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When he's not on his Kulm, North Dakota farm, Josh Gackle, President of the American Soybean Association (ASA), can be found advocating for U.S. soybean producers nationwide. The future of biofuels like biodiesel, renewable diesel and sustainable aviation fuel will be greatly impacted by government action, so farmer-leaders like Gackle are actively working with Congressional and agency representatives on policy that's favorable for ag-based fuels.

—Photo by The Creative Treatment



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an Hovland had deep roots in
North Dakota before assuming his
U.S. Department of Agriculture
Natural Resources Conservation
Service (NRCS) state conservationist title in
2023. Hovland graduated from Cavalier High
School and earned a degree in soil science from
North Dakota State University.

After college, Hovland was part of the NRCS' pathways program, "which was a sort of internship with the agency, and it's something my dad actually had done before," Hovland says. "I saw the benefit of the program and the passion he had to deal with natural resources, so I kind of followed in his footsteps."

Hovland started his NRCS career with several stops in North Dakota before having conservationist roles in Michigan and Indiana, where he spent the past 17 years before returning to North Dakota in July 2023.

"My primary focus is really helping our producers get conservation implementation on the ground, helping them, whether it's through technical assistance, financial assistance, whatever it is we can do to help meet their needs," Hovland states.

Hovland describes how North Dakota recently put \$104 million in conservation assistance on the ground, assisting with over a thousand contracts. Examples include nutrient and pest-management assistance, help with no-till farming and cover crops as well as technical assistance.

With the growing emphasis on climate-smart agriculture, Hovland asserts that there are ample opportunities for farmers to look at incorporating conservation practices on their farms. The Inflation Reduction Act made additional funds available.

"I would say this is probably one of the greatest opportunities for our producers to reach out, get that technical assistance, get the financial assistance that they can use to better their operation, whatever that looks like," Hovland explains. "Some people are just starting out, and some people are way ahead of the game, but we can help anywhere from beginning to end."

The NRCS administers a broad variety of programs and initiatives, ranging from the Conservation Stewardship Program, the Regional Conservation Partnership Program, and the Environmental Quality Incentives Program to initiatives which involve on-farm energy and organic farm production.

Hovland says that, despite some staffing challenges, employees at North Dakota's 53 NRCS offices are available to help farmers.

"We're here to support them," Hovland maintains. "NRCS has been around for 92 years, and we want to be able to help farmers on the ground. We want to help growers understand that conservation is applicable, and it can support their operation. It shouldn't cost them to do so. We know that return on investment is key for our producers. We want to make sure our support enables that return and doesn't deter it."

Farmers who are interested in exploring possibilities with the NRCS programs are encouraged to visit nrcs.usda.gov to find a list of offices and district conservationists.

"One of the things I love the most about our agency is we're the only voluntary agency in the federal government," Hovland contends. "We take great pride in that and being able to support our producers across the state and bring in needed dollars to help their operations. We love to work with farmers on their resource needs, promoting soil health and regenerative agriculture, and making sure that we're preparing our resources for the future generations."

—Story by Daniel Lemke, photos submitted by NRCS



State Conservationist Dan Hovland returned to North Dakota in 2023 to lead the state's NRCS efforts.

Exciting Times for Soybean Farmers

all: it's my favorite time of year. If you haven't already begun harvest, I'm sure you're getting the combine and equipment ready because it won't be long now before harvest is in full swing. It seems like it was just yesterday that we were fighting wet field conditions while trying to plant this year's crop. Where did this year go? Nothing ever stands still.

The same can be said of the ever-changing soybean supply and demand picture as well as where our soybeans are used at their destination market. As this harvest begins, North Dakota is fortunate to have two dedicated soybean crush plants in operation with a possible third plant still being developed. Therefore, we have several new ways to market and to deliver North Dakota soybean products.

In this month's magazine, you'll find articles that discuss some uses and new opportunities for the products from these crush plants. The challenges are there, but the opportunities are huge. The future looks exciting to see where things can go from here. Just as the development of the shuttle loading facilities brought about significant changes in the past two decades, the opportunities these crush plants provide will help shape the next few decades.

Of course, it wouldn't be right if we ignored the elephant in the room and pretended that everything is just rainbows and unicorns. A huge, projected soybean crop across much of the country combined with a lack of export sales to date have resulted in a significant drop for soybean prices, making the financial chal-

lenges with this harvest and going into next year's growing season all that much more critical. We will continue to advocate on your behalf so that you can focus on the upcoming harvest.

In addition to many other activities, we are still urging Congress to pass a farm bill before the end of the year. We're pushing for a bill that includes much-needed farm safety-net improvements, and we are working hard to improve the upcoming biofuel rules so that soybean producers can be a full participant in that market.

I hope that you will all take a little extra time to be safe and to watch out for one another during this busy season. To me, there's nothing better than watching the crop come into the combine hopper and knowing that all of the hard work and dedication over



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the past year was worth it. I'm very proud of the work all of our soybean producers do, and I look forward to seeing where we can go from here.



Membership Application

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

Name:	Do you raise: □ Cattle □ Hogs □ Poultry □ Dairy						
Spouse:	Do you currently grow soybeans? ☐ Yes ☐ No						
Date of Birth:	Soybean Acres: Total Acres Farmed:						
Farm/Company Name:	How did you hear about NDSGA? (Please circle one)						
Address:	Recruited in person; Recruited by phone; Magazine;						
City, State, Zip:	Internet; Social Media; Mailing; Radio; Event; Other						
County:	□ 3-Year Professional Membership: \$250 □ Retired Farmer: \$25						
Phone:	□ 1-Year Professional Membership: \$110 □ 1-Year Student: Free						
Cell:	☐ Check enclosed (please make checks payable to NDSGA)						
Email Address:	☐ Credit Card: Visa / MasterCard / Discover / American Express Card Number:						
Occupation (Please check all that apply)	Expiration Date:/ CVC:						
□ Farmer □ Retired □ Agribusiness	Name on Card (Please print):						
☐ Finance ☐ Elevator ☐ Other	Signature:						

Mail application with payment to: North Dakota Soybean Growers Association, 4852 Rocking Horse Circle South, Fargo, ND 58104

The Lure of Livestock



cott German is an advocate for animal agriculture. Since 1987, hog production has been a part of his family's farm near Oakes. Nearly 40 years later, the German farm is a bit of a unicorn.

"I have the only hog finishing site in Dickey County," German says.

German farms with his father and his son, raising soybeans, corn and hogs. He started farrowing pigs in 1987 with 3 sows that he purchased through an FFA program. By 1998, the herd was up to 200 sows. A collapse in the hog market prompted the Germans to sell the sow herd and to put up a commercial contract finishing site. They now have 4,500 commercial hog finishing spaces.

"We're a gilt multiplier, which means our supplier brings us all female pigs, and then we grow them up to various sizes, depending on what their customers want," German explains. "Probably 80% of the gilts will go to some kind of breeding farm, and the ones that don't make the grade will go to market."

Changing Landscape

German recalls that, during the late 1980s, weather conditions were very dry; interest rates were high; and the family was looking for a way to diversify the operation. Hogs were deemed to be the best alternative.

"Just crop farming wasn't going to cut the mustard, German asserts. "My dad's thought was, maybe we should try and branch out and get in the pigs."

As was the case for the Germans in the 1980s, there's interest by many people in the agriculture sector to grow North Dakota's livestock production.

North Dakota offers numerous advantages that are attractive to animal agriculture. With the addition of two soybean crushing facilities in the past year, soybean meal is widely available. There are abun-

dant supplies of corn and dried distiller's grains (DDGS) from ethanol production, so local feed ingredients are plentiful. Those factors aren't lost on German.

"Anytime you can get your primary feed ingredients from a close supplier, it obviously helps your bottom line with transportation costs and with availability," German states. "It's not only a win for livestock producers; as a commodity farmer, it gives me more outlets for my grain."

North Dakota's wide open ag lands also offer a high level of biosecurity. Because pork production facilities aren't common, the



Scott German sees animal agriculture as an opportunity, especially for young farmers.

risk of diseases spreading from farm to farm is very low. With most North Dakota farms being a long way from the pork processing plants, those wide-open spaces can also be a disadvantage.

"My site is the only site in the entire county for finishing hogs, so from a biosecurity standpoint, you can't beat it. The best attribute that I can provide to any kind of integrator is my location," German contends. "The worst attribute I can offer for any integrator is also my location."

German notes that there are very few independent pork producers now. Most growers work with an integrator to manage the flow of hogs from birth to market.

German says that working with an integrator is a double-edged sword. Because farmers contract with a packer, there is slightly less risk to get into pork production.

"When we built our four finishing barns, we had a tenyear contract with a packer, so it was a fairly low risk investment," German states. "The downside of integration is you really can't get into the hog market without some kind of integrator or somebody working with you. The days of just having a few sows and trying them out just aren't there."

German explains that legisla-

tion related to animal agriculture was passed during the most recent legislative session. The law granted more freedom under the state's corporate farming act, allowing producers and integrators to form different kinds of partnerships which might encourage more interest among integrators.

"We've got plenty of corn, and now we have soybean meal and DDGS availability, so I have to believe that all of those things are positives for future growth and demand in the livestock industry within the state," German contends.

Next-Generation Opportunity

As it was for him when he when he was younger, German sees livestock production as an avenue for bringing the next generation back to the farm.

"For young producers that maybe don't have capital or don't have land, it's a way for them to come back or to get started. When you look across Minnesota or North Dakota or Iowa or wherever, the cost of land is crazy, and interest rates don't help young producers trying to buy land," German asserts. "Livestock is definitely an option for young producers and older producers if they're looking to diversify or bring the next



German (second from left) shard his experiences ad part of an animal agriculture panel at the 2023 Northern Corn and Soybean Expo.



North Dakota has several advantages for pork production including local feed ingredients, available land and favorable biosecurity.

generation back in."

One of the biggest challenges for a North Dakota livestock renaissance, German maintains, is the fact that many farmers in the state are at least one generation removed from animal ag production.

"Once you get one generation removed from livestock, it's really hard to come back in and start up animal agriculture, especially with the issues we have with labor force," German says. "Everybody likes to drive auto steer tractors, but nobody likes to pressure wash a pig barn, and I can speak from firsthand experience on both."

German advises that, if farmers are considering livestock production, their first call should be to the North Dakota Livestock Alliance (NDLA). The NDLA membership encompasses North Dakota State University Extension, crop production organizations and even lenders.

Room for More

Even though having more pork production in North Dakota would increase German's competition, he believes that there's plenty of room for expansion.

"The best asset for my pig barns is location. So, by having more hog farms in the area, do I lose part of

my niche market that I have when it comes to biosecurity and some of the things like that? Yes, absolutely I do," German explains. "But we are so isolated with the current livestock production that there's room for quite a bit of expansion before we start compromising our biosecurity status."

German notes that increased animal agriculture would not only provide an opportunity for some farmers to bring livestock production to their operation, but the addition would also benefit local farmers who are dealing with low commodity prices.

"From the perspective of a corn and soybean producer, I want all available markets that I can get. I don't want to be bound to the 110-car shipper," German states.

German describes how he willingly advocates for agriculture, including animal agriculture, because it's been his family's livelihood for five generations.

"Unfortunately, we don't have a lot of people advocating for us or telling our story," German contends, "so anytime that we can, I think we have to take advantage of it."

—Story by Daniel Lemke, photos by Wanbaugh Studios, Daniel Lemke and The Creative Treatment

A Farm-to-Fire Solution

he versatility of soybeans is remarkable. From a staple ingredient for livestock feed to a feedstock for biofuels, there are many reasons why soybean production continues to grow globally.

An exciting new opportunity for value-added use is fire suppressants made from soybeans. This soy-based, foam fire suppressant has been on the North Dakota Soybean Council's (NDSC) radar for many months. We've watched it go through some testing, first by the company that developed it, and then more recently, we've been fortunate to have the company put it in the hands of the Casselton Fire Department in Casselton. The department's feedback was very positive.

Called SoyFoam™, the bio-based suppressant is free of PFAS (per- and polyfluoroalkyl substances), the so-called forever chemicals. The foam's developer, Cross Plains Solutions, says that this product is 84% bio-based, is certified readily biodegradable and is made with soy grown in the United States. This product is the first and only firefighting foam to attain the gold level through GreenScreen Certified for Safer Chemicals. The foam has tremendous upside for use with industrial applications, including soybean crush facilities or ethanol plants.

SoyFoam™ has the potential to be an environmentally friendly firefighting tool without

harmful side effects and the worries about toxic chemicals. Several North Dakota fire-fighters and soybean farmers participated in a SoyFoam™ demo in Eau Claire, Wisconsin, this summer to learn more about the product and to see its potential firsthand. See pages 20 and 21 to learn more.

The bio-based fire suppressants can, hopefully, take the place of some products which contain forever chemicals. That advancement would be beneficial to our first responders and fire department personnel as well as to the environment.

SoyFoam™ will provide another use for soybeans, but the benefit extends beyond farmers. Everyone cheers for the fire department, the police department, or the first responders. If they have a product from the soybean industry to use when protecting the public, that scenario makes for a really good story.

SoyFoam™ development is a great example of the type of programs for which the NDSC invests checkoff dollars. The projects we support are advancing the promotion and development of new uses and markets for North Dakota soybeans. This demonstrates that the programs we invest in and believe in are truly worthwhile.

Markets and the soybean industry are always changing. We strive to stay ahead of those changes and to have a game plan for what we want to



Jim Thompson
Chairman
North Dakota Soybean Council
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Website: ndsoybean.org

do going forward. It's about more than just our plans for this year or next; it's about what we aim to achieve in three, five, or even seven years. That plan is always changing because we need to be ready to adapt to changes and emerging opportunities, such as fire suppressants, rather than being caught behind them.

Many Thanks!

The North Dakota Soybean Council (NDSC) said farewell to Director Mike Schlosser of Edgeley at its September 17 board meeting. The NDSC was proud to recognize Schlosser for six years of service to the board; his term ended on June 30. During that time, Schlosser served as the secretary for two years. The NDSC is grateful for his willingness to serve North Dakota's soybean producers, and the NDSC thanks his family for supporting him. Thank you, Mike!

—Story and photo by staff

NDSC Chairman Jim Thompson, left, presents an appreciation award to Mike Schlosser, right.









GETTING IT RIGHT SOYBEAN WEBINAR

DECEMBER 10 2024

From 8.30 am to noon CST Supported by North Dakota Soybean Council Certified crop adviser (CCA) continuing education credits will be available There is no participation fee

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EXTENSION



SCN Sampling Program Q&A



- Q: How does the SCN sampling program work?
- **A:** The NDSC covers the cost of up to 2,000 SCN samples for growers in N.D. NDSU will label, code and distribute sample bags. Growers bag and mail sample bags to the lab.
- Q: When will the sampling program begin?
- **A:** Sample bags will be at County Extension offices in mid-late August.
- Q: How do I receive sample bags?
- **A:** Each ND grower can get up to three bags at their County Extension office
- Q: When is the best time to sample?
- A: The number of eggs and cysts in the soil increases throughout the growing season, making SCN detection most likely if you sample at the end of the season; from just before harvest to just before freeze-up is generally recommended.
- Q: What do the results tell me?
- A: Results indicate how much (if any) SCN is in your soil. If you don't find SCN, excellent! If you find SCN at any level, you want to manage it immediately. If you are already managing SCN, and your levels are still high, it may be time to evaluate additional management options.

Contact Richard (Wade) Webster at NDSU with questions: richard.webster@ndsu.edu • (701) 231-7057



MAKE AN IMPACT:

Consider Becoming an NDSC County Representative

he North Dakota Soybean Council's (NDSC) 2025 election process will begin in December 2024 for the following counties:

- District 1: Richland County
- District 5: Barnes County
- District 7: Grand Forks & Traill Counties
- District 9: Eddy, Foster & Wells Counties

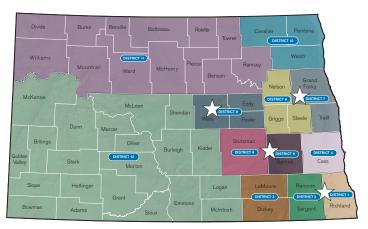
How do the NDSC's **Elections Work?**

NDSC's election process is conducted by mail. In December 2024, soybean farmers in the

designated counties will receive instructions about the NDSC's nomination process, delivered in a green envelope.

Official election ballots will be sent out in February 2025, contained in a blue envelope. To ensure a fair and secure election, the process is managed North Dakota State University (NDSU) Extension. All NDSC county representatives and board members are elected by their peers— North Dakota soybean farmers

In single-county districts, the elected soybean producer will also serve on the NDSC Board of



North Dakota Soybean Council District Map

Directors. In multi-county districts, a representative from each county will be elected to serve as an NDSC county representative. These newly elected representatives will then attend a meeting organized by NDSU Extension, where one of them will be selected to serve as a director on the NDSC board.

Soybean producers in these

counties are encouraged to nominate a fellow producer or to consider nominating themselves for the position of county representative.

—Story and photos by staff

To learn more about the NDSC's 👼 election process, scan the OR code.



The Benefits and Rewards of Serving on the NDSC Board



Milo Braaten

"A friend of mine served on the Council and told me it was one of the best boards he had ever been a part of," said NDSC Director Milo Braaten of Portland. "So far, my experience on the board has exceeded my expectations."



Joe Morken

"Council directors collaborate and discuss, but ultimately, we're all farmers focused on what's best for North Dakota soybeans," said Joe Morken, past NDSC chairman from Casselton. "If you join the board, be ready to serve it's a commitment, but it's worth it!"



Jennifer Meyer

"NDSC directors each bring unique perspectives to the table, and it's valuable to have diverse voices contributing to all board discussions," said NDSC Director Jennifer Meyer from Wilton.



Mike Schlosser

"NDSC is one of the most interesting and well-run boards I've ever joined, with information beyond anything I've experienced," said Mike Schlosser, past NDSC director from Edgeley. "Serving as a director requires time and responsibility, especially in managing checkoff funds, but the rewards are tremendous."



Dan Spiekermeier

"NDSC is engaged in nearly everything, from soybean planting research to developing new uses for soy oil and meal," said Dan Spiekermeier, past NDSC director from Sheldon. "It's not just about how effectively we can grow soybeans, but also about finding innovative ways to use them once they're harvested."





Gov. Doug Burgum (center, with scissors) was among the dignitaries on hand to celebrate the North Dakota Soybean Processors opening.

n August 7, the North Dakota Soybean Processors (NDSP), a joint venture between Consolidated Grain and Barge Company (CGB) Enterprises, Inc. and Minnesota Soybean Processors, celebrated the opening of a new soybean crushing plant near Casselton, North Dakota. The event included a ribbon-cutting ceremony with speeches from company leaders; local, state, and federal representatives; and supporting organizations. Chairman Jim Thompson from Page spoke on behalf of the North Dakota Soybean Council.

The state-of-the-art facility has a 125,000 bushel-per-day capacity and will produce soybean oil, soybean meal and soyhull pellets. It is estimated that the plant will process 42.5 million bushels of soybeans in the first year. The plant creates a strong year-round, local market for North Dakota and Minnesota soybean producers, resulting in better prices for farmers and more consistency for local agriculture. For more information about NDSP and the Casselton facility, visit ndsoy.com.

—Story and photos by staff



Representatives from the North Dakota Soybean Council and the North Dakota Soybean Growers Association attended the grand opening in Casselton. Pictured from left to right are Jeremiah Undem, Chris McDonald, Jim Thompson, Stephanie Cook, Stephanie Sinner, Justin Sherlock, and Suzanne Wolf.



The North Dakota Soybean Processors plant will process approximately 125,000 bushels of soybeans into oil, meal and hulls each day.





ll decisions have consequences. With agricultural policy and trade decisions, there can be far-reaching ripple effects that go beyond the primary issue being addressed.

The Center for Agricultural Policy and Trade Studies (CAPTS) at North Dakota State University (NDSU) takes a deep dive into a range of issues and decision-making that affect agriculture. CAPTS was established in 2001 to advance farm income and rural prosperity in North Dakota and the Upper Midwest by providing sound economic analysis and informing the decision processes related to agricultural policy. CAPTS also researches the impact of trade and state economic strategies.

"Our goal is to inform decision-making processes on the state and regional policy side, but also the industry side by conducting economic impact studies and providing an understanding of market opportunities using economic modeling tools to inform those processes," says Sandro Steinbach, Ph.D., an associate professor for NDSU's Department of Agribusiness and Applied Economics and the CAPTS director.

Steinbach describes how CAPTS helps provide critical information about the economic influence of potential strategic investments such as agricultural processing infrastructure and the effects of decision-making by leadership, including aspects of a new farm bill, which involves billions of dollars for North Dakota.

"North Dakota agriculture has a huge dependence and opportunity in expanding crop insurance as a tool to manage production risk," Steinbach explains. "The production of agricultural commodities in the Upper Midwest differs from what is done in the South, so the policy-making instruments must account for those differences. Our analyses inform the political decision-making processes by showing how those policy proposals out there right now will impact the bottom line of farmers in the Upper Midwest and how those policies can be amended to achieve the set goals."

Steinbach states that CAPTS recently conducted a study of the potential market opportunities for North Dakota-produced soybean meal in Canada. The center also researched the effects of the California Air Resource Board's

proposal to disallow diesel-powered locomotives in the state and how that policy could negatively affect the movement of agricultural products from the Upper Midwest.

"We reveal the whole picture of how those agricultural challenges are playing out and how changes in regulatory frameworks are impacting the North Dakota economy," Steinbach asserts. "Our goal is also to identify potential solutions that could solve the pressing issues farmers and ranchers in the Upper Midwest face."

CAPTS has examined the implications of global events, including how the Russia-Ukraine war affected U.S. farmers and ranchers. The center is also studying the barriers to biotech crops that have caused trade issues with Mexico. Those efforts are funded by considerable federal dollars.

CAPTS is guided by an advisory board comprising nine groups that represent North Dakota agriculture statewide. The North Dakota Soybean Council holds a voting seat on this advisory board.

"I think we have a unique opportunity here to impact the well-being of agriculture across the region," Steinbach contends. "Few research centers can speak to

agricultural policy at the state and national levels. It is an opportunity for North Dakota to fill this void, and it's a critical void with a new farm bill pending, global market uncertainty increasing and production agriculture facing unseen challenges."

"The North Dakota Soybean Council (NDSC) values its partnership with the CAPTS at North Dakota State University," says Stephanie Sinner, NDSC executive director. "This collaboration is crucial for advancing industry research and providing valuable insights into agricultural policy and trade issues. Together, we work to ensure that North Dakota sovbean farmers benefit from the latest research and informed decision-making that supports the growth and sustainability of the soybean industry."

> —Story by Daniel Lemke, photos courtesy of Sandro Steinbach and Adobe

To learn more about the Center for Agriculture Policy and Trade Studies, scan the QR code.



Dr. Sandro Steinbach heads up the NDSU Center for Agriculture Policy and Trade Studies





oybean farmers clearly stand out as experts for the art of producing more with less. U.S. soybean production has more than doubled over the past 40 years while using fewer acres and resources. Yields are predicted to grow by more than half a bushel per acre annually.

All this while soybean farmers helped launch and grow the biodiesel industry. As noted by Clean Fuels Alliance America, "U.S. Soybean farmers continue to meet the oil production demands for clean fuels and the soy protein demands for food sources," a point underscored by research from Purdue University which concluded that every 50 bushels of harvested soybeans generate 550 pounds of soybean oil for clean fuels and 2,200 pounds of protein for food.

Like farmers, Pittsburgh-based Optimus Technologies uses innovation and adaptability to realize the carbon-reduction potential of biofuels. Optimus dedicated more than two decades under the hood to craft a comprehensive suite of technologies that make environmental sustainability financially and operationally successful for heavy-duty diesel fleets.

Optimus' trucks have accumulated more than 10 million road miles but, like farmers, the company keeps pushing to prove and to improve its products and fuel source.

Optimus set out to disprove the lingering misunderstandings about clean fuels' dependability in sub-zero temperatures. Several of the company's engineers traveled to Columbus, Indiana-based Analytical Engineering's Drive-In Cold Cell testing facility in order to put an International truck upgraded with Optimus' products through the paces.

"We proved B100 works in heavy-duty trucks at -30 °F," concluded Jon Ewing, co-founder and director of engineering for Optimus.

Studies will continue, but the results should be another win for biodiesel.

"Optimus' ecosystem of products makes clean biogenic fuels like B100 immediately viable and affordable for fleets," Ewing adds. "We have more than 10 million miles, 750 trucks and now additional evidence that clean transportation can happen no matter the operating conditions or weather."

Optimus' ability to thrive in cold weather was previously reinforced by partner ADM Trucking, which conducted a 1.3 million mile on-road test of the technology and noted that the Optimus-equipped trucks performed

Iowa Department of Transportation's plow truck equipped with Optimus' Vector System and operating on B100.

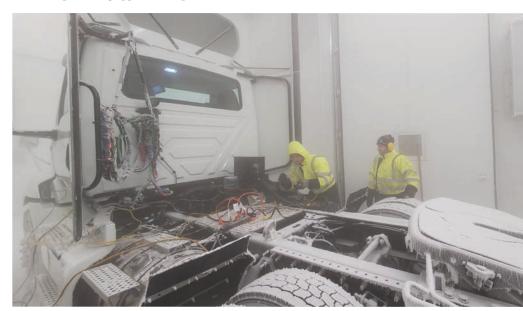
flawlessly with B100 in -10 °F temperatures in central Illinois. In addition, the company's systems were successfully used for snowplow fleets in Washington, D.C.; Wisconsin; and Iowa, and more products will soon be launched on plow trucks in Minnesota.

"It's well established that B100 can reduce carbon dioxide emissions to near zero due to the atmospheric carbon that is sequestered into the growing crops," said Optimus Co-Founder and CEO Colin Huwyler, "but it's all of the added benefits of biodiesel that are causing the transportation industry to take note, like the fuel being biodegradable, how it increases engine lubricity and decreases particulate matter in the engine's after-treatment systems."

According to the Global Reporting Initiative, B100 offers a 100% carbon reduction compared to diesel. An American Transportation Research Institute Study from May 2022 validated that a 100% biodiesel Class 8 truck has 2.5 times less carbon dioxide than an electric vehicle on a full lifecycle basis. These advantages also come without the need to build a nationwide network of completely new refueling infrastructure because biodiesel can be integrated into existing diesel tanks and dispensers.

To learn more, visit optimustec.com.

—Story and photos courtesy of Optimus Technologies



International RH (Regional Haul) Day Cab truck equipped with Optimus' Vector System and operating on B100 at -30 °F.





armers are no strangers to military service. According to the Census of Agriculture, 9% of U.S. farmers served in the military while 15% of all farms had a producer who serves or had served in the military.

Oakes farmer Jeremiah Undem enlisted in the U.S. Army as a military police officer, committing to a five-year term from 1996 to 2001. He continued his service in the North Dakota Army National Guard from 2001 to 2002.

"I enlisted in the Army with no real thought process behind it," Undem admits. "I had some interest in law enforcement, which is why I chose the branch that I did."

Undem's enlistment led to a six-month deployment to Bosnia in 1998. Undem also went to Airborne School, Air Assault School and Jumpmaster School as well as participating in other leadership courses.

"I went in as an E-1 (private) and came out as an E-5 (sergeant)," Undem says.

While he had originally planned

to be in the Army for 20 years, when it was time for him to reenlist, Undem describes how he convinced himself that, in order to be successful, he needed to go to college. He left the Army and enrolled at North Dakota State University, where he earned a bachelor's degree in landscape architecture with a minor in natural resources.

Undem worked in the landscape architecture profession for about two years. During that time, his father-in-law talked with him about becoming part of the farm.

"There was no one in the immediate family that was going to take on the farm, so I became the fifth generation on the farm, through my wife," Undem explains.

Prepared for Service

While working as a farmer, Undem has also served on different boards, most recently joining the North Dakota Soybean Council.

"All the things that I've done all tie back to my original decision to join the military and go through leadership classes and all the things I've done," Undem states. "Military service taught me to think for myself, to ask questions, be inquisitive, be curious. If I have an opinion or if I think something's right or not, to actually bring it up and ask the question and get clarification."

Undem explains how, while military service sometimes requires blindly following orders, he also learned that he needed to understand the whys behind a decision.

"I try to live my life asking the question of why and not taking my eye off the big picture, like how an action benefits the whole," Undem maintains. "I'd say that was first instilled in me through the military. It gave me the perspective to stop looking right in front of your nose and try to see the whole picture and get the best perspective you possibly can."

Undem asserts that one of the



North Dakota Soybean Council Communications Director Suzanne Wolf served in the U.S Army from 1996 to 2000.



best things to come from his military service is the lifelong friendships he made. He still talks to some of his friends from the Army, but over the years, his service has taken on greater meaning.

"There's the pride and the honor in serving your country," Undem contends. "It was an honor to do it, and I was proud to do it. Maybe at the time when I first enlisted, it wasn't a big thing because that's not what my intention was, but now, looking back at it, that service helped form me as a person."

A Family Tradition

After graduating from California State University, Chico, North Dakota Soybean Council (NDSC) Communications Director Suzanne Wolf had the itch to travel and to find adventure. She was hesitant when her mother suggested the military. Wolf's grandfathers and three uncles had served, so she was no stranger to military life. A summer with an 80-mile round-trip commute for an unpaid internship changed her mind.

"I served as a military intelligence analyst in the U.S. Army from 1996 to 2000, where I provided critical information on enemy forces and potential conflict zones, analyzed and distributed tactical intelligence, and managed intelligence records and files," Wolf explains.

Wolf's military training took her to South Carolina, Arizona and Texas. She was stationed in South Korea for a year and completed a brief tour in Kuwait.

"It's fascinating how serving in the military forges strong bonds and lasting relationships through both the challenging times and the good times," Wolf says. "When you're far from home, your fellow soldiers become like family. The people I met and served with are the true highlight of my military experience."

When she joined the Army, she hoped to be stationed in Germa-



Oakes farmer Jeremiah Undem says it was an honor to serve his country and military service helped form him into the man he is today.

ny. However, a year-long tour in South Korea ended up being one of the best times of her life.

Because of her military family, Wolf was already a proud American before she joined the Army.

"After serving, my pride and gratitude for being American grew even stronger," Wolf shares. "We have the finest men and women serving in our military, and I am proud to be a veteran."

She also served in the North Dakota Army National Guard from 2000 to 2004.

Wolf describes how she tries to instill a strong sense of American

pride as well as respect for our country, our service members, and our flag in her two sons.

"I frequently remind them of how blessed they are to be Americans," Wolf adds.

Wolf graduated from college with a degree in journalism, focusing on public relations, but she wasn't able to secure a journalism position in the Army. After leaving the U.S. Army, she wanted to return to the communications and public relations field. When she moved to North Dakota in 2000, she discovered a job opening with the North Dakota Soybean

Council as the communications director.

"The rest is history. I've thoroughly enjoyed working with and for farmers," Wolf says. "Farmers share many qualities and values as soldiers: they're hardworking, humble, patriotic, honest, and respectful. It's been a real pleasure to work alongside them."

With Veterans Day on November 11, the North Dakota Soybean Council salutes the brave men and women who have served, along with the families who support them.

—Story by Daniel Lemke, photos by staff







g-based biofuels, including biodiesel, renewable diesel and sustainable aviation fuel, have the potential to strongly benefit the nation's low-carbon fuel goals while providing some enticing opportunities for farmers. However, the future success of those fuels often depends more on policy decisions than on the quality of the fuels themselves.

Several looming actions will likely have far-reaching effects on agriculture's ability to capitalize on low-carbon fuel opportunities.

The 45Z Clean Fuel Production Credit is a tax credit in the Inflation Reduction Act that encourages the domestic production of clean transportation fuels. The credit applies to fuels produced after December 31, 2024, and sold before December 31, 2027. Earlier this year, the Treasury Department provided guidance about the 40B tax credit which was valid to produce transportation fuels through 2024.

Farm groups were unhappy with that guidance because biofuel producers could only receive additional tax credits by purchasing soybeans from farmers who used both no-till practices and cover crops. Those demands effectively shut out many soybean farmers from being able to supply approved feedstocks. Updating what practices can be used to lower a fuel's carbon-intensity score is a focal point for organizations such as the American Soybean Association (ASA).

"The U.S. Department of Agriculture (USDA) just concluded a comment period on a request for information on how it should quantify and qualify different climate-smart agriculture practices for biofuel programs," says Alexa Combelic, the ASA director of government affairs. "This review goes beyond 45Z to really any biofuels program, state, federal or international, but it truly was meant to inform some of the ways in which different farming practices could benefit through this program."

Combelic states that, when the Treasury Department was creating guidance for the 40B tax credit, the agency had pushed back on the true carbon-intensity reduction that could be realized through various farming practices. The ASA disagreed with the need to bundle conservation practices for soybean production because

bundling limits who can qualify. The organization is pressing the Treasury Department to recognize more conservation practices, not just cover crops and no-till practices, in the 45Z guidance.

"We would like to see a suite of practices that's much broader and to allow folks to pick and choose practices rather than needing to bundle practices together," Combelic explains.

Because the U.S. Department of Agriculture (USDA) is supporting a range of climate-smart programs for farmers, additional data about how those practices lower agriculture's carbon-intensity scores are being gathered. Combelic describes how combining that information with what the USDA already collects through the Natural Resources Conservation Service will, hopefully, convince the Treasury Department to expand the practices which farmers can employ to produce feedstocks that will qualify for the 45Z tax credit.

Unintended Consequences

The Treasury Department's 40B tax credit has triggered some unexpected developments. The agency's model showed a 55%

carbon-intensity reduction for soybean-based sustainable aviation fuel. Meanwhile, sustainable aviation fuel made from used cooking oil was credited with an 80% carbon-intensity reduction. Used cooking oil is considered a waste product, so it carries certain advantages with biofuel programs.

"When you have that huge disparity, it creates this perverse incentive to import feedstocks for biofuels rather than use domestic feedstocks," Combelic asserts.

Biofuel producers have recognized the opportunity and are importing huge volumes of used cooking oil from foreign sources.

"The concern is really all the investment going into soybean crush for renewable diesel is now being undercut by the imports," says ASA Economist Scott Gerlt. "When the Environmental Protection Agency (EPA) set the blending levels, they tried to calculate what they thought imports of feedstocks would look like. They very much underestimated it. I don't mean that as a criticism of EPA because I don't think anyone was looking at this coming down the road. What that means is what EPA assumed would be filled by soybean oil is now being

filled by imports."

Gerlt contends that the demand for used cooking oil is primarily coming from biofuel producers in the Gulf and on the West Coast. However, the imported feedstocks erode the demand for soybean oil, including the oil produced at processing plants in North Dakota.

The ASA's position, and the view of many farm and biofuel groups, is that the 40B tax credit was intended to benefit and to support the U.S. economy and the U.S. biofuel value chain. What the policy did was create a shift in demand from domestic feedstocks to imported feedstocks.

"The policy removed the ability for imported biofuels to access the tax credit, but what we're seeing is the biofuels aren't being imported; the feedstocks for these biofuels will be," Combelic states. "The ASA is trying to get changes made to this tax credit so that it only benefits biofuels that are produced using domestic feedstocks."

Combelic explains that the Renewable Fuel Standard (RFS) did not account for the huge surge of imported waste feedstocks when the EPA developed its volumes for the years in the current renewable volume obligation. States like North Dakota have seen infrastructure investments made across the entire value chain to support an increased soybean-oil demand for domestic biofuels.

"If you want to support domestic fuel security and rural economies, you need to look at this carefully and make changes so that you're buying your feedstock from U.S. suppliers and not from China or Malaysia," Combelic states.

There is no federal standard defining used cooking oil. Domestic biofuel proponents fear that, unless policy is changed, it will continue creating an increased demand for imported products, and the tax credit may cause countries to turn cooking

oil over faster than it needs to because they're making money with the waste product.

Combelic says that the ASA is expecting new guidance for the 45Z tax credit sometime this winter.

RFS and CARB

While attention is being given to guidance for the 45Z tax credit, Combelic explains how the most important program that spurs demand for biofuels is the RFS. The volumes that are set through the RFS indicate where the demand will be.

"The EPA is updating their renewable volume obligations for 2026 and beyond," Combelic asserts. "They (the EPA) were supposed to do that in November, and they've pushed it back, so we'll see a draft of that likely in March."

The California Air Resources Board (CARB) is going to update its Low Carbon Fuel Standard (LCFS) in November, according to Combelic. California is, by far, the largest consumer of renewable diesel in the United States because of the demand created through the state's low-carbon-fuel credit system. Combelic describes how the California standard is based on a carbon-intensity score basis. As is the case with the current 40B tax credit, it's more beneficial to create a fuel by utilizing used cooking oil than by utilizing domestic feedstocks such as soybean oil.

"If you have an LCFS credit stacked on top of a tax credit, it does create a huge demand for imported waste feedstocks over domestic feedstocks. Our goal here as an industry is to not become the backfill feedstock," Combelic maintains. "We want to continue to be the primary feedstock for biofuels in all of these programs."

—Story and photo by Daniel Lemke

The Used Cooking Oil Challenge

Imports of used cooking oil (UCO) have exploded in the past three years as biofuel producers tap into tax credits that reward producers for using the waste oil. UCO is oil that is left over from cooking, particularly in fryers.

Because UCO is considered a waste product, it carries some advantages in biofuel programs. California consumes almost all domestically produced renewable diesel. Its Low Carbon Fuel Standard gives UCO a very low carbon intensity score. The carbon intensity is essentially allocated to the frying use of the oil, leaving the UCO with a minimal carbon intensity. The type of base oil does not matter since it was assumed the UCO would be destined for disposal. Since low carbon intensity feedstocks generate more credits in California's program,

biofuels produced with UCO are more valuable.

Not surprisingly, import growth is pronounced for UCO, which has exceeded the Environmental Protection Agency's (EPA) predictions, pushing out corresponding amounts of domestic feedstocks. Imports of UCO have gone from less than 300 million pounds in 2021 to over 3 billion pounds in 2023, according to the American Soybean Association (ASA).

The shipments are primarily

from China, which before 2023 sent almost no UCO to the United States. China has been the world's largest UCO supplier the past several years. In 2023, the U.S. imported about 40% of China's world imports. Canada is the next largest supplier to the U.S.,

—Story continued on page 18

U.S. Impor	ts by Top	Suppliers
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	2019	2020	2021	2022	2023		2019	2020	2021	2022	2023
China	843	745	1096	1563	1819	China	1	0	0	0	718
Malaysia	875	1255	764	715	905	Canada	71	72	108	232	268
Indonesia	800	762	1067	519	371	Australia	3	0	0	97	93
Canada	129	142	167	277	282	Chile	8	6	8	3	86
United Kingdom	125	183	158	247	219	New Zealand	0	0	0	35	70
United States	463	512	539	380	189	Columbia	0	0	3	10	41
Australia	32	24	32	121	127	Mexico	1	2	3	10	21
Japan	95	91	128	123	123	Germany	0	0	0	0	16
Chile	30	44	80	68	102	Netherlands	0	0	0	0	15
Netherlands	61	47	37	49	99	Indonesia	0	0	0	0	12
Russia	63	101	91	85	89	Malaysia	0	0	0	0	12
Saudi Arabia	85	73	78	92	87	United Kingdom	0	0	0	0	11

Legislative Liaison Left His Mark

or the past eight years, Phil Murphy walked the halls of the state capitol in Bismarck; attended hundreds of meetings; and had an untold number of conversations with township, county, and state officials on behalf of North Dakota's soybean farmers. Murphy, who served as the North Dakota Soybean Growers Association's (NDSGA) legislative liaison, retired from the organization at the end of June.

Murphy's tenure as the NDSGA legislative liaison began in 2016 with a call from then legislative director Scott Rising. Murphy had previously taught for more than 30 years in the Mayville-Portland school district. He was also a North Dakota state senator from 2011 to 2016.

"When Scott called to gauge my interest, I immediately said 'yes," Murphy explains. "I felt like I had some things to give. I still had the energy and had some expertise that I'd picked up working with water issues and just public issues in general. It seemed like a good fit because I still knew a lot of people and had a good relationship with people on both sides of the aisle."

In addition to serving in the state legisla-

ture, Murphy was also a township officer and a volunteer firefighter.

Murphy described how, over the years, there were numerous issues that took a lot of attention and energy, including water, transportation and taxes. Issues which were important to Murphy and the NDSGA often extended beyond what would be considered agricultural issues.

"Farmers are citizens, so all kinds of issues affect them, from the seeming obscurity of uniform septic system efforts to the obvious importance of water and road needs impact the quality of life for their families, so farmers have a stake in what happens," Murphy asserts.

Most of Murphy's attention was focused on policy, which he had done as a legislator.

"It was really fun trying to make policy from a lobbyist viewpoint," Murphy states. "I enjoyed the perspective of seeing things from a different angle instead of the policy-maker standpoint, so I kept learning; there was no doubt about that."

Whether as a legislator or a lobbyist, Murphy tried to remember why he was involved with policy work in the first place.

"Many legislators had said to me that they



NDSGA Legislative Liaison Phil Murphy has retired after serving the organization for eight years.

did it for the relationships," Murphy recounts. "They did it for the people that they came to know and came to cherish. That's the way it ended up for me. I met a lot of people in the legislature, but I got to know more people in the next seven years working as an educator for the soybean growers. That's the bittersweet part. I'll miss the people a lot."

Murphy expects that his retirement will include time on the golf course; in the field hunting birds and big game; and spending time with his family, including four young grandchildren.

—Story and photos by Daniel Lemke

—Story continued from page 17

which is where it sends many of its exports. Malaysia and Indonesia are the second and third largest UCO world exporters, but the U.S. has purchased little directly from those countries.

The timing of the large jump in imports of Chinese UCO during mid-2023 corresponds to the period when Germany asked the European Union (EU) to investigate biofuel imports from China that were labeled as made from waste oils. The EU also provides incentives for biofuels made from waste oils, and Germany raised concerns about the authenticity of imported biofuels.

European imports of China's used cooking oil fell by almost

600,000 metric tons in 2023 compared to 2022 while imports to the U.S. increase by over 700,000 metric tons. What was going to the EU was largely rerouted to the United States where concerns over the integrity of UCO imports had not been raised.

Even though there is no federal standard to define UCO, policies have often created an opportunity to capture higher values for imports labeled as UCO, displacing opportunities for domestic feedstocks like soybean oil. ASA Chief Economist Scott Gerlt says EPA does require that biofuel producers maintain chain of custody data for every gallon of UCO, both domestic and imported origin, but EPA does not audit the UCO chain of

custody for either until an enforcement action has been initiated.

"There are feedstock credibility issues with used cooking oil," Gerlt says. "There have been allegations of fraud. Nothing's been proven, but it's very hard to prove at the same time. There are other concerns beyond outright fraud, such as emptying fryers more quickly and cycling out that oil more quickly, which would still technically be used cooking oil, but it's not really in the spirit of low carbon intensity at that point."

In August, EPA confirmed that it has been auditing supply chains of at least two U.S. renewable fuel producers amid concerns of fraudulent feedstock usage. Farmer groups and lawmakers have also raised concerns that some Chinese UCO supply could be tainted with virgin palm oil, a product linked to deforestation.

"Are there ways to require better verification or to start establishing standards for UCO," Gerlt questions. "ASA supports the establishment of standards because there are none to define what used cooking oil actually is. Tests could be run on the oil and having a standard to compare them against would be helpful."

Gertl estimates that federal policy rewarding the use of imported UCO has displaced over 500 million renewable diesel gallons worth of domestic feedstock and that total could rise to a billion or more gallons in 2024.

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hen firefighters respond to an emergency call, they have to deal with a fire's immediacy and danger. Rarely do they consider the potential long-term threat to their own health that could be caused by some of the products used to fight fires.

Since the 1950s, polyfluoroalkyl substances (PFAS), commonly called "forever chemicals," were used to put out fires, repel oil and water, reduce friction, and more

for a wide range of products. The PFAS can leak into the environment where they are made, used, or spilled. Exposure to PFAS is linked to several adverse health effects, including certain cancers and thyroid dysfunction.

A new soy-based product is showing tremendous promise for suppressing fires without putting firefighters at risk from chemicals.

SoyFoam™ is a wetting and smothering agent that is capable of extinguishing Class A (ordinary combustibles) and Class B (flammable liquids) fires. It is certified as 84% biobased through the U.S. Department of Agriculture's BioPreferred® program. SoyFoam™ is also certified as readily biodegradable because it is made with soy grown in the United States. It's also the first and only firefighting foam to be GreenScreen Certified® at the Gold™ level.

Made by Cross Plains Solutions, SoyFoam™ was developed with assistance from soy checkoff and United Soybean Board's (USB) funds. The North Dakota Soybean Council (NDSC) is also helping to promote the product's use among the state's fire departments.

"We are taking a multi-pronged approach to it," says NDSC Outreach and Engagement Director Shireen Alemadi.

"Some departments have reached out, and we are connecting them with Cross Plains directly to learn more about the product," Alemadi states. "The NDSC board has approved some funds to help North Dakota fire departments try the foam."



 $\mathsf{SoyFoam}^\mathsf{m}$ is a soy-based fire suppressant used on a range of fires.



Firefighters from Casselton participated in a SoyFoam™ demonstration at the Chippewa Valley Technical College in Eau Claire, Wisconsin.





The North Dakota Soybean Council is making pails of SoyFoam™ available to North Dakota fire departments.

Interested departments can get a 5-gallon sample at no cost from the NDSC. The foam is mixed with water like other firefighting foams. It is compatible with existing foam inductors and aerating nozzles, so it doesn't require staffing or equipment changes to a fire department's current standard operation procedure for Class A and Class B fires.

Demonstrating its Value

In August, a group of North Dakota firefighters and farmers took part in the Farm to Fire 2 program held at Chippewa Valley Technical College in Eau Claire, Wisconsin. Attendees saw presentations about the science of SoyFoam™, took a tour of the facility where SoyFoam™ is being tested, and participated in demonstrations with the product in action for a variety of scenarios.

"It was very beneficial to hear about and see all of the different types of foam systems different departments have run SoyFoam" through with great results and no issues," explains John Hejl, Casselton Fire Department chief. "It works very well on all Class A materials and on hydrocarbon pool fires."

"This product works fast and safely extinguished all kinds of fires from petroleum products to wood," adds Chris Prochnow, Casselton Fire Department captain. "I was impressed with how the foam lasted on the ground even with wind and a sunny day. It looked a lot like

a blizzard was going on. It stuck to the buildings and to the wood that was on fire and coated every surface nicely. I can see this being used in our department shortly."

Not only were the firefighters impressed with the soy-based product, so were the farmer leaders who are responsible for aiding in the product's development, including Hillsboro farmer and USB director Cindy Pulskamp.

"Cross Plains Solutions has come forward with a product that uses soybean meal, turning it into flour, and making a fire suppression product that is safe for the environment and safe for the people that are using it," Pulskamp asserts. "That's especially positive when we hear all of the negative things about PFAS and the dan-

gers to firemen, including cancer."

Former NDSC director; Sheldon, North Dakota farmer; and volunteer firefighter Dan Spiekermeier also attended the SoyFoam™ demonstration. He describes how it's an important factor that the product is biodegradable and made from renewable products such as soy.

"The product is 50% soybean, up to almost 85% natural, and it's all biodegradable," Spiekermeier contends. "I believe this product could have a significant impact if it's adopted nationwide and globally. Investing research dollars to help prevent cancer in firefighters, 20 or 30 years after exposure to potentially harmful firefighting foams, is incredibly important. Saving lives and preventing cancer is a big deal."

Investing in products such as SoyFoam™ that can help fight fires while being safer for firefighters is especially intriguing because many rural fire departments are comprised of farmers.

Pulskamp highlights that the potential of this fire suppressant represents another innovation placing soybeans and soybean products in new and exciting applications.

"I've used a variety of soy-based

products, from my tennis shoes and truck tires to turf, food products, protein, and now even fire suppression," Pulskamp explains. "What right now can't a soybean do? I'm not sure that there's an answer to that. It's exciting being a farmer growing this product because, right now, the sky's the limit."

"I think the investments that we've made into research has made a big difference in so many different aspects of our lives," Spiekermeier says, "It's amazing."

The value of investing in safer, biodegradable firefighting products isn't lost on the people who may benefit most.

"Thank you to USB and state soybean boards," Hejl states. "Your checkoff dollars are being put to good use."

Questions can be directed to Shireen Alemadi at (701) 566-9300 or salemadi@ndsoybean.org.

—Story by Daniel Lemke. Photos by staff and United Soybean Board

To learn more and register for NDSC's offer of a free 5-gallon bucket sample of SoyFoam™ for
North Dakota fire departments, scan





North Dakota firefighters and soybean industry representatives traveled to Eau Claire to learn more about SoyFoam™ and its potential.



Soy Connext 2024 Positions North Dakota Farmers to Increase U.S. Soy Exports



he North Dakota Soybean Council (NDSC) was a major sponsor of Soy Connext, the Global U.S. Soy Summit, in San Francisco, California, August 19-21.

The summit brought together over 400 international soy customers from 62 countries, including Bangladesh, China, Egypt, Indonesia, Japan, and Mexico, for learning and networking opportunities. Of those customers, 40% attended their first Soy Connext.

Many individuals participated in a trade team tour, visiting farms and soy supply chain partners specific to their business before or after Soy Connext.

"Nearly 60% of U.S. soybean production is exported in any given year, and for North Dakota farmers, that percentage is even higher," says Josh Gackle, a Kulm, North Dakota, farmer who currently serves as the president of the American Soybean Association (ASA). "Expanding existing

markets and identifying and growing new markets is critical to our success. At the same time, U.S. soy customers around the world are grateful for the relationship and opportunity to partner with U.S. farmers. They understand the value of the sustainable, high-quality and reliable product we provide."

Gackle was one of several North Dakota farmers who attended Soy Connext 2024. Throughout the summit, the U.S. Soybean Export Council (USSEC) tackled tough questions and shared data to elevate a preference for U.S. soy products among global customers. Speakers and sessions aimed to differentiate the quality and value of U.S. soy from other nutrition and vegetable oil products. Compared to recent years, current prices allow international customers to benefit from



The Chinese guests experienced the exceptional quality of North Dakota soybeans up close.



The Chinese group toured Minn-Kota Ag Products Grain Terminal, where they observed the process of shipping soybeans to their final destinations.





North Dakota farmer-leaders and staff attended Soy Connext in August. From left to right: USSEC Director Scott Sinner, Casselton; ASA President Josh Gackle, Kulm; NDSC Chairman Jim Thompson, Page; USB and USSEC Director Cindy Pulskamp, Hillsboro; NDSGA President Justin Sherlock, Dazey; NDSC Executive Director Stephanie Sinner; and NDSC Director JP Lueck, Spiritwood.

the many advantages of U.S. soy.

"There seems to be a newfound eagerness from international customers to buy U.S. soy," adds Justin Sherlock, a Dazey farmer who is the president of the North Dakota Soybean Growers Association (NDSGA). "I've talked to customers who are first-time buyers of U.S. soy and several who are coming back as repeat buyers. The current pricing opens the door for cost-competitiveness, and I am optimistic that will lead to long-term business opportunities."

"We've seen a shift with more crush plants coming online, so we can crush about half of our state's soybean crop," asserts Jim Thompson, who farms near Page, North Dakota, and serves as the NDSC's chairman. "We are still a reliable and efficient supplier of whole soybeans, but the soybean meal resulting from domestic crush plants makes us a global competitor with that product as well. We have to develop partnerships in world markets to have some diversity for marketing our soy. The customers here recognize our quality."

Supporting North Dakota's need to move soybean meal overseas, one of the sessions discussed the value of adding U.S. soy to animal and aqua feeds by using some modeling data that quantify the value of the nutritional package

delivered by soybean meal from U.S. soy as a feed ingredient.

During the session, data modeling clearly showed lower greenhouse gas emissions when using U.S. soy compared to soy of other origins.

Global U.S. soy customers and supply chain leaders appreciate the knowledge shared at Soy Connext, but they value the unparalleled networking even more. They are grateful to connect with farmers, visit farms, and see firsthand the logistics that make U.S. soy incredibly reliable.

"I love sharing about my farm and answering questions," states Cindy Pulskamp. She farms near Hillsboro, North Dakota, and serves as a director for the USSEC and the United Soybean Board (USB). "Many of our international customers are interested in the details of how soybeans are raised and delivered to them. That was a topic of conversation during breakfast with the delegation from China during Soy Connext. Then, the following week, a segment of that group came to North Dakota to see those details firsthand."

Prior to USEEC's Soy Connext Summit, from August 15-17, NDSC Executive Director Stephanie Sinner met with trade teams in Portland, Oregon, and Vancouver, Washington. The teams, consisting of buyers from the Philippines, Thailand, and Vietnam who import U.S. whole soybeans and soybean meal, toured United Grain and Kalama

Export Company to gain insights into the export facilities and capabilities in the Pacific Northwest, a key region for exporting North Dakota soybeans.

On August 26, following USSEC's Soy Connext Summit, a trade team of Chinese soybean buyers visited the Davenport, North Dakota, family farm of NDSGA Director Stephanie Cook. There, they received an update on the current crop and learned about the NDSC's efforts to support and maintain trade. Then, the group toured the Minn-Kota Ag Products Grain Terminal, a grain elevator with a shuttle loader. The buyers learned how the rail infrastructure in North Dakota allows soybeans to move efficiently from farms to ports in the Pacific Northwest and then on to China.

"NDSC was proud to host international guests and highlight the exceptional quality of North Dakota soybeans and the commitment of our farmers," says Jena Bjertness, NDSC director of market development. "The interactions between the soy value chain and international customers help strengthen relationships, trust and understanding for North Dakota and U.S. soy."

—Story courtesy of the USSEC, photos by staff and the USSEC



At Soy Connext, ASA President Josh Gackle from Kulm participated as a panelist, discussing this year's crop, sharing insights on evolving on-farm practices, and explaining the factors influencing those decisions.



NDSU Welcomes New Staff

Dr. Ana Carcedo, NDSU Extension Broadleaf Agronomist

Ana Carcedo, Ph.D., joined the staff of North Dakota State University (NDSU) in July 2024, filling the role of Extension broadleaf agronomist.

Carcedo grew up in an agricultural area of Argentina. While not from a farm herself, all of Carcedo's friends farmed, which increased her interest in agronomy.

"When I had to decide what I would study, it was a really easy choice for me," Carcedo recalls. "As soon as I started studying agronomy, I just fell in love with it."

Carcedo earned her Ph.D. in Argentina, working with crop modeling and exploring climatic influences, including drought. She did her post-doctoral work at Kansas State University, where, besides working with Kansas farmers, she also assisted with a United States Agency for International Development (USAID) program which helps farmers in Senegal, Cambodia and Bangladesh. That work introduced her to very different types of cropping systems than she'd experienced in Argentina or Kansas.

Carcedo was attracted to NDSU's broadleaf specialist position because of the opportunity to work with a wide range of crops.

"Here in North Dakota, we have such a diversity of crops, and after my experience working with the USAID project, I love working with diverse cropping systems," Carcedo says. "It's not



Dr. Ana Carcedo is the new broadleaf agronomist at NDSU.

easy to be a farmer here. I love to face the challenges that the diversity of environments and crops brings to this position. Helping farmers is something that really motivates me."

Carcedo's position is mostly Extension, but she contends that Extension doesn't exist without research. She will be working with farmers to provide the results for NDSU research that can help them with the production of broadleaf crops such as soybeans, canola, sunflowers, flax and more.

While she'll be providing information to North Dakota farmers, Carcedo wants to hear from farmers about their needs and production challenges.

"I need the farmers' input. I want to get to know them and get to know what they need. I'm really looking forward to that," Carcedo explains. "I already have been in contact with some farmers, but I want to talk with more of them to solve their challenges."

Carcedo can be reached by email at a.carcedo@ndsu.edu.

Dr. Chandler Gruener, NDSU Extension Soil Health Specialist

Chandler Gruener, Ph.D., has joined the staff of North Dakota State University's (NDSU) North Central Research Extension Center (NCREC) in Minot as the new Extension soil health specialist. Gruener, who grew up in Missouri, received his undergraduate degree from the University of Missouri before earning his master's degree from the University of Arkansas. Most recently, Gruener received his Ph.D. in crop and soil sciences from the University of Georgia before joining the NDSU staff in May.

Even though much of Gruener's experience came from working with farmers in the South, the principles of soil health are the same regardless of geography.

"How farmers operate is a little bit different, but a lot of the same on-farm goals and ideas work similar, like one method is specialty cover cropping systems," Gruener says, "You just have to change the perennial cover crop that's more suited to this area, which I've been starting to identify. I've been here a few months now, identifying perennial cover crops that will work in the area and talking to other researchers and producers."

Gruener will work with NDSU Extension agents and other specialists to improve soil health while collaborating with industry



Dr. Chandler Gruener is the new soil health specialist at the NCREC in Minot.

partners and farmers to provide soil health management education and support. Gruener expects that the support will take many forms.

"I'm conducting research trials, interfacing with farmers, speaking at field days, helping farmers, doing a variety of things," Gruener states. "I'm going out and visiting farms if growers have questions or issues that are going on and also working with the county Extension agents on the different issues they're seeing or feedback they're getting."

Gruener will work with farmers to improve soil health, including helping to measure the soil's organic matter and fertility as well as setting up on-farm tests to experiment with various practices. He'll also be conducting his own research at the NCREC while collaborating with other NDSU researchers on projects around the state to improve and to protect the state's soil resources.

"Many farmers are worried about their topsoil loss; that (concern) goes into the principles of keeping the ground covered, keeping a living root to help keep soil in place," Gruener explains. "There are other practices besides cover crops, including reduced tillage and selective tillage on areas just to help soil aggregation loss. Loss from erosion from wind and water is a common issue that many farmers have identified, and they want to figure out ways to help mitigate that, so they have topsoil for the future."

Gruener can be reached by email at chandler.gruener@ndsu.edu.

—Story by Daniel Lemke, photos courtesy of Ana Carcedo and Chandler Gruener





or years, soybean marketing in North
Dakota used to involve either sending
newly harvested soybeans directly
to market right off the combine or
holding onto them for a few months before
marketing them during the winter. Now, more
farmers are storing soybeans for longer periods
of time, which means that storage management
is increasingly important to maintain seed
quality, especially as temperatures rise.

When trade disputes resulted in significant tariffs on U.S. soybean exports to China, soybean storage suddenly became a bigger issue. North Dakota State University (NDSU) Extension Engineer Ken Hellevang, Ph.D., went looking for information about soybean storage.

"When I started talking to storage managers and farmers, I found out that our experience really had been to grow soybeans, market them over the winter, and have stored soybeans gone by late spring, early summer," Hellevang said.
"We didn't have a whole lot of experience at summer storage. Looking through the literature, I was surprised to find that there was little research on storing soybeans in the summer."

Hellevang found that Iowa State University had published data about allowable storage time, but he wasn't sure if the recommendations in Iowa were applicable to North Dakota. Soybeans are typically stored at 13% moisture. Hellevang came up with his own data that was similar to Iowa Soybean University, but was one percentage point lower.

"That kind of pushed me towards the recommendation that we needed to store soybeans in that 11% to 12% moisture range if we were storing during the summer conditions," Hellevang asserted.

Hellevang explained how NDSU research funded by the North Dakota Soybean Council

started showing allowable storage time variability based on a soybean variety that differed from both the Iowa State University and existing NDSU recommendations. Hellevang sought and received funding from the United Soybean Board (USB) to expand the research.

The USB-funded study evaluated the effect of typical storage temperatures (-15 °C (5 °F), 4 °C (40 °F) and 22.5 °C (72°F)) and soybean moisture contents (11%, 13%, 15% and 17% wet basis) on the allowable storage time of three soybean varieties with relative maturity groups (0.3, 1.3 and 2.3) for nine months. The quality parameters used to determine the allowable storage time were germination, fungal development, and oil quality.

According to results from the USB-supported research, Hellevang and researchers Ibukunoluwa Ajayi-Banji, Ph.D., and Ewumbua Monono, Ph.D., developed new recommendations for allowable soybean storage time.

"For each of the varieties, we looked at the allowable storage time based on each quality parameter evaluated," stated Ajayi-Banji. "The shortest allowable storage time from each variety per quality parameter evaluated was the basis for the guideline in developing the final table. Irrespective of the different varieties and relative maturity groups used in the research, our final allowable storage time table accommodates the variation in the research data."

The updated research tables compared the new information from the USB-funded study to the previous NDSU and Iowa State University recommendations.

The storage recommendations for cold months remained largely the same. However, as temperatures and moisture contents rise, the recommended storage times before the soybean quality deteriorated were reduced.

"This should definitely be used as an estimate," Hellevang said. "As it would be expected, grain doesn't store as well in warmer conditions, and it doesn't store as well at higher moisture contents. We can store soybeans in that 13% to 14% moisture range over winter as long as it's cold, but if we're going to store into the spring and summer temperatures, we really need to be down to somewhere between 11% and 12% moisture to maintain the quality."

The full research report will be available on the NDSU Ag Hub website: ndsu.ag/soybeanstorage.

—Story by Daniel Lemke, photo by Wanbaugh Studios, charts courtesy of NDSU

Estimated Allowable Storage Time (Days) Comparison for Soybeans

Temperature		15°C (4°	F)	4°C (40°F)			22.5°C (72°F)			
Existing/new AST tables	USB	NDSU	ISU	USB	NDSU	ISU	USB	NDSU	ISU	
11%	270	300	300	270	300	300	240	200	300	
13%	270	300	300	240	300	300	120	70	150	
15%	270	300	300	120	200	270	30	30	60	
17%	270	300	300	60	90	200	14	14	20	

Estimated Allowable Storage Time (Days) for Soybeans

Moisture Content	30°F	40°F	50°F	60°F	70°F	80°F
11%	300*	270	260*	250*	240	200
13%	270	240	200*	160*	120	100*
15%	200*	120	90*	60	30	14*
17%	150*	70	50*	30*	14	7*

*Values are extrapolated from known values at 40 and 70 degrees. Allowable storage time is the storage period before quality loss is expected to affect grain quality. Airflow through the grain permits maintaining the grain temperature but does not extend the allowable storage time beyond that listed in the table. Allowable storage time is cumulative. If 15% moisture soybeans were stored for 45 days at 50°F, one-half of the storage life has been used. If the soybeans are cooled to 40 degrees, the allowable storage time at 40 degrees is only 60 days, one-half of 120 days shown on the chart.

Supporting the Blue Jackets

wo of every nine high school students in North Dakota sport the iconic blue, corduroy jackets that symbolize their participation in FFA (Future Farmers of America). Those students are far from alone. FFA recently hit a membership milestone of 1,027,273 members from over 9,200 chapters across the U.S., Puerto Rico and the Virgin Islands, making FFA the largest student-led organization in the country.

For many years, the North Dakota Soybean Council (NDSC) has supported FFA. In 2023, the NDSC provided a New Chapter Grant through the North Dakota FFA (NDFFA) Foundation to assist with the startup costs associated with establishing a new chapter.

"FFA is such an important part of the agriculture community in North Dakota, and many producers are alums of the program," says NDSC Outreach and Engagement Director Shireen Alemadi.

"We know supporting FFA means supporting future leaders and the future of ag," adds NDSC Communications Assistant Katelyn Duchscher. "These members

are the future producers, researchers and leaders of the agriculture industry. By supporting chapters in North Dakota, we are ensuring that students involved in these chapters will make a positive impact on North Dakota agriculture in the years to come."

The NDSC supported Hankinson's new FFA chapter in 2023-2024.

Starting a new FFA chapter can be expensive because there are costs that chapters incur. New FFA chapters receive \$1,500 for discretionary spending along with seven FFA jackets, a chapter flag, an American flag and all officer stations.

"The New Chapter Grant is given by the NDFFA Foundation to new chapters to help cover some of the costs that they face," Duchscher states. "This means chapters can allocate more funding to sending students to career and leadership development contests, leadership conferences, chapter retreats and other activities without having to worry about covering chapter startup costs."

The NDSC sponsorship means that new students can experience the benefits and opportunities which FFA provides.



NDSC Treasurer Dallas Loff from Wahpeton visits with an FFA member in Hankinson.

"These types of partnerships are imperative," explains NDFFA Foundation Executive Director Laiken DeMorrett. "Support from commodity groups and trade organizations like NDSC bolsters the credibility of the NDFFA Foundation and further validates our mission to grow leaders, build communities and strengthen agriculture. Our FFA members will eventually become the employees of these organizations, or the members being served by the organizations, and partnering with the NDFFA Foundation allows

those relationships to start early."

DeMorrett illustrates how, because FFA advisers already have their hands full starting a chapter, the New Chapter Grant removes some barriers and stress, allowing the adviser and students to celebrate the opportunity to be FFA members instead of worrying about where the resources will come from to help them get their new program off the ground.

FFA is experiencing rapid growth nationwide. Assistance from ag organizations such as the NDSC is helping support that resurgence.

"More and more, school districts are recognizing the value of agricultural education regarding career readiness," DeMorrett states. "Ag education programs provide a platform for real-world experiential learning and leadership development that make our FFA members qualified, sought-after employees. Because of that, the number of chapters continues to grow, and more schools are starting to offer middle school programs."

Currently, there are 95 FFA chapters that serve nearly 7,700 students across North Dakota.

—Story by Daniel Lemke, photos by staff



On August 28, Haley McClue (far left) and Shireen Alemadi (second from left) of NDSC presented a sponsorship plaque to the Hankinson FFA chapter. NDSC is proud to support the next generation of agricultural leaders.

North Dakota Soybean Council Sponsors Red River Market: A Day of Celebration and Education



n July 27, 2024, the Red River Market in Fargo, North Dakota, welcomed the North Dakota Soybean Council (NDSC) as the event's sponsor, highlighting the versatility and importance of soybeans.

The NDSC's booth attracted visitors with a variety of soy-based products, including delicious Chocolate Chip Soy Nut Cookies, innovative sustainable goods, and a fun soy trivia wheel. The market also featured a live cooking demonstration by Chef Benjamin Whitmore from the North Dakota State College of Science (NDSCS) culinary arts department. He prepared Edamame Corn Succotash and shared insights about the health benefits of soy foods.

The event was a huge success, attracting over 400 visitors to NDSC booth's, where they expressed their appreciation for the opportunity to learn more about the diverse uses of soybeans.

To find out more about the Red River Market in Fargo, please visit redriver.market

—Story and photos by staff



Attendees had the opportunity to sample Edamame Corn Succotash.



Attendees tested their soy knowledge by spinning the fun soy trivia wheel.



The market featured a live cooking demo by Chef Benjamin Whitmore from NDSCS.



NDSC's outdoor booth highlighted the versatility and importance of soybeans to North Dakota.





Good for Your Land and Your Bottom Line

FARMER BENEFITS AND INCENTIVES



Per Acre

Financial Incentive

To help cover the start-up costs of cover crops, Farmers for Soil Health offers financial assistance of up to \$50/acre over a three-year period.



Exclusive Marketplace

Enrollment in Farmers for Soil Health provides access to an exclusive future marketplace connecting farmers to top-tier supply chain partners that are focused on sustainability.



Technical Advisor

Each state has dedicated on-theground technical advisors to provide research-based information and educational resources to aid in the transition of your field.















Fargo Area Tournament winning team – Team Ellingson: Levi Otis, Kurt Lysne, Corey Haag and Brad Abel.



hank you for making the 21st annual Fargo-area golf tournament successful! The tournament is a way for the North Dakota Soybean Growers Association (NDSGA) to say thank you to its members and supporters. Your membership dues and sponsorship of NDSGA events help to provide the necessary funds to continue policy and advocacy work in Bismarck and in Washington, D.C. We're proud of our past successes and are continually working to make things better for soybean growers throughout North Dakota.

Congratulations to our Fargo Area tournament team winners:

First Place: Team Ellingson: Corey Haag, Levi Otis, Brad Abel and Kurt Lysne.

Second Place: Team BankNorth: Matt Evenson, Derrick Rogers, Hayden Bring and Brent Thielges.

Third Place: Team Midwest Seed: Tyler Lamp, Brian Foster, Stuart Lamp and Julian Schuster.

Congratulations to the Fargo Area contest winners:

Closest to Pin #8: Andy Heflin. Longest Putt #9: Kevin Johnson. Longest Drive #1: Cory Haag.

Thank you to our Fargo Area golf tournament sponsors:

Hole Sponsors: Advance Trading, Inc.; Ag-Country Farm Credit Services; BankNorth; Bell Bank; Butler Machinery Company; Clean Fuels Alliance America; Ellingson; Equitable AgriFinance; FMC; Gateway Building Systems, Inc.; Heuer Agri Drone Services, LLC; M & M Lynnes Seed; MEG Corp. Biodiesel; North Dakota Soybean Processors; North Dakota Soybean Council; Plains Grain & Agronomy Cooperative; Proseed; Rush River Seed & Chemicals; Stantec; and Visjon Biologics.

Lunch Sponsor: Purple Wave Auction.

Lunch Sponsor: Purple Wave Auction.

Dinner Sponsor: BNSF Railway.

Golf Cart Sponsor: Prinsco Water

Management Systems.

Programs: Peoples Company.Welcome Bag: Dakota Access, LLC.Signs: D-S Beverages.

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

Two NDSGA tournaments are scheduled for 2025. The first tournament will be at the Jamestown County Club on July 22, 2025. The second one will be August 26, 2025 at the Leonard Country Club. More information is available at ndsoygrowers.com/events.

—Story by staff, photos by Addison K Creative Co.



Fargo Area Tournament second place team – Team BankNorth: Hayden Bring, Matt Evenson, Derrick Rogers and Brent Thielges.



Fargo Area Tournament third place team – Team Midwest Seed: Julian Schuster, Tyler Lamp, Stuart Lamp and Brian Foster.

Broad Coalition Opposes Measure 4

hen North Dakota voters enter their polling places this November, in addition to choosing from a slate of candidates for office, residents will also vote on a ballot measure that would abolish property tax in North Dakota.

Initiated Measure 4 would prohibit the state and local governments from levying taxes on the assessed value of a home, except for those taxes designed to pay for bonded indebtedness. The measure would not prohibit taxes levied on other aspects of a home, such as square footage. Measure 4 would require the state government to replace the local government's property-tax revenue in an amount equal to the amount of tax revenue levied in 2024.

In opposition to Measure 4, a broad cross section of more than 80 North Dakota organizations has formed a coalition called Keep It Local. Chad Oban, who chairs the coalition, says that one of the group's primary concerns is the lack of a plan to replace the revenue that is currently generated by property taxes.

'There's no plan from the proponents to replace that \$1.3 billion a year, \$2.6 billion a biennium, blowing a huge hole in the state's budget," Oban explains. "The way the measure is written, it says the state must reimburse political subdivisions at 2024 levels. That alone is about 40% of the general fund budget when you take out federal funding and special funds, and that doesn't get into the unfairness of reimbursing at 2024 levels."

The Keep It Local coalition encompasses many organizations, ranging from agriculture and energy groups to chambers of commerce, public-safety organizations, educational associations, real-estate groups, health care organizations and more. The North Dakota Soybean Growers Association is among the agriculture organizations that have joined the coalition.

"The folks who are proposing this measure fancy themselves as being very conservative, but there's nothing conservative about centralizing all decisions at the state capitol and taking it

away from our local communities and those governing boards," Oban says. "That's the exact opposite of conservative."

A second major concern with Measure 4 that was identified by the coalition centers on local control of budgets. Local governments, including cities, counties, townships and schools, rely on property-tax dollars to support critical services such as schools, public safety, road maintenance, public parks, water treatment facilities and more. Instead of local government subdivisions making decisions, funding for those services would have to come from the state.

"I live in Bismarck, and if we need to add some police officers or if we need to build a new school, it seems to me that the best people to make that determination are the people right here in Bismarck," Oban asserts. "I'm not begrudging our legislators, but it's impossible for a state legislator in Fargo to know the needs of 180 different school districts in this state. That's not what they do, and it's not what they should do. This is a very flawed measure without any plan

to replace the revenue."

Oban points out that eliminating the property tax wouldn't just affect personal property owners. Businesses and corporations, including major corporations that are based outside North Dakota, would no longer pay property taxes to the state. Those funds would likely be returned to shareholders, leaving North Dakota residents to make up the lost revenue.

According to Oban, Keep It Local coalition members didn't come together because they think everything is fine with the current property-tax system.

"That's not it at all," Oban maintains. "We just know that Measure 4 is not the right solution. When there's no plan to replace \$1.3 billion of revenue annually that goes to our schools and law enforcement and those kinds of services, it does create concern. If you talk to any legislator, they'll tell you the next session is going to be absolute chaos trying to figure out how to fund things if this measure passes."

Oban describes how a unique component of the Keep It Local coalition is that the group is comprised of a broad spectrum of people and ideologies, which is a rare thing in politics today.

"This is a very diverse coalition of ideology from right to left, but it represents the energy industry, the agriculture industry, builders, realtors, senior citizens, labor, business and everybody you can imagine," Oban states. "They're all coming together for one reason: they want to keep our community strong, and they believe that communities should control their own destiny."

To learn more about the coalition, visit keepitlocalnd.org.

—Story by Daniel Lemke





unter Gallagher of Ashley, North Dakota, is very familiar with the many avenues that are open in agriculture. Majoring in horticulture and urban agriculture at North Dakota State University (NDSU), Gallagher's interest lies in providing healthy food for the world.

"Within horticulture and urban agriculture, there are many opportunities. From working for a greenhouse with new technologies like hydroponics or vertical farming to assisting urban agriculture nonprofits that help alleviate food deserts, there are a variety of options," Gallagher says. "These interest me because creating the food that the world runs on is one of the agriculture industry's main focuses, whether in a rural or urban setting."

NDSU recently added the urban agriculture classification to the horticulture major.

"I normally think of horticulture

inherently being done in more urban settings, but that isn't always the case; it can happen anywhere. Urban agriculture specifically involves more non-traditional agricultural practices and settings," Gallagher explains. "Compared to traditional agriculture, urban agriculture can include things like greenhouses; rooftop gardens; hydroponic systems; and, in general, conducting agriculture in an urban setting or with limited space."

Gallagher, who is on schedule to graduate from NDSU in the spring of 2025, is the recipient of the 2024 North Dakota Soybean Growers Association (NDSGA) Scholarship, which is presented to the child or grandchild of an NDSGA member. The recipient must be enrolled in agriculture at NDSU and must have completed 90 or more credits. Gallagher was also the 2023 recipient.

"Scholarships are the number one factor that has allowed me to attend university," Gallagher states. "I have been able to take heavy course loads, learn all that I can and still graduate on time because of them. They have allowed me to fully focus on school. I do have a part-time job during the school year, but because of scholarships, I have never had to stress about not being able to attend university, pay for tuition or other expenses. This education will greatly help me pursue a career and live my life to the fullest after graduation. I am forever grateful for scholarships and the wonderful opportunities they have given me."

Gallagher is part of NDSU's Horticulture and Forestry Club, serving as the outreach and events coordinator. She's also an agriculture ambassador for the NDSU College of Agriculture, Food Systems and Natural Resources.

"With the Horticulture and Foresty Club, we try to hold a couple of events per semester for people outside of the club, such as other NDSU students or people in the community. Previously, we have done terrarium workshops, wreath making and plant sales. We do these partly as a recruitment effort for the club, but also to share our love of plants with others," Gallagher explains.

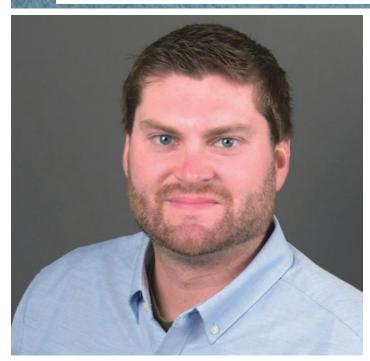
Gallagher says that she enjoys horticulture, but she's unsure what career path she'll take when the time comes. Experience has taught her that agriculture will offer opportunities.

"There are endless opportunities within agriculture and many different types of careers that one can have," Gallagher asserts. "Even within a specific agricultural sector, there are many roles that must be filled for the entire process to be completed and the end product delivered."

To learn more about the NDSGA scholarship, visit ndsu. academicworks.com/opportunities/27189

—Story and photo by Daniel Lemke

Getting to Know the NDSC Director



Philip Neubauer Bottineau, North Dakota, Bottineau County

Tell us about your farm.

I farm by Bottineau, North Dakota, with my brother. My parents have recently retired, but they still help out around the farm. We grow barley for malting, durum, spring wheat, canola and soybeans.

What do you like best about farming?

Every day is a new challenge. You don't know what you will get every day.

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

No, initially I didn't see myself

returning to the farm. It wasn't until my senior year of high school that I reconsidered. After exploring colleges and other career options, I realized I really enjoyed the farming lifestyle. There's always something new to do, and while you have some downtime in the winter, you're constantly planning and thinking ahead throughout the year.

What's the most exciting thing about the growing season?

Seeing the seed you put into the ground grow to full maturity and seeing what it will produce.

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

I got involved with NDSC through my county crop improvement association. As a farmer, I recognized the importance of actively participating in organizations that support and advance our industry.

Why are soybeans part of your crop mix?

We like them in our rotation. We are primarily oilseed and small grains, so soybeans allow us to have a later harvest, which helps in breaking up the workload. Soybeans add nitrogen to the soil for the next crop in the rotation.

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

I would like a half inch of rain every week during the growing season.

What has changed the most about farming since you started?

I began farming in high school, and back then, only some equipment had GPS. Over the years, GPS technology has expanded to more equipment, like combines, and has become much more advanced. We've also seen great strides in other technologies, such as variable rate applications, section control, and nozzle turn-offs. I'm excited to see what the future holds for farming innovation.

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

I don't think we will see fully autonomous tractors yet, but maybe further in the future. Maybe in the next 10 years, we will see an autonomous grain cart. Seed genetics will be advanced. Maybe we will fit another crop in the rotation, depending on the length of the growing season.

What do you like to do outside farming?

I like to go on vacations, hunting, being outside, snowmobiling, golfing, and playing sports.

If you could go anywhere, where would it be?

I would like to check out Europe.

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

I couldn't live without GPS. It makes me way more efficient.

—Story and photo by staff

Phillip is one of the North Dakota Soybean Council's county representatives. To learn more about serving on the North Dakota Soybean Council as a county representative or board member, scan the QR code.



Bean Briefs

ASA Submits Comments to CARB About the LCFS

The American Soybean Association (ASA) has submitted comments for the California Air Resources Board's (CARB) proposed modifications to its Low Carbon Fuel Standard (LCFS). The proposal includes a damaging vegetable oil cap, sustainability

guardrails and outdated carbon intensity scoring, among other problematic proposals.

CARB is the state governing body that oversees California's low-carbon fuel policy. CARB approved a LCFS regulation in 2009 as part of a larger state effort to cut greenhouse gas (GHG) emissions as well as other smog-forming and toxic air pollutants.

LCFS programs are modeled in a way that measure a fuel's carbon intensity, or CI score, over the fuel's lifecycle. The program requires gradually lower carbon emissions from the transportation pool. Fuels with a CI score lower than the baseline generate credits while values above the benchmark

generate deficits. These credits and deficits are measured in metric tons of GHG emissions. Fuel providers must purchase excess credits if they have a net deficit. Companies with a surplus of credits can sell the excess to these buyers.

CARB's proposals include 1. Capping soybean oil: Establishing a 20% soy and canola vege-

Getting to Know the Expert



Taw Scaff, Ph.D.
North Dakota State University (NDSU) Assistant Professor and Extension Swine Specialist

Where did you grow up?

I grew up in Sulphur, Oklahoma, which is a small, rural community. I worked on a beef operation through high school.

Tell us about your education.

I went to Oklahoma State University for my bachelor's degree, and that's where I really

started getting interested in pigs. My sophomore year at Oklahoma State, I started working at the Swine Education Research Center as an undergrad research assistant looking at grower pig and nursery pig research. I graduated (with) my bachelor's in 2019 and continued with my master's degree looking at nursery pig water intake. I finished

my master's in 2021 and then went to Purdue University for my Ph.D., where I looked at nutritional impacts on boar growth and development as well as semen production. I just finished that degree in May and moved to Fargo in June to start at NDSU.

What interested you about working with pigs?

Oklahoma is predominantly a beef state, but I wanted to do something different. There are a ton of ruminant nutritionists who are great at their jobs, but I wanted to go off the beaten path a little bit and work on hogs. I picked the research side because I wanted to help producers with their on-farm problems and find solutions to those through research.

The work on a hog farm is not for everybody, but I enjoyed it, and I like being able to help producers with some production changes that they could make or give them tips on how they could implement some new technologies that might be coming out to improve their system. Building those relationships and connections with producers and allied industry, and helping the swine industry grow is what drives me.

What excites you most about your work at NDSU?

One thing that's exciting for me is working closely with the North Dakota Livestock Alliance and helping answer questions that come up about zoning or when a farmer has a management question that they're not sure how to handle.

We also need to do some outreach with rural communities to explain how (a) swine farm can help boost the rural community's economy and provide jobs in that area. As diverse as the crop and grain side of North Dakota is, I think it's a great area for hog production to expand.

What do you like to do away from work?

I do enjoy fishing, so I'm looking forward to trying ice fishing. I like waterfowl hunting, going to sporting activities and being outside enjoying the weather. I don't like being cooped up inside for too long, so it's good I got a role in Extension. If I had to sit in my office all day for 40 hours a week, I might go crazy.

—Story by Daniel Lemke, photo proviuded by Taw Scaff

- table oil cap per company-wide basis and treating biofuels beyond this cap as a fossil fuel.
- 2. Limiting biobased diesel (BBD) pathways: Giving CARB's executive officer the discretion to stop accepting any new BBD pathway applications in 2031 if Zero Emission Vehicle sales hit a certain threshold, limiting future expansion into this market.
- 3. Maintaining sustainability criteria: Creating a timetable for sustainability requirements with specific phase-in benchmarks. Starting in 2026, fuel producers would have to collect and submit farm boundaries where soybeans are sourced.
- 4. Regional land-use change: Developing more conservative

- land-use change values for feedstock-producing world regions and assigning different scores depending on the growing area (e.g., North America versus South America).
- 5. New carbon-intensity thresholds: Ramping up carbon-intensity (CI) reductions immediately from 5% in 2025 to 9% before flattening the curve over time and keeping the same 30% reduction target in 2030.

CARB intends to finalize these proposed, harmful updates to the LCFS in November.

The ASA contends that CARB's proposal has significant, negative implications for soy-based biofuels. Of top concern for soy farmers

are the measures that would cap a company's use of soybean oil and canola oil as feedstocks for biofuels at 20% and would apply burdensome sustainability guardrails that add cost without rewarding the farming practices that lower carbon-intensity scores.

ASA Submits Supplemental Dicamba Registration Comments to the EPA

The American Soybean Association (ASA) has provided comments to the Environmental Protection Agency (EPA) about a new registration for post-emergent dicamba and S-metolachlor for use on dicamba-tolerant soybeans, underscoring the environmental benefits, specifi-

cally for endangered species.

The comments highlight how dicamba can be used for crops before transitioning fields to the Conservation Reserve Program (CRP) for wildlife habitat or food plots to ensure that the CRP lands are weed free and have the greatest benefit for species.

The ASA outlined how dicamba could help manage invasive weeds, which can outcompete native species or degrade wildlife habitat, and could mitigate weeds that pose wildfire risks, which can also create a serious threat for species. The ASA discussed how dicamba can facilitate the use of reduced tillage and no-till, which decreases erosion and runoff as well as a tractor's fuel

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use, among other benefits, which can both directly and indirectly benefit wildlife.

"By making continued access to post-emergent dicamba available to U.S. soybean growers, (the) EPA can help preserve the water and climate benefits of reduced tillage and notill, which would otherwise be difficult for some farmers to maintain," the ASA writes. "The benefit of continuing these soil management practices for aquatic species or those susceptible to climate change could also be significant. In fact, in its recently finalized Herbicide Strategy, (the) EPA assigned medium and high efficacy to reduced tillage and no-till, respectively, at reducing pesticide runoff risks for listed species."

The ASA urges the EPA to swiftly advance a new registration that grants U.S. soybean growers meaningful post-emergent use of dicamba for the 2025 growing season.

EPA Releases the Final ESA Herbicide Strategy

Soy growers are expressing ongoing concerns regarding the Environmental Protection Agency's (EPA) final Endangered Species Act (ESA) Herbicide Strategy.

American Soybean Association (ASA) President Josh Gackle, a North Dakota soybean farmer, commented on the final ESA Herbicide Strategy: "While there are clear improvements to the final Herbicide Strategy over what was first proposed, we are disappointed (the) EPA chose to leave so many opportunities on the table to make this strategy workable for U.S. agriculture. We remain concerned with the complexity of this framework and whether growers and applicators will be able to clearly understand how to implement it. Likewise, we continue to have concerns as to the type and affordability of runoff mitigations (the) EPA has provided, the potential distance of spray drift buffers, the number of mitigations farmers will need to adopt and whether these requirements are supported by the best available science as the law requires. As finalized, the Herbicide Strategy is likely to cost U.S. farmers billions of dollars to implement and could result in significant new hurdles to farmers accessing and using herbicides in the future."

Another significant improvement that the EPA largely has not addressed is how the agency evaluates whether pesticides pose a genuine risk to endangered species. As the ASA and over 300 other groups noted in a letter to the EPA several weeks ago, the agency's current process is unduly conservative, greatly overestimates risks and demands that farmers adopt far more restrictions than are truly necessary to protect species. The final Herbicide Strategy does little to address these concerns.

Soy Growers Support the 2024 WRDA Legislation

The U.S. House and Senate passed 2024 Water Resources Development Act (WRDA) legislation this summer. As leadership from both chambers enter the conference process to reconcile the two bills and to develop a final 2024 WRDA to be passed by the end of the year, soy growers are urging their Congressional representatives to include the Senate-passed, cost-share ratio in the final 2024 WRDA legislation.

The American Soybean Association (ASA) has long advocated for improved cost-share ratios for inland waterway projects to minimize construction delays with lock and dam improvements. While the House-passed WRDA bill maintains the current cost-share ratio of 65% general revenue and 35% Inland Waterways Trust Fund (IWTF) for these projects, the Senate-passed bill changes the ratio to 75% general revenue and 25% IWTF, a key priority for the ASA.

The current cost-share ratio for improvement projects on U.S. inland waterway systems can lead to significant construction delays that prevent this critical transportation artery from operating at 100%. The majority of U.S. soybeans rely on inland waterways for a portion of their journey to market, and the Senate's WRDA Section 109 will improve construction timelines and efficiency significantly. This

competitive edge is critical for assuring that the movement of our soybean supply to overseas markets remains efficient and reliable.

Expanding the Biofuel Infrastructure, Clean-Energy Projects

The U.S. Department of Agriculture (USDA) announced that it will fund 160 projects in 26 states to expand access to clean-energy systems and to increase the availability of domestic biofuels.

The USDA is providing \$99.6 million through the Higher Blends Infrastructure Incentive Program (HBIIP) and the Rural Energy for America Program with funding from President Biden's Inflation Reduction Act. To date, the USDA has invested more than \$600 million from the Inflation Reduction Act for more than 4,500 clean-energy projects through the Rural Energy for America Program (REAP) and more than \$180 million for over 200 projects that increase the availability of domestic biofuels across the country.

The USDA is awarding \$9.2 million in REAP grants to 71 projects across the nation. This program helps farmers and small business owners to expand their use of wind, solar and other forms of clean energy and to make energy efficiency improvements.

The USDA is also offering \$90.3 million in HBIIP grants for 89 projects in 26 states. These investments will help business owners install and upgrade infrastructure, such as fuel pumps, dispensers and storage tanks, that will improve the consumer access to and affordability of biomass-based diesel blends.

The American Soybean Association is a strong supporter of HBIIP and other policies that help the nation become more energy independent while expanding the use of soy-based biofuels and the market opportunities for soy farmers.

Gackle Testifies Before Senate Committee Hearing

American Soybean Association (ASA) President and North Dakota farmer Josh Gackle testified at a Senate Appropriations Committee subcommittee field

hearing titled "Perspectives on the Future of Agriculture Research and Technology." The hearing, hosted by the Senate Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, was led by North Dakota Senator John Hoeven.

Gackle, who operates a family farm with his father and brother, shared insights about the significant influence of agriculture on the U.S. economy.

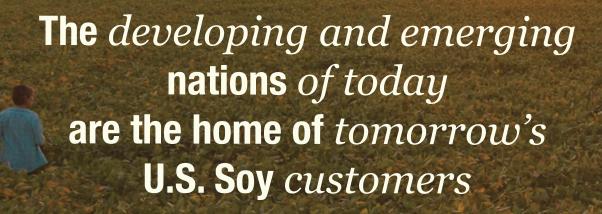
During his testimony, Gackle emphasized the transformative benefits of agriculture research and technology for soybean farmers. He highlighted how these advancements help generate a stable and sustainable supply of soybeans, improve farmer resilience, drive product development and market demand, and build efficient infrastructure. "These benefits flow to farmers and throughout the entire value chain," Gackle stated.

As a third-generation farmer, Gackle underscored the importance of agricultural research by referencing the ASA's Policy Resolutions book. This year's edition includes 26 resolutions focused on supporting and maintaining a viable, profitable, resilient and sustainable soybean industry. "To plant, market and transport over 80 million acres of soybeans each year, we rely on ag research and technology to move us forward," he noted.

Gackle discussed various research and technology outcomes, including precision ag technologies that enhance input efficiencies but face affordability challenges, seed technologies for production in colder climates, mental health initiatives for farmers, new end uses and global markets for soy, and efficient infrastructure for crop transportation.

Gackle also highlighted the farmers' contributions to research and innovation through the soy checkoff, stressing the importance of protecting this funding mechanism from harmful amendments during the appropriations or farm bill reauthorization processes.

—Story by Daniel Lemke











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