorite fruits, such as citrus, berries, or melon, you can make water more interesting and fun for you and your kids.

Limiting Screen Time

Studies have shown that excessive screen use can lead to attention problems, sleep & eating disorders and chronic diet-related diseases. The American Academy of Pediatrics recommends no screen time before age two and limited screen

time after that.

Children learn best when they interact with people rather than screens. Plus, reducing screen time creates more time for active play and more time to interact with other kids.

Get Active

Kids need to be active: to jump, run dance and move their bodies every day. The American Heart Association recommends that children get at least 60 minutes of physical activity each day. Make family physical habits part of the daily routine by taking a walk every night after dinner. Or plan weekend activities that include physical activity, such as hiking, biking or swimming.

If your child can't give up the video games, then set a rule that at least one hour of game time is with a game that requires your child to move, such as those that involve dancing, exercise or sports. Children who eat healthy foods, stay active, and limit daily screen time are more likely to maintain a healthy weight and have the potential for lifelong health. For more information and resources on how you can give your kids the building blocks for a healthy life, visit www.heart.org/healthykids.

—*Story by Chrissy Meyer*





Back-to-School Soy Snacks Provide Healthy Protein and Health Benefits

At the beginning of the school year, kids step up their snack consumption. This year, discover how soyfoods can simplify the task of creating grab-and-go quick bites for busy families.

Soyfoods provide a healthy foundation for children's growth and development because soy is a complete protein, is cholesterol-free and is low in saturated fat. Popular wisdom dictates that new behavior needs to be practiced for at least 21 days before it becomes a habit. Eating soy-based snacks is one way to start building a lifetime of healthy habits for children.

As children head back to school,

the demand for healthy, economical snack options increases. For mid-morning treats, Soynut Butter Banana Muffins, made with soy yogurt and soynut butter, can provide 7 grams of protein (the same amount of protein that is in a glass of soymilk). For lunch-box desserts, an ideal choice is an easy-to-make Soy Brownie that has soy flour and chocolate syrup. For after-school snacks, the North Dakota Soybean Council offers a variety of recipes as well as a free brochure, Kids in the Kitchen, that features 50 kid-friendly snacks. You'll find quick and satisfying recipes such as Edamame Dip with Pita Crisps or Ranch Tofu

Dip, which is made with silken tofu and ranch seasoning mix, and goes great with fresh vegetables.

Here are three reasons why soyfoods are a good snack choice.

1. Soyfoods lay the groundwork for good eating habits. Soyfoods provide a healthy foundation for children's growth and development. Snack-worthy combinations such as ready-made or do-it-yourself trail mixes combine soynuts with other healthy foods, such as dried fruits, for an energy snack.
2. Soyfoods are good for girls' health. One or two servings of soyfoods per day may reduce young girls' risk of breast cancer later in life by up to 50 percent. Fun-to-eat soyfoods such as edamame in the pod and dark chocolate-covered edamame are

craveable snacks for girls who are on the go.

3. Soyfoods provide high-quality, cholesterol-free protein that is low in saturated fat. One serving of soyfoods provides approximately 7 to 15 grams of protein. For healthy people, soyfoods are healthful additions to the diet; a good goal is two servings per day. Soyfood choices range from soymilk and soy yogurt to edamame, tofu, tempeh and soy flour. Use soymilk on cereal, or replace part of the sour cream or mayonnaise in recipes with silken tofu. It is easy to start "soy-izing" your family's favorite appetizer and snack recipes as well as entrees, beverages and desserts.

—Story and photos by Linda Funk

Soynut Butter Banana Muffins

Ingredients

- 1 cup all-purpose flour
- 1 ½ cups raw wheat bran
- 1 teaspoon baking soda
- 1 teaspoon baking powder
- ¼ teaspoon salt
- ¼ cup soybean oil
- 2 egg whites, beaten
- 3 ripe bananas, mashed
- ½ cup vanilla soy yogurt
- ⅔ cup creamy soynut butter
- ¼ cup packed brown sugar
- Raw sugar to garnish muffins



Directions

Preheat oven to 400 °F. Combine flour, bran, baking soda, baking powder and salt in a mixing bowl; set the mixture aside. In a large bowl, combine the soybean oil, egg whites, bananas, soy yogurt, soynut butter and brown sugar. Mix well. Fold in the dry ingredients, and mix

just until combined. Spoon the batter into paper-lined or non-stick muffin tins. Bake in a 400 °F oven for 20 minutes or until firm to the touch. Remove the muffins from the oven. Sprinkle them with raw sugar, if desired. Let the pan cool on a wire rack.

Yield
12 muffins.

Chocolate Soy Brownies

Ingredients

- ½ cup butter
- 1 cup sugar
- 4 eggs, beating after each
- 1 teaspoon vanilla extract
- 1 can (16 ounces) chocolate syrup (1 ½ cups)
- ⅔ cup all-purpose flour
- ⅓ cup soy flour



Directions

Preheat oven to 350 °F. To prepare the brownies, use a medium mixing bowl to beat butter, sugar and eggs with an electric mixer until smooth. Add vanilla and chocolate syrup; stir well. Add flour and soy flour; stir well. Pour the batter into a 9-inch square pan that is coated with cooking spray. Bake 20-25 minutes. Remove from the oven. Cool.

MORE THAN JUST STORAGE

Advanced Bin Technology with Proper Grain Management

Wrapping up the fall harvest and getting grain sold or stored safely provide a feeling of relief and accomplishment for most farmers. In many cases, rewards for the season's hard work, stress and management decisions come in the form of bushels protected in the gleaming, steel grain bins that dot the landscape.

With both farm sizes and yields growing, there is increasing use of on-farm storage. It's not uncommon for farmers to hold tens and even hundreds of thousands of bushels in their grain bins. Having what could be an entire year's revenue stored to take advantage of favorable marketing opportunities requires diligent management to keep the grain from going out of condition, therefore costing farmers money. As with many areas of agriculture, technological advances are helping farmers more closely

monitor and manage stored grain.

When Wimbledon, North Dakota, farmer Joe Ericson and his family added additional on-farm storage two years ago, they knew that they needed to be able to manage grain in the two 60,000-bushel dry storage bins and the 18,000-bushel wet bin. The new setup included cables inside the bin that monitor temperature and moisture. Ericson can connect to the system with a computer in order to get information about what's happening inside. That information helps him to manage the grain and to keep it from going out of condition.

"We had seen how the cables worked before and decided when we built the bins that it was something we wanted to include," Ericson says.

More to Manage

Ericson isn't alone in wanting to know what's happening inside his bins. Grain-storage and management systems are becoming increasingly popular and powerful because there's a lot more at stake.

"An average-size farm bin used to be 30,000 to 55,000 bushels; now, we're seeing bins exceeding 200,000 bushels," says Jon Engelstad, an

international sales manager for Superior Grain Equipment in Kindred, North Dakota. "A lot of on-farm storage is now very similar to commercial storage facilities. When grain is stored in larger bins and for longer periods of time, the risks also increase."

"Grain management has changed dramatically, the last five years especially," adds Paul Leverington, president and CEO of Custom Marketing Company (CMC) in West Fargo, North Dakota. "The big changes with grain bins have come in technology, particularly with sensors and automation."

Leverington says that CMC has focused on grain management since the 1980s. Determining the right type of floor, air-flow rates and venting was the standard way that farmers managed grain for many years. By the early 2000s, he continues, moisture and temperature sensors were starting to come into play.

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“There wasn’t a lot of change in floors, fans, bins or vents, but the market was getting smarter about what was needed to dry grain with just air,” Leverington says. “Now, we’re providing systems that are fully automated to target temperature and moisture with consistent control. Weather stations now control when fans run based on temperature and humidity.”

Because of North Dakota’s widely varying weather, keeping grain stored at consistent temperatures that keep the grain in condition and that reduce the potential for insect infestation and mold growth can be a challenge. Automated grain-management systems are one way that farmers are taking

advantage of the right conditions to protect stored grain.

“New technologies are helping us make storage more of a tool that can be put to work for farms,” says Todd Sears, president of Intelli-Farms, which offers bin-management tools that can be accessed through the internet anywhere in the world. “Cables that once could only measure one thing in the bin can now have components inside of them to measure temperature, moisture, movement and soon more. Technology is giving a full picture of what’s really happening inside the bin.”

Some bin-technology systems allow farmers to check their grain’s condition remotely via computer or

mobile phone. Alert systems notify farmers if the temperatures or moisture levels go beyond prescribed parameters so that problems can be addressed before spoilage occurs. Remote access is just one of the motivations that farmers have to invest in management systems.

“One farmer is going to be drawn to being able to monitor his grain bin from his phone, no matter where he is in the world,” Sears says. “Another is going to want the system to help get grain to the point that it can be sold at a premium. At the end of the day, it’s peace of mind for everyone. Technology helps (farmers) know that their grain is safe and is going to be in good condition when it’s time to market it.”

electricity and won’t over dry grain,” Leverington says.

Having properly dried grain ensures consistent quality while it’s stored, but over-dried grain can cost farmers money. Systems can help rehydrate crops, such as soybeans, to moisture levels that offer optimal test weights and value.

“Grain-management systems can offer the producer the tools to help make the management of grain easier; allow for earlier detection of possible problems; and, when used correctly, add profit to their bottom line,” Engelstad contends.

Management technologies can help alert a farmer about what is happening to grain inside the bin, and they can help rehydrate grain. Leverington says that there’s more to grain management than plugging in an automated system. Farmers also need to have the proper roof vents, floor aeration and air-movement capacity in their bins in order to get optimal performance from the management tools.

Something in Return

Beyond keeping grain in condition, farmers are recognizing the role that bin-management systems can play in helping with profitability.

“Targeting moisture and temperature so fans only run when there is productive air saves on

—Story by Daniel Lemke,
photos by Wanbaugh Studios

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Joe Ericson with his son Jack and father-in-law Mike Clemens.

FINS & FEED

Most North Dakotans are far more familiar with walleye fishing on Devils Lake or catfishing in the Red River than they are with farmed fish. Even so, for the state's soybean farmers, aquaculture is a key sector of animal agriculture.

Fish have a serious appetite for soy. Fish are also an important protein source for people around the world, including the Middle East and Asia. Because most of the state's exported soybeans are bound for Asia, farmed fish matter to North Dakota soybean farmers.

Soybean meal, soy-protein concentrates, soybean oil, and other vegetable proteins and oils can replace from one-third to one-half of the fishmeal in feeds for many farmed species, reducing the need for wild-caught fish. Soybean meal costs significantly less than most animal meals. Reducing the feed cost is critical to improve efficiency and maintain sustainability for aquaculture operations.

Aquaculture is the fastest-growing food-production sector in the world, with an annual growth rate of 8 percent, according to Colby Sutter, United States Soybean Export Council aquaculture marketing director. World aquaculture production needs to double by 2030 in order to meet the projected demand brought about by a growing middle class. Therefore, an additional 41 million tons of fish per year will be needed to maintain the current levels of seafood consumption.

"There's been a lot of work in the past 10 to 15 years in finding replacements for fishmeal and fish-oil ingredients in feed, most of which are from wild-caught sources that are already fully exploited and cannot scale up," Sutter says. "Soy



has emerged as a nutritious, affordable and scalable feed ingredient. It will be key to industry growth."

Fish farming is widespread across much of Asia. China, the Philippines and Indonesia have well-established industries that rely heavily on soy-based feed.

"The industry is hungry for a protein source it can rely on," adds Bridget Owen, Soy Aquaculture Alliance (SAA) executive director. The SAA supports research and education to increase soy use in aquaculture. Owen adds, "Soy is excellent for fish because its profile fits nicely for most rations. We can provide a consistent, quality product that is economically viable."

Domestic Growth

Aquaculture isn't just occurring overseas. There are also growth opportunities closer to home.

In January, the National Oceanic and Atmospheric Administration published its final rule that implemented the nation's first regional regulatory program for offshore aquaculture in federal waters, paving the way for U.S. seafood

farming in the open ocean, including the Gulf of Mexico. New ventures, including shrimp production, are being developed in the Midwest.

About 90 percent of the fish and shrimp consumed in the United States are imported. Like other, more familiar livestock-production enterprises, raising food through aquaculture could offer another market for North Dakota soybeans.

Soy Protein

Soybean meal is a main ingredient for many fish rations, but its inclusion can be limited for some species. Herbivorous fish, such as tilapia, milkfish and carp, have different dietary needs than carnivorous fish, such as trout, salmonids or marine fish.

"We're finding solutions to increase soy in fish diets, either as meal or as soy-protein concentrate," Owen says.

"Most marine species are used to a high-protein diet that consists mainly of other fish, so they are carbohydrate intolerant and can only tolerate so much soy in their feed," Sutter says. "The solution to this challenge is advanced soy proteins, such as soy-protein concentrate and fermented soy. The challenge is sourcing enough enhanced soy products from processors to meet the demand of a growing industry and, specifically, sourcing it from U.S. processors."

Fish farming may be unfamiliar to a lot of farmers, but with a growing world population and strong demand for soy ingredients, aquaculture may become an important market for North Dakota soybeans.

—Story and photos by Daniel Lemke



Third Annual Jamestown Golf Tournament



Thank you for making the Third Annual Jamestown Golf Tournament successful! The tournament is a way for the North Dakota Soybean Growers Association to say thank you to

members and supporters. Your membership dues and sponsorship of NDSGA events help provide the funds necessary to continue policy-advocacy work in Bismarck and Washington, D.C. We're proud of our past successes and are continually working to make things better for soybean growers throughout North Dakota.

For more photos of the tournament, check out [facebook.com/NorthDakotaSoybeanGrowersAssociation](https://www.facebook.com/NorthDakotaSoybeanGrowersAssociation).

Congratulations to our tournament winners:
First Place: Randy Blaskowski, Nick Blaskowski, Brandon Stahlhut and Myles Torgerson
Second Place: Travis Traut, Tom Readell, Wade Readell and Andrew Schell
Third Place: Tyler Lamp, Alan Anderson, Chad Kleinknecht and Andrew Geggelman

Congratulations to our contest winners:
Longest Drive #6: Andrew Geggelman
Longest Drive #17: Donny Schrader
Longest Putt #9: John Yatskis
Longest Putt #16: Brandon Stahlhut
Closest to Pin #4: Bruce Thomas
Closest to Pin #12: Steve Dale

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General: I-29 Trailer Sales and Pride of Dakota
Dinner: North Dakota Soybean Council
Welcome Bag: Minnesota Soybean Research & Promotion Council

—Story and photos by Staff



Efforts to Modify the Agricultural Risk Coverage County Option Continue

For most of the past year, the American Soybean Association (ASA) has been working with National Corn Growers Association (NCGA), the National Association of Wheat Growers (NAWG), American Farm Bureau Federation (AFBF), National Farmers Union (NFU) and other farm organizations to address discrepancies in county yields and payments under Agricultural Risk Coverage County option (ARC-CO). These differences came to light last October, when payments were made for 2014 crops, the first year under the Agricultural Act of 2014 (AA-14), also known as the farm bill. The number of affected crops and counties may be more significant when payments are made for 2015 crops in October 2016. Continued discrepancies in yields and payments will make the ARC-CO program, in which 97 percent of soybean base acres are enrolled, subject to criticism as debate begins on the next farm bill in 2017.

The cause of the discrepancies, the “cascade policy” for determining county yields, adopted by the Farm Service Administration (FSA) after AA-14, was enacted. Currently, FSA requires that a county’s National Agricultural Statistics Service (NASS) yield be used when at least 30 producer surveys are returned or when returned surveys represent at least 25 percent of a county’s harvested acreage for a crop. If neither of these conditions is met, the county’s Risk Management Agency (RMA) yield is used. Differences between yields in neighboring counties can occur due to weather and agronomic reasons,

and are often significant. However, since reported RMA yields are frequently higher than NASS yields, payments to producers in counties where RMA yields are used can be substantially lower than payments in counties using NASS yields.

There is no legislative requirement or guidance for the cascade policy, and FSA could change it if a way can be found that would make yields and payments more consistent between counties. One suggestion would be to use NASS yields in adjacent counties to establish yields in counties that don’t meet either of the requirements for a published NASS yield. In situations where there are no adjacent counties, the FSA State Committee could use NASS yields in comparable counties. However, after several meetings with ASA and other farm organizations, FSA decided not to change their policy, stating that it could create “winners and losers” or increase the cost of the program. They also expressed concern that making a change in the middle of the current farm bill could bring unwanted attention to differences in yields that producers report to both NASS and RMA.

ASA’s Voting Delegates adopted a policy resolution in February, 2016 to support using RMA rather than NASS yields under the ARC-CO program. Since FSA has declined to change its current approach, ASA leaders decided at the July Board meeting to encourage farmers to submit NASS surveys in order to reduce the number of county yield discrepancies and make ARC-CO more defensible in advance of debate on the next farm bill.

In addition, North Dakota Senator John Hoeven amended the FY-2017 Agriculture Appropriations bill to establish a pilot pro-

gram for 2016 crops under which FSA would designate counties for which NASS yields in adjacent or comparable counties would be used to mitigate differences that would otherwise exist. ASA will support adoption of the Hoeven amendment in Conference later this year if efforts to have FSA change its current policy are not successful.

House Joins Senate in Passing a Uniform GMO-Labeling Standard

Following the Senate’s lead, the United States House of Representatives passed a GMO Labeling Bill that has been signed by President Obama.

The GMO labeling bill passed both congressional bodies with bipartisan support. The bill gives the U.S. Department of Agriculture the authority to create a national standard for

labeling food items that may contain genetically modified ingredients. Once signed by the president, the bill will deter states from creating their own, individual labels.

“The passage of this bill allows for both consumers and producers to move on from this fight, and benefit from a uniformed, standardized labeling law across the country,” says American Soybean Association President Richard Wilkins of Delaware. “We believe this thoughtfully crafted compromise provides consumers with the information they need, without stigmatizing a safe and sustainable food technology.”

Panama Canal Expansion Benefits Soy Exports

U.S. soybean farmers now have access to faster and more



efficient waterway transportation when delivering U.S. soy to international end users.

The long-awaited Panama Canal expansion opened in June, doubling the waterway's capacity. The new, larger lane allows more freight to be loaded on each vessel, decreases transit time and lowers transportation costs overall when compared with the original canal.

The Panama Canal is integral for the movement of soy. Annually, approximately 600 million bushels of U.S. soybeans transit the Panama Canal, making soy the No. 1 U.S. agricultural commodity using the canal. In fact, 44 percent of the total U.S. soy exports move through the canal.

Transportation is not only necessary, but it's also a key aspect of the U.S. soy industry's competitive advantage in the global marketplace. According to a soy-checkoff-funded study, foreign soy buyers often pay as much attention to the delivery timeliness as they do to the price. Currently, the U.S. transportation system supports the most efficient soy supply chain in the world, providing the U.S. with a significant competitive advantage over South American soy suppliers.

Your Conservation Story Could Be a Winner

Share a story about how conservation is part of your farm operation, and you could be the next winner of a Conservation Legacy Award. This program showcases U.S. soybean producers' farm-management practices that are both



environmentally friendly and profitable.

All U.S. soybean farmers may enter to win a Conservation Legacy Award. Entries are judged on soil management, water management, input management, farmstead protection, and conservation and environmental management. Three regional winners and one national winner are selected.

Award Winners Receive

- An expense-paid trip for two to the Commodity Classic, March 2-4, 2017, in San Antonio, Texas.
- Recognition at the American Soybean Association (ASA) Awards Banquet at the Commodity Classic.
- A feature on your farm and conservation practices in *Corn & Soybean Digest* as well as a special online video.
- A potential opportunity to join other farmer-leaders on a trip to visit international customers of U.S. soybeans.

The Conservation Legacy Awards are sponsored by the American Soybean Association, BASF, *Corn & Soybean Digest*, Monsanto, the United Soybean Board/soybean check-off and Valent.

More information about past award winners and how to submit your application is available at soygrowers.com.

All applications must be submitted by Sept. 2, 2016.

Senate Foreign Relations Committee Passes Plant Genetics Treaty

The International Treaty on Plant Genetic Resources for Food and Agriculture has passed the Senate Foreign Relations Committee. The American Soybean Association (ASA) supports the treaty's passage and ratification.

ASA President Richard Wilkins has expressed support, noting that the treaty "establishes uniform terms for the exchange of plant materials which provide the greatest certainty to public-sector plant breeders and seed companies." The treaty was signed by the U.S. House in 2002 but is still pending ratification in the Senate.

Many crops that are grown in the U.S. rely on genetic diversity from other countries. In fact, few crops originated in North America.

Today, 139 countries have ratified the treaty, many of which are key U.S. competitors in the international seed markets. Even without ratification, U.S. companies, universities and government agencies are impacted by the treaty, and they must abide by its legally binding material-transfer agreement in order to access critical, international germplasm. Ratifying the bipartisan treaty would require no changes to existing U.S. laws and no additional appropriations.

Calling Young Leaders

The American Soybean Association (ASA) and DuPont are seeking applicants for the

2016-17 ASA DuPont Young Leader Program. The ASA DuPont Young Leader Program is a challenging and educational, two-part training program. Phase I of the training takes place at the DuPont Pioneer headquarters in Johnston, Iowa, Nov. 29-Dec. 2, 2016. The program continues Feb. 28-March 4, 2017, in San Antonio, Texas, in conjunction with the annual Commodity Classic Convention and Trade Show.

For more than 30 years, the ASA DuPont Young Leader Program has identified and developed grower leaders who continue to shape the future of agriculture.

"The ASA DuPont Young Leader Program has had a tremendous impact on the soybean industry, and many of our current grower leaders at the national and state level are program alumni," said ASA President Richard Wilkins, a farmer from Greenwood, Delaware. "The program provides industry-leading training that develops the participant's leadership potential while fostering collaboration among farmers throughout the U.S. and Canada."

Grower couples and individuals are encouraged to apply for the program that focuses on leadership and communication, agricultural information and the development of a strong peer network. ASA, its 26 state affiliates and DuPont will work together to identify the top producers to represent their states as part of this program.

—Stories by Staff

Getting to Know the Grower



Art Wosick
Minto, North Dakota

Tell us about your farm.

I have been farming since 1974. I raise soybeans; certified wheat seed; and dry beans, mostly pinto beans.

What do you like best about farming?

Every day is a new challenge, and farming is never boring. I also like being my own boss.

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

I was nominated and elected from my county, and that is how I got involved. I am happy and proud to serve as I have met a lot of good friends by getting involved with the North Dakota Soybean Council.

Has serving on the NDSC been beneficial to you? Why?

Yes, as I have learned how the council operates through the checkoff funds. I have also learned, by traveling overseas, how people live in different countries and how that influences their demand for our soybeans. I can bring that information back to the North

Dakota Soybean Council and the soybean farmers.

What do you like to do outside farming?

I have 7 grandchildren, so I like to visit them as much as I can. I also like to collect toy tractors, and I have about 300 of them. I also like to do a little fishing.

Why are soybeans a part of your crop mix?

Soybeans are good rotation before wheat and with round up it kills all the weeds, they also seem to handle excess water better than edible beans as northeast North Dakota has

been pretty wet in recent years. You can also market (soybeans) any business day of the year.

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

My John Deere row-crop planter.

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

No, I graduated college and got a job as a machinist in Grand Forks and realized that being inside in the summer-

time wasn't for me. I worked construction for about 4 years (and) then decided to farm with my father.

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

Technology. Some of the new equipment has so much technology; it's almost too much. Another change is the Roundup ready crops; it costs a lot for the seed but makes it easier in the long run.

— Story by Staff, photo by Wanbaugh Studios

Questions about soil health?



Get answers at Big Iron

Dr. Abbey Wick, NDSU Assistant Professor of Soil Health-Extension/Department of Soil Science will be at the North Dakota Soybean Council booth #C-07 to talk to farmers about soil, answer soil health questions and talk to farmers about research funded by the ND Soybean Council. Dr. Wick will be at the booth:

Sept. 13th: - 1:00-2:30

Sept. 14th: - 10:00-11:30

For more information about soil health, visit ndsu.edu/soilhealth. For information about Big Iron, visit bigironfarmshow.com.



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Greg Gussiaas
Carrington, North Dakota

Tell us about your farming operation.

I raise corn and soybeans with my dad, uncle and cousin northeast of Carrington.

How long have you been farming?

I've been farming my whole life. It started at 1/64 scale in my sandbox, and the equipment just kept getting bigger.

I started helping Dad when I was about 12. Raking hay was my first job. I moved to Fargo in 1999 and was there until 2012 when I moved back with my wife and children to start "livin' the dream" as a good friend once said.

Did you always know you wanted to farm?

My mom still tells people that I spent three-fourths of my developmental life on the floor of a tractor. We weren't lucky enough to have buddy seats back then, so yes, I fell in love with the farming lifestyle at a young age and now get to spend every day doing what I love.

If you could, what would you change about the current farming environment?

I would love it if the society as a whole would realize we're

all on the same team and trust that we, the American farmer, will produce safe products using the most efficient means possible. It gets old quickly being told how to do your job better by people who have never done the job before.

What has changed most about farming in the time you've been involved?

The changes in technology are happening daily: not only in the tractor cab, but also the technology in seed production, water management, etc. It makes agriculture an exciting field to be a part of because you never know what our when the next breakthrough will be.

What do you like to do outside farming?

I have three small children, ages 6, 4 and 2, and a wonderful wife of almost 8 years with

whom I enjoy spending time. As a family, we enjoy bike rides and playing outside in the summer as well as supporting our local Carrington Cardinal sports teams year round. In addition to the NDSGA, I'm also involved with the Foster County Agriculture Improvement Association and a bowling league to fill in any free time in the winter.

Where is your favorite place to visit in North Dakota?

I would have to say the Fargo dome, mainly when there's a Bison football game. I've been a Bison fan my whole life, so the last five seasons have been especially rewarding.

— Story and photo
by Daniel Lemke

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Farm Service Agency Val Dolcini (enter, black shirt) was at the Buxton, N.D. Home of Marcia Hoplin, (blue shirt, center) to learn more about her operation. Senator Heidi Heitkamp, (next to Hoplin) and NDSGA Executive Director Nancy Johnson (left of Senator) had the opportunity to ask about ARC County program implementation. More about that on page 32.

**NORTH DAKOTA SOYBEAN
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