

THE NORTH DAKOTA **Soybean** GROWER MAGAZINE

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INSIDE:
Going to Bat
for Biofuels

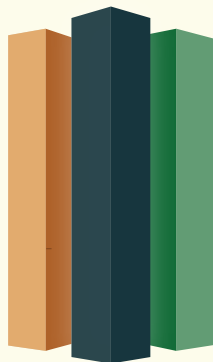
PAGE 16



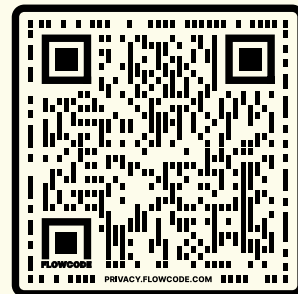
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Contents

- 6 Soybean Skeptic Turned Believer
- 8 NDSC Director Joins ASA/ WISHH Trade Team to Southeast Asia
- 9 NDSC Congratulates Scholarship Recipients
- 9 Soy Grants Help to Power the Classroom Experience
- 10 Creating Connections at Expo
- 12 Clean Fuels Industry United as One
- 13 Plenty of Incentive to Use Biodiesel
- 14 Early Progress Sets the Stage
- 16 **Cover Story**
Going to Bat for Biofuels
- 17 Green Bison Soy Processing on Target for 2023 Harvest
- 18 Ripe with Opportunity
- 20 All the Ingredients for Growth
- 22 The Cover Crop and Insect Connection
- 23 Khan Appointed Assistant NDSU Extension Director
- 24 Carrying a Message: Northern Soy Marketing Builds Relationships in Thailand
- 25 Identity Preserved International Summit Connects Farmers, Suppliers with Foreign Buyers
- 26 Culinary Opportunities with Soy
- 29 Casselton Crush Plant Grows Through the Winter
- 30 NDSGA Changes with the Times

D

Departments

- 4 ND Legislative Interim Update
- 5 NDSGA President's Letter
- 8 NDSC Leader Letter
- 32 Getting to Know the NDSC County Representative
- 33 Getting to Know the Expert
- 33 Bean Briefs

O

n the cover

Even though North Dakota is one of the nation's leading soybean producing states, research contributes greatly to the growth and improvement of soybean production. North Dakota State University (NDSU) researchers conduct a wide range of projects to support North Dakota soybean farmers. Efforts include small plot research at the NDSU research facility near Casselton. Here NDSU staffers seed plots using equipment purchased with soybean checkoff funds.

—Photo by staff



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2023 Road and Bridge Dollars and More

In February, the North Dakota Soybean Growers Association (NDSGA) testified at a hearing for SB 2367 which discusses how the state allocates its share of oil and gas tax revenue. In 2019, the Upper Great Plains Transportation Institute (UGPTI; the state authority in transportation research) estimated that North Dakota needed \$440 million per year for 20 years to maintain roads and bridges. This year, the study says that the need per year is \$525 million.

The state's share of gas and oil dollars flows from the top down into buckets, and as expected, when the first bucket fills, money goes into the second one, and so on. Here's how the buckets are filled: the first bucket is \$230 million for the General Fund. Next is \$230 million for the tax-relief fund, then \$75 million for the budget stabilization fund, \$230 million for another general-fund bucket, \$10 million for a lignite research fund, \$20 million for a state disaster-relief fund and a whopping \$460 million for the Strategic Investment and Improvement Fund (SIIF). The SIIF is used as a backstop to balance the budget. Finally, the Operation Prairie Dog fund gets \$59,750,000 for infrastructure in non-oil-producing counties, with half of the money for larger cities and the other half for county and township infrastructure funds. Are you still with me? Then, another bucket combines with the above bucket for the same political subdivisions to receive \$170 million, for a total of about \$230 million. When those two Prairie Dog buckets fill completely, the money is distributed. During the last biennium, the downturn in oil prices did not allow the buckets to fill, but by this past autumn, money had finally reached the bucket, and some entities began to receive checks. The

next \$20 million is for airports. Any leftover money goes into another SIIF to help balance the budget.

Our testimony was to move the county and township infrastructure bucket ahead of the immediate SIIF above us (unlikely to occur) or, hopefully, to slip \$200 million or so into our roads and bridges fund: move the money instead of the bucket. If we cannot add to these infrastructure buckets, maybe we could push for \$200 million to be taken from the SIIF above Prairie Dog so that our buckets fill faster. There are many other bills that target help for the township and county roads, and teaming up with the Township Officers Association, the North Dakota Association of County Officers, the Transportation Coalition and other agricultural groups is helpful.

In the past, one problem has been that the North Dakota Department of Transportation (NDDOT) was not allowed to spend its dollars outside its designated state system. That road system does not include county and township roads, so the NDDOT has not been able to help local governments, even if it wanted to assist. The NDDOT director has expressed the wish to have flexible funding within his department; right now, it looks like \$150 million or so may be granted for those types of abilities, so we've got that change going for us.

A couple of smaller, but still significant, NDDOT bills are files HB 1080 and SB 2111. Those bills allow for electronic versions of your motor vehicle registration and certificates of title, respectively. The modern age has reached the point where you, as well as anyone else who may be driving your trucks, can have all those documents on your phone. I believe that these bills will pass, but we were



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

not even halfway through the session when this was written.

Another change from the usual NDDOT budget is that there are \$70 million from possible bond proceeds which came from bill HB 1103 (It was rolled into HB 1012, the NDDOT budget bill.) and are dedicated to roads and bridges.

Water drainage bills, zoning bills concerning animal feeding and corporate farming discussions are ongoing, with the results unknown at this time, but your NDSGA executive director helped put together HB 1437, which provides counties and townships help if they wish to update their zoning ordinances. The bill would let anyone interested in value-added ag projects know which areas are more willing to welcome them, and it seems popular with most people. As I said, on Legislative Day 29, we are not even half done.

Follow what's happening in the North Dakota Legislature with agriculture policies and issues

Phil Murphy, NDSGA's liaison between legislators and farmers, writes the "Murphy's Law" blog.

Scan to subscribe to "Murphy's Law" blog today!



Grower Leaders Staying Connected

Few industries have been changed by technology as dramatically as agriculture. Technologies such as GPS and variable-rate applications have allowed us, as farmers, to be more precise with our production, which makes for greater productivity and efficiency. We can put seeds, nutrients and crop protection products exactly where we need them. That's a win for everyone.

Technology also allows us to stay connected with off-farm activities that have the potential to affect us and our operations. What's happening in Bismarck and Washington, D.C., will certainly influence us, so it's vital that we stay in tune with developments there. In many instances, we rely on technology to enhance our abilities to monitor and deliver testimony.

Winter is a busy time for meetings and hearings on a wide range of topics. Because those of us serving on the North Dakota Soybean Growers Association's (NDSGA) board are active farmers, it can be difficult to attend all the pertinent meetings in person. Thanks to the fact that many hearings in Bismarck can be monitored virtually, we can keep tabs on testimony at the state capitol to stay in tune with issues that are being discussed.

NDSGA directors have delivered testimony for important issues during virtual hearings. Several of our directors provided comments to the Environmental Protection Agency during hearings about the agency's proposal to revise volume obligations for biofuels under the Renewable Fuel Standard. This input was possible because technology allows us to connect with key decision-makers more efficiently than if we had to travel to Washington, D.C., to testify.

As an organization, we connect regularly to discuss important policy concerns. Soybean association delegates gathered at the Commodity Classic to make policy decisions which the American Soybean Association (ASA) will use in its advocacy efforts. We, as NDSGA directors, spent many hours discussing and debating policy positions that we wanted to bring forward at the Commodity Classic. Because we have directors representing the entire state, many of our meetings took place virtually so that we could be more efficient with our time without sacrificing the management of our farms.

The technology necessary to monitor and contribute to discussions about North Dakota agriculture is important, but even more vital is



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the willingness of farmer leaders to be involved. Technology is just one more tool that the NDSGA uses to stay informed and to represent the interests of North Dakota soybean farmers.



Membership Application

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

Name: _____

Spouse: _____

Date of Birth: _____

Farm/Company Name: _____

Address: _____

City, State, Zip: _____

County: _____

Phone: _____

Cell: _____

Email Address: _____

Occupation (Please check all that apply)

- ☐ Farmer ☐ Retired ☐ Agribusiness
☐ Finance ☐ Elevator ☐ Other

Do you raise:

- ☐ Cattle ☐ Hogs ☐ Poultry ☐ Dairy

Do you currently grow soybeans?

- ☐ Yes ☐ No

Soybean Acres: _____ Total Acres Farmed: _____

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

Recruited in person; Recruited by phone, Magazine;
Internet; Mailing; Radio; Event; Other

☐ 3-Year Membership \$200 ☐ 1-Year Membership \$75

☐ Check enclosed (please make checks payable to NDSGA)

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Card Number: _____

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



Soybean Skeptic Turned Believer

As a long-time farmer and seed dealer, Aaron Friesz of New Leipzig had heard talk of soybeans moving into southwestern North Dakota for years. Friesz, who raises cattle with his wife as well as farming and ranching with his brother, wasn't convinced that soybeans would ever succeed in his area.

"I sat for 25 years at seed meetings and heard people say that beans are moving west, and I'd start falling asleep because I thought, beans will never move west," Friesz recalls. "Now, here I am planting beans."

Friesz is not only planting soybeans in his crop rotation, but he also sells them to neighbors and seed customers who are increasingly interested in the crop that's only been planted regularly in the region for a handful of years.

It has taken time for soybean production in the region to gain a foothold. Friesz says that corn acceptance began the same way. Farmers started experimenting with corn, but crop insurance only insured the crop if it was going to be used for silage. Once corn for grain was covered, farmers had a bit more security when giving grain corn a try.

"Soybeans started off like corn

did," Friesz explains. "A few guys dabbled in it, mostly just small acres originally; then, we got insurance for it, and more people jumped on board. We're still in the infancy stages of everybody learning about soybeans and people watching other farmers to see, well, did he make any money? I guess we'll find out if he puts soybeans in again next year. It's coming along, but people just have to learn about it."

Soy Opportunity

Moisture in southwestern North Dakota can be limited. Late-season rains are rare, which,

for years, kept many farmers from seriously considering soybeans in their rotation.

"It's ingrained in everybody that we need that August rain, or we won't get beans," Friesz asserts, "and we typically don't get that August rain. But that thought isn't 100% accurate. Sure, we do get a better crop when it rains, but it's still doable without them."

Yields in southwest North Dakota may not rival counties in the eastern part of the state, but profitability is the end goal. With a county average that Friesz says is up over 20 bushels per acre, farmers

can make money planting soybeans.

"We don't have the input costs of other crops, and we're not paying the high-priced land rents farmers are where they're raising 60-bushel beans every year," Friesz contends.

Soybeans don't require the same inputs as crops such as spring wheat or corn. Expenses are mostly seed and, sometimes, inoculants and fungicides. Those lower input costs make profitability possible. Friesz describes how, if profitability can be achieved, there will be farmers who are willing to try something new.

"One thing about farmers in southwest North Dakota, they aren't afraid to try anything if they can save some money and make some money in the process. We're going to do it," Friesz continues. "I've seen a lot of guys do some different things over the years, and some have worked, and some haven't, but beans seem to be here for good."

Room for Growth

Farmers in the region are eager to learn about soybeans. Because the crop is relatively new in southwestern North Dakota, Friesz states that growers want information. Farmers in the area are accustomed to planting wheat, so there's not as much to learn. Growers who are new to soybeans



New Leipzig farmer Aaron Friesz says despite often receiving limited moisture in western North Dakota, soybeans are becoming an increasingly viable crop in the region.

have questions about everything from pod count to insect pressures.

"I get guys saying, 'I've got 35 pods. Is that good?' I'm like, yeah, that is pretty good," Friesz maintains. "They're watching those soybeans pretty closely."

Friesz has made the commitment to soybeans on his farm and in his business. He recently put up a facility to treat and condition soybeans. It's an investment he made on his own, believing in the potential for soybeans in areas not typically associated with soybean production.

Friesz isn't alone in that favorable assessment. He describes how soybean varieties that work in the area are improving and how seed company agronomists are looking at the specific needs of drier regions. Because the biggest competition for acres comes from spring wheat, Friesz sees western North Dakota as a target area for seed companies.

"Companies look at this area as the hugest potential of growth. The eastern part of the state, North and South Dakota, and the whole Corn Belt are all corn and beans. There's only so many acres there, so you have seed companies fighting for the same acres," Friesz explains. "Companies also see all the acres out here that don't have corn and beans on them."

Friesz says that seed companies are working on improved genetics and seed varieties which work in dry regions, such as western North Dakota. He asserts that soybean farmers in the region, as well as their neighbors, will be watching to see how those varieties perform.

Fits the Diversity

Because soybeans are a fairly new crop, disease issues, pests and weed management are different than they are in other parts of the state. However, soybeans are becoming more of a mainstream crop. More elevators in the region are now accepting corn and soybeans in addition to staple

crops such as spring wheat, winter wheat, sunflowers and flax.

"Soybeans are growing, sure, but we're always going to have the rotation here," Friesz contends. "I'll never stand up and say that we're all going to be corn and beans. The one thing we've got going for us is the ability to rotate in and out of crops, which keeps some of our pests and our diseases out."

Soybeans may still be a developing crop in the area, but Friesz says that they're firmly embedded in his crop rotation.

*—Story by Dan Lemke,
photos by Timothy Jokerst*



Friesz, who is a seed dealer as well as a farmer, recently installed soybean conditioning and treating equipment on his farm.

contract with SB&B in 2023

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It's exciting to be part of a growing industry that has so many benefits for the economy and the environment. In recent years, soy based biodiesel and renewable diesel have moved from alternative fuels to major contributors for the nation's energy independence and a lower carbon future.

I recently attended the Clean Fuels conference, organized by Clean Fuels Alliance America, formerly the National Biodiesel Board. The name was updated to encompass other fuels, including renewable diesel and sustainable aviation fuel, which, like biodiesel, are made from soybeans (and other renewable feedstocks).

Biodiesel has come a long way in the past several decades. Early in biodiesel's acceptance, proponents pushed for diesel users to try B20, a blend of 20% biodiesel and 80% petroleum diesel. Now, the goal is to increase blends to B50 and even B100 in appropriate climates and markets.

Biodiesel has been tested in a multitude of applications, including trucks, locomotives, heavy equipment, buses and more. Studies show that biodiesel reduces particulate matter, greenhouse gases and other harmful gas emissions. Biodiesel also has a very positive carbon footprint, which is why states with clean fuel standards are turning to biodiesel and renewable diesel to help meet those requirements.

While many states are pushing for greater use of electric vehicles, testing has shown that some

applications, including long haul trucking and locomotives, just aren't good fits for electrification. In those and many other instances, biofuels are an excellent choice to achieve performance and environmental benefits.

Biodiesel has a place in clean fuel standards, and it also has a place on my farm. In 2022, I utilized 5,000 gallons of biodiesel from June through September. I used biodiesel in everything from a 1990 utility tractor to my newest machine, a 2017 four wheel drive tractor. All of my equipment ran well with no issues. I did change the storage tank's fuel filter and had the tank checked to make sure that it was free from water and algae growth before filling it with biodiesel. That little bit of tank maintenance helped ensure that I would have a good experience with biodiesel.

If you've never used biodiesel, make 2023 the year you do. The great thing about biodiesel is that it's a renewable fuel that you and I have a hand in producing. Each gallon of biodiesel adds to the value of every single bushel of soybeans that we raise. With increased demand, that value will likely increase. It just makes sense for all farmers to use a product that directly benefits us in so many ways.

Biofuels are a driving force behind the increased soybean crushing capacity in North Dakota. We also understand that there are customers around the world who want whole beans. As the demand for biodiesel and renew-



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able diesel grows, we won't forget the importance of supplying soybeans to our customers around the world.

Competition for our soybeans is a good thing. I'm confident that North Dakota farmers can meet the need to produce both fuel and food.

To learn where you can find biodiesel in North Dakota, visit bit.ly/NDSCBiofuels.

NDSC Director Joins ASA/WISHH Trade Team to Southeast Asia

The North Dakota Soybean Council's (NDSC) District 10 Director Adam Redmann represented U.S. soybean growers on a trade mission to Southeast Asia with the American Soybean Association's (ASA) World Initiative for Soy in Human Health (WISHH) program. Redmann, a soybean grower from Saint Thomas, serves on the WISHH program committee that trailblazes new markets for U.S. soy in emerg-

ing and developing countries.

The trade mission participants, sponsored in part by the NDSC, traveled to Cambodia and Vietnam.

In Cambodia, Redmann visited AgriMaster Feed, which had just completed a multi-million-dollar expansion of its plant that uses U.S. soy for aquaculture and livestock feeds. WISHH is leveraging U.S. Department of Agriculture

—Story continued on page 27



Adam Redmann visits the port facility near Vung Tau City, Vietnam. This port facility imports U.S. soy and soybeans that are sold in Vietnam and other Asian countries.

NDSC Congratulates Scholarship Recipients

Anually, the North Dakota Soybean Council (NDSC) sponsors two scholarships for undergraduate students and two scholarships for graduate students at North Dakota State

University (NDSU).

The NDSC's Undergraduate Scholarships are awarded to sophomores or juniors in crop and weed sciences, soil science, food science, animal science, agribusiness or agricultural economics



Caleb Hauck



Evan Friesz

who have demonstrated a tie to soybeans, are U.S. citizens and have a minimum 3.0 GPA.

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

This year, Caleb Hauck, Forbes, North Dakota; and Evan Friesz, New Leipzig, North Dakota, were

Checkoff
Investment



awarded the NDSC's Undergraduate Scholarships. Ryann Nendick, Prior Lake, Minnesota; and Peter Beerbower, Fort Wayne, Indiana, were awarded the NDSC's Graduate Student Scholarships.

—Story by staff, photos courtesy of recipients



Ryann Nendick



Peter Beerbower

Soy Grants Help to Power the Classroom Experience

Just as soybean acres have grown in North Dakota in recent years, the North Dakota Soybean Council (NDSC) is working to expand knowledge about soybeans and their many uses by reaching into the classroom.

The NDSC has developed an Educational Mini-Grant program that provides funds to middle school and high school teachers. Funds can be used for materials associated with projects that help students to learn more about soybeans, soybean-related products, soybean research, soy innovations, soy health, soy nutrition and more.

"The goal of the program is to provide an opportunity for North Dakota teachers to incorporate soybean related lessons into their curriculum by supporting the costs of new or additional materials they might need for the lessons," says Shireen Alemadi, NDSC outreach and education coordinator.

Grants are worth up to \$500 and are awarded on a competitive basis to support lessons related to

soybeans or soy products. Applications can be submitted throughout the 2022-2023 school year.

Grants are limited and will be awarded on a first-come, first-serve basis. Funds awarded for the 2022-2023 school year need to be used by April 30, 2023.

"So far, we have had nine teachers apply and be awarded mini-grant funding for a variety of classroom lessons related to soybeans and or soybean based materials. We have funding to support more teachers, so we encourage more teachers to apply online," Alemadi states.

Alemadi describes how there have been a wide range of lesson ideas submitted so far, including lessons on soyfoods, biodiesel, making soy lip balm and learning about products made from soybeans.

"It is important that students learn and understand not only where food comes from, but in addition all the new, innovative ways that ag products, such as soybeans, are used for many other things like tires, insulation, foam seats in cars, cosmetics

and more," Alemadi explains.

There is still time to apply for the 2022-2023 school year. The deadline to apply is April 14, 2023. To learn more about the program

or to apply, please visit bit.ly/NDsoyEduGrants.

—Story by Daniel Lemke,
photo by staff



NDSC provides grants to teachers to help students learn more about North Dakota farmers, especially soybean farmers. These students are future FFA members, future farmers, and future career supporters in the ag industry.



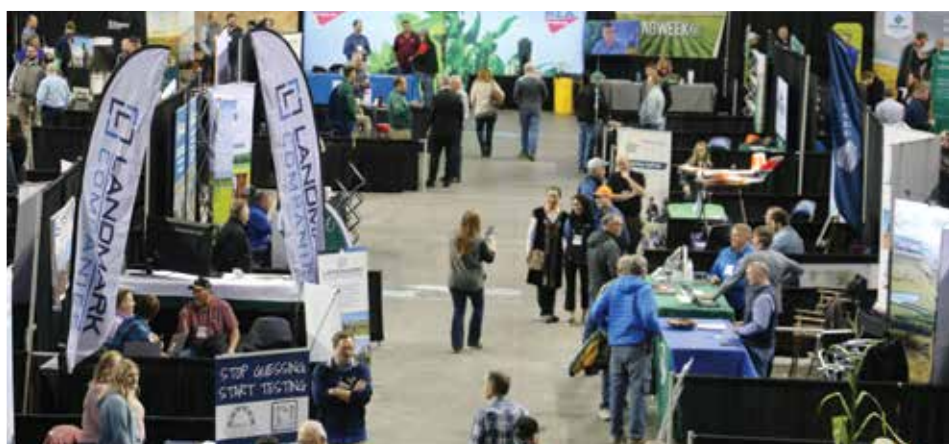
North Dakota Soybean Council leadership welcomed Expo attendees to the FargoDome on February 14.

Creating Connections at Expo



North Dakota soybean and corn farmers, as well as agriculture industry representatives, turned out in full force for the 6th annual Northern Corn and Soybean Expo on February 14 at the FargoDome. Hundreds of growers participated in the event which featured informative presentations, lively discussions about key issues in North Dakota agriculture, a dynamic trade show featuring more than 70 exhibitors and an interactive research pavilion.

The Northern Corn and Soybean Expo also featured the annual meetings for both the North Dakota Soybean Growers and North Dakota Corn Growers Associations.



The FargoDome floor was a busy place as more than 70 exhibitors participated in the tradeshow.



Tom Verry (center) with Clean Fuels Alliance America talked biodiesel with United Soybean Board Director Ryan Richard (left) and North Dakota Soybean Council Director of Market Development Jena Bjertness.



Joshua Linville with StoneX updated farmers on price trends for fertilizer products heading into spring planting.



North Dakota Soybean Council Vice Chairman Rob Rose (foreground) welcomed attendees to the opening session.

Main stage presentations included information about the price trends for fertilizer as well as a look into the global economic influences for 2023. A deep dive into weather patterns and the spring weather outlook was also part of

the day's events.

Discussions about the future of biofuels, including ethanol, biodiesel and renewable diesel, brought in industry experts while a panel of producers and livestock specialists provided

thoughtful insights regarding the potential for expanding North Dakota's livestock sector.

Mini sessions included valuable information about the identification and management of Palmer amaranth as well as a spirited conversation about perspectives for the 2023 Farm Bill with U.S. Representative Kelly Armstrong and former Senator Heidi Heitkamp.

Video presentations from the 2023 Northern Corn and Soybean Expo can be viewed at bit.ly/23ExpoPresentations.

Farmers are encouraged to mark their calendars for next year's 7th annual Northern Corn and Soybean Expo, February 6, 2024.

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



A livestock panel featuring (from left) Harold Stanislawski, Scott German and Tyler Eschenbaum was a popular session, moderated by emcee Mike Pearson.



Amber Boeshans, North Dakota Livestock Alliance executive director was on hand to talk animal agriculture with attendees.



Eric Snodgrass, senior scientist for Nutrien briefed attendees on upcoming weather trends.



Agweek General Manager Katie Pinke served as co-emcee for Expo events.



Noted speaker and Virginia Tech Professor Emeritus David Kohl, Ph.D., delivered a global overview and encouragement to attendees.



North Dakota Soybean Council Executive Director Stephanie Sinner, second from right, along with other leaders of several state soybean organizations, shared their perspectives during a panel presentation on the changing landscape for agriculture and clean fuels.

Clean Fuels Industry UNITED AS ONE

Clean Fuels Alliance America welcomed representatives of an industry that was united as one for a sustainable energy future at the first ever Clean Fuels Conference in Tampa, Florida, on January 23-26. Formerly the National Biodiesel Conference, the new focus encompassed biodiesel, renewable diesel and sustainable aviation fuel.

"It turned out to be an incredible event, exceeding even our high expectations," says Clean Fuels Chief Executive Officer (CEO) Donnell Rehaugen. "The energy and excitement were a big boost as the clean fuels industry works toward bigger and better things in 2023. We thank our speakers and panelists for a week of engaging content, and it was great to meet and visit with many of our stakeholders. We showed the strength and passion our industry has when we're united as one."

The heads of several state soybean organizations and the American Soybean Association (ASA) sat down together at the conference as a panel to share their perspectives about the changing landscape for agriculture and clean fuels.

Kansas Soybean Association CEO Kaleb Little moderated the conversation with ASA CEO

Steve Censky, Iowa Soybean Association CEO Kirk Leeds, North Dakota Soybean Council (NDSC) Executive Director Stephanie Sinner, and New York Corn and Soybean Growers Association Executive Director Colleen Klein.

"The unique thing we have happening in North Dakota is we're having farmers out west introducing soybeans into their crop rotations for the very first time," Sinner says. "The industry has seen what's going on and has said North Dakota has the soybeans, with more to come. With the demand that is building for biodiesel, renewable diesel and sustainable aviation fuels, our farmers are ready to step up and provide the soybeans."

"It's an incredible time for the biodiesel, renewable diesel and sustainable aviation fuel industry as we accelerate toward our vision of 6 billion gallons by 2030," Rehaugen says. "With the growth in demand, we see broader and growing interest in the success of the industry."

While the clean fuels industry has expanded into other areas and other feedstocks, it's good to remember where it started. "Certainly, it was soybean farmers that founded the biodiesel industry

as we know it today...and it still is soybean farmers showing the strong support for the industry," states Steve Censky, ASA CEO.

Other session highlights included business leaders discussing corporate commitments to reduce greenhouse gas emissions, and policy experts analyzing current and anticipated federal and state regulations impacting biofuels; managers of aviation, rail, and marine fleets discussed the potential

for growth in sustainable fuel markets in their respective industries; also sessions discussing bioheat in populous U.S. cities.

Clean Fuels Alliance America is the U.S. trade association representing the entire biodiesel, renewable diesel and sustainable aviation fuel supply chain, including producers, feedstock suppliers and fuel distributors. Clean Fuels Alliance America is funded in part by the United Soybean Board and state soybean checkoff organizations.

To learn more about Clean Fuels Alliance, visit cleanfuels.org.

—Story and photos courtesy of Clean Fuels Alliance America and staff



North Dakota soybean farmers and industry were well represented at the Clean Fuels Alliance Conference as biodiesel and renewable diesel become increasingly important to the state.

Plenty of Incentive to Use Biodiesel



Enderlin farmer Kent Bartholomay had long considered using biodiesel on his farm. Bartholomay, who attended a Fueling Your Future workshop hosted by the North Dakota Soybean Council (NDSC), learned more about the fuel and about a rebate that the NDSC was offering. He decided to give biodiesel a try.

It's a move he doesn't regret.

"I had been thinking about using biodiesel anyway for the lubricity that it provides," Bartholomay says. "The ultra-low sulfur diesel we have now is very dry. The Soybean Council had a meeting in Lisbon where they talked about using biodiesel. They also had a rebate program for something I wanted to use anyway."

The incentive program helped push Bartholomay to give biodiesel a try. He explained that his fuel distributor was also at the NDSC meeting and told him

that he could get biodiesel. Then, Bartholomay had his fuel tank inspected to make sure that it was clean and had biodiesel delivered

in time for the fall field work.

Bartholomay reported no fuel related issues with his equipment through the harvest season. Because he only used about half of the biodiesel that was delivered, Bartholomay added some number one diesel to the tank for the winter.

"My truck hasn't missed a beat all winter," Bartholomay states.

The NDSC held the Fueling Your Future workshops and developed the biodiesel incentive program to familiarize farmers, mechanics and distributors with biodiesel.

"We wanted to get farmers comfortable asking for and using biodiesel," declares NDSC Director of Marketing Jena Bjertness. "A lot of people who registered for the workshops had never used biodiesel."

MEG Corp Director of Operations Lisa Pedderson described how farmers took advantage of the rebate program to try biodiesel.

"New biodiesel users made up 33% of those who received a rebate," Pedderson asserts. "The total gallons of B10/B20 tracked through the program were 77,559, which translates to 11,526 gallons

of B100."

At the time the rebate program was available, diesel prices skyrocketed. The fuel incentive helped to encourage biodiesel use, but with higher fuel prices, the incentive could only do so much to encourage farmers to adopt the fuel. A bigger selling point was that biodiesel is a fuel which farmers have a hand in producing because soybean oil is a primary feedstock for biodiesel.

"We want farmers to use the product that they grow," Bjertness explains. "If incentives helped to get them to try it, then this program was a success."

"We're hoping something that resonates with soybean farmers is that this is their fuel," Pedderson says. "Recent industry studies indicate that biodiesel and now the renewable diesel industry add anywhere from a \$1.65 to \$2 of value per bushel of soybeans. That's the value that would go away if those industries didn't exist. We have to help support them and keep biodiesel demand up."

As for Bartholomay, he intends to keep using the fuel that he has a hand in producing. He encourages other farmers to give biodiesel a try for more than just economic reasons.

"I'll definitely keep using biodiesel. There's no reason not to," Bartholomay contends. "Especially if farmers are raising soybeans, they should give biodiesel a try. The ultra-low diesel is so dry; adding biodiesel is something you can do to improve lubricity and possibly avoid some mechanical issues."

Information about biodiesel manufacturing, availability and the fuel's influence on the value of soybeans can be found at bit.ly/NDSCBiofuels.

Checkoff
Investment

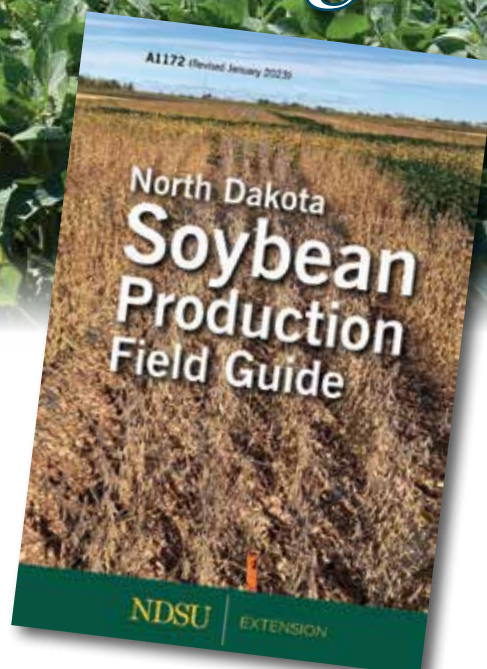


Even in the winter, Enderlin farmer Kent Bartholomay uses a biodiesel blend in some of his equipment. He plans to continue using biodiesel in the spring.

—Story by Daniel Lemke,
photos by staff



Early Progress Sets the Stage



Late-game heroics may make for legendary sports performances, but counting on a rally in the closing minutes is no way to achieve maximum soybean yields. To reach high soybean yield, nothing beats a fast start.

Soybeans can pack on yield through much of the growing season, but it's difficult to overcome yield loss due to a slow start.

"If we can get the crop up and going with adequate populations, it makes the rest of season and the management options easier. As a result, we can maximize soybean yield potential," says Greg Endres, a North Dakota State University (NDSU) Extension cropping systems specialist.

Endres and Hans Kandel, Ph.D., have recently updated the NDSU Soybean Production Field Guide which contains latest production information based on years of research across the state. As stated in the NDSU Soybean Production Guide, farmers need

to consider various aspects of soybean management to achieve high yielding and high-quality crop.

Seed Homework

What varieties farmers plant is one of the key factors determining yield. Endres highly recommends that farmers do their homework to select a variety that works in their fields. While yield potential is a primary consideration, farmers also have to consider their herbicide program. Knowing what weeds are present in each field is important when choosing a weed management program. Herbicide tolerant soybean varieties are a normal part of a weed management plan.

Tolerance to soybean cyst nematode (SCN) is becoming increasingly important across North Dakota. Soil sampling shows that many growers have SCN infestations. The best way to combat SCN is through varieties that are SCN tolerant. Other diseases, including phytophthora and iron deficiency

chlorosis, are also best managed through proper variety selection.

Relative maturity is a key variety selection consideration, too. Endres explains that most farmers push the maturity date because picking longer maturing varieties tends to add more yield than the early finishing competitors. "You don't want a variety that matures early when we still have season left," Endres contends. "We have a short season in North Dakota, so we don't want to waste it by having an early maturing variety unless, of course, we're planting later or there may be some other factors. Variety selection is at the

top of the list, really, for getting that good start in the season. You've got to have a good variety that fits the farm and specifically fits the field."

Timing

Early planting is a key factor that sets soybeans up for success at harvest. Endres states that, once soil conditions are adequate, the tilling is correct and the soil temperature is consistently close to 50 degrees, farmers should consider planting soybeans.

"It would be good to plant early, certainly the first half of May," Endres asserts. "We've done a fair amount of work, either surveying

commercial fields as well as actual small plot research work, and they all indicated yield advantages by planting earlier. There's no cost to that."

There are risks with early planting if there are significant frosts once the young crop has emerged. If that scenario occurs, growers may be forced to replant. If growers are covered by crop insurance, the rewards most likely outweigh the risks.

"We've done a considerable amount of research work comparing early May planting when the conditions are right, compared to planting in the last half of May. We see, on average, about an 8% yield increase with this practice," Endres continues, "so there's opportunity to have higher yield with no direct input costs."

Spacing and Population

Endres says that NDSU has conducted more than three dozen trials on planting rate and row spacing across North Dakota. He maintains that, regardless of where the trial took place, narrow rows outperform wide rows. Plant populations show less consistent results.

"Soybean is quite elastic in its response to plant density; in other words, we can get by with lower plant densities, but we want to optimize yield," Endres explains. "If a grower can establish 150,000 plants per acre, certainly in eastern North Dakota, that would optimize yield."

Endres describes how 150,000 established plants per acre has been NDSU's recommendation for many years; that recommendation was reconfirmed by a recent analysis. "According to research results conducted in western North Dakota," Endres says, "growers can establish a less dense population of about 135,000 plants per acre."

A Comfy Bed

According to Endres there is some flexibility with the planting depth. If soil moisture is adequate,

growers don't need to go too deep. Typically, planting at the one- to one-half inch depth is recommended. If necessary, seed can be planted slightly deeper, down to two inches if the soil surface has dried out. "Growers should expect a lower percent of established plants, especially if small seed is planted or seeds planted to less than optimum soil conditions," Endres asserts.

"Soybeans work well for reduced tillage," Endres contends, "making them a good candidate for planting into small-grain stubble, corn stalks or cover crops. Reduced tillage helps to minimize erosion and preserves soil moisture." Endres reminds growers that soybeans aren't salt tolerant, so saline soils are not a good option for planting soybeans.

A Spring Coat

Endres claims that, if fields have had soybeans in the past two to three years, inoculating the seed with bacteria to help with nitrogen fixing isn't necessary, but that step could be valuable for fields with less frequent soybean history.

Seed treatments to protect against soil and seed borne diseases are becoming a necessity, especially as growers try to push the planting window.

"Using seed treatments is a good strategy, especially if you're planting earlier when soils are a little cooler," Endres says.

Endres explains that fungicide seed treatments can be very useful if weather and soil conditions go bad exposing the seeds to prolonged period of less than ideal soil conditions which prevent seeds from rapid germination and growth.

"We have data to show that when the environment is right for some risks, seed treatment certainly can result in increased plant stands and seed yield," Endres adds.

Modest Appetite

Endres asserts that nitrogen fertilizer does not need to be

applied for soybeans. If soils are low in phosphorus (<7 ppm Olsen test), broadcast or band application (away from seed) can help increase soybean yield. The same is true for potassium. See NDSU Extension's fertilizer tables for the recommended fertilizer amounts based on soil analysis.

"Sometimes, people ask about zinc, which is a micronutrient that corn and dry bean may respond to if soil levels are low (<1 ppm), but soybeans don't respond to zinc," Endres contends. "Soybeans also show an inconsistent yield response to sulfur, compared to canola, corn and cereal crops. Overall, soybean plant nutrition is quite simple."

Calibrating the planting equipment to make sure that it is operating properly is another consideration for growers to achieve better plant establishment.

Checkoff
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"Anything we can do to get as many established plants from the seed we placed in the ground and do it uniformly, both in plant spacing as well as emergence time, will contribute to having high yield potential," Endres concludes.

A copy of the NDSU's updated soybean production guide is available at bit.ly/NDSUSoyProductionGuide23.

For more information on soybean checkoff funded research across the country, including research funded by the North Dakota Soybean Council at NDSU, visit the Soybean Research and Information Network (SRIN) website at soybeanresearchinfo.com.

—Story by Daniel Lemke,
photos by staff



Extension Cropping Systems Specialist Greg Endres (pictured) and Extension Agronomist Hans Kandel, Ph.D., recently updated the NDSU Soybean Production Field Guide.

Going to Bat for Biofuels

As more states adopt low carbon fuel standards and as companies look for ways to lessen their carbon footprint, the potential for renewable fuels such as biodiesel and renewable diesel has never been greater. However, biofuel proponents argue that, for the next three years, volume obligations proposed by the Environmental Protection Agency (EPA), under the Renewable Fuel Standard (RFS), threaten to thwart the industry's growth.

The EPA sets annual biofuel blending targets under the RFS, which was created to reduce greenhouse gas emissions and to expand the nation's renewable fuel sector. Soybean industry leaders say that the EPA's proposed volume requirements do not support that intention, which could leave farmers and biofuel industry partners that have invested in the government's goal in the lurch.

According to data from the EPA's Moderated Transaction System, the U.S. market exceeded 3 billion gallons of biomass-based diesel in 2021 and 2022. The Energy Information Administration's Short Term Energy Outlook, which until this proposal had informed the EPA's decisions on annual RFS volumes, projects a 500-million-gallon increase for biodiesel and renewable diesel consumption in 2023.

Unfortunately, the EPA's proposed volumes for the biomass based diesel category limit growth to 65 million gallons per year through 2025 and, even in the final year, do not reach 3 billion gallons.

"I think the main thing is EPA underestimated what is available for crush capacity and renewable diesel and not just diesel, but food and fuel and fiber and everything based on what's coming online for crush in the U.S.," states Kulm farmer and American Soybean Association (ASA) Vice President Josh Gackle. "I think U.S. soybean farmers are going to be able to meet all of those needs, and (the) EPA just underestimated that and didn't take it into account."

Gackle, Valley City farmer and ASA director Monte Peterson, and Rolette farmer Ryan Pederson provided testimony to the EPA during virtual hearings in January. The growers argued that increased soybean crushing capacity is coming online, which will certainly allow the industry to grow.

"There's just very little growth in the EPA volume," Gackle explains. "I think it sends a signal to the industry that they shouldn't be investing in these plants. But I think there's a different story to tell because we're going to be able to meet all those needs."

Pederson represents the North Dakota Soybean Council on the Clean Fuels Alliance America board, but he spoke about canola due to his experience in that industry. During the EPA hearing, he pointed out that, not only is crushing capacity in the U.S. growing, companies in Canada are also building their processing infrastructure, which will make even more oil available for renewable fuels.

"Clean Fuels presented where we think the volume should be based on feedstock availability, based on current production capability, and we would want EPA levels brought up to our recommendations," Pederson asserts, "because we demonstrated that we have the capability to get there. Truthfully, we're already there on the front years."

Growth for biodiesel and renewable diesel use has been aided by states such as California that have set their own low carbon fuel standards. Biofuels, such as biodiesel and renewable diesel, are drop-in fuels that are helping states meet those standards. Individual state policies are helpful, but Gackle contends that a nationwide policy is necessary.

"There are places like California and other states or regions that are investing in this new technology and this new way to have a liquid fuel," Gackle says. "We need to have a solid government policy as well, that supports the industry. Renewable diesel is going to keep growing, but it could be more difficult if state and federal policy doesn't match up with what we know we can actually do."

In addition to the virtual testimony, written comments have been submitted to the EPA by the North Dakota Soybean Growers Association, ASA, Clean Fuels Alliance America and dozens of other organizations. Early in the summer of 2023, the EPA is expected to announce its final renewable volume obligations for the next three years.

—Story by Daniel Lemke

The EPA's Finalized and Proposed RFS Volumes

Year	Biomass Based Diesel*	Advanced Biofuel* (in excess of cellulosic and biobased diesel)
2020 (Finalized)	2.43	0.49
2021 (Finalized)	2.43	0.84
2022 (Finalized)	2.76	0.86
2023 (proposed)	2.82	0.87
2024 (proposed)	2.89	0.86
2025 (proposed)	2.95	0.87

*Billions of gallons



Green Bison Soy Processing On Target for 2023 Harvest

Construction of the Green Bison Soy Processing facility in Spiritwood is progressing rapidly. The plant is on pace to be operational for the 2023 harvest, giving farmers in the region an option for marketing their soybeans.

“Green Bison Soy Processing posted its first-ever bid to the marketplace in early January 2023 for soybeans to be delivered during harvest with a basis carry into 2024,” says Green Bison Soy Processing President Mike Keller. “I would encourage farmers to contact our grain origination team to establish an account and to request to receive our soybean bids via text and/or email for daily updates.”

The approximately \$350 million facility will have the capacity

to process 150,000 bushels of soybeans per day using state-of-the-art technology. Keller states that the facility is a great example of in-state collaboration and connection between North Dakota’s agriculture and energy industries. Green Bison Soy Processing is a joint venture between ADM and Marathon Petroleum Corporation.

“Green Bison Soy Processing will be sourcing soybeans locally from North Dakota farmers, and then, 100% of the refined soybean oil production in Spiritwood will be delivered to Marathon Petroleum’s refinery in Dickinson for the production of renewable diesel,” Keller explains.

In addition to soybean oil production, soybean meal will be another primary product from the Spiritwood facility. Interest

with growing the state’s animal agriculture industry is accelerating because soybean meal is a staple ingredient for many feed rations.

“While some of the soybean meal produced in Spiritwood will be sold to the export markets, we’re also working together with local industry associations, university extensions and other partners to help increase the local animal ag production market and demand for soybean meal within the state,” Keller asserts.

Keller contends that construction of the new complex has supported hundreds of jobs in the region, and the facility is expected to employ approximately 75 people once operational.

The Green Bison Soy Processing facility will also give farmers a local marketing option.

“We’ll provide a 12-month, year-around competitive local destination for the region’s soybean production,” Keller continues.

Farmers who are interested in establishing an account with Green Bison Soy Processing should contact the company’s grain origination team by phone or email. Keller says that Green Bison Soy Processing will request some basic information from each customer prior to conducting business, which could take up to 24 hours to finalize. The grain origination team can be reached at 1-800-475-4291 or via email at GBSP@GreenBisonSoyProcessing.com.

—Story by Daniel Lemke,
photo courtesy of Green
Bison Soy Processing

Ripe with Opportunity

An innovative program that would pay producers to implement climate-smart practices on their farms has gotten a boost from the U.S. Department of Agriculture (USDA). Rural Investment to Protect our Environment (RIPE) has received \$80 million for a pilot program in North Dakota, Minnesota, Virginia and Arkansas; the program will test the feasibility of rolling out a similar program on a national scale.

Operated through Virginia Tech University, the pilot program, called the RIPE Partnership, will pay producers \$100 per acre or animal unit for the voluntary adoption of climate-smart practices that deliver public environmental benefits. Unlike previous cost sharing programs that put some of the financial burdens of adopting climate-smart practices on producers, proponents say that this program pays producers more than the cost of implementing these practices while also improving the farmers' bottom lines.

"We're thrilled that we got the USDA pilot because we think it shows that our direction is a very valid one that leadership in USDA sees as worth exploring," states RIPE Executive Director Aliza Drewes.

Once the federal funds are released and details about the program are announced, the pilot project will be available for a handful of North Dakota conservation districts that have yet to be determined.

"The great part about the pilot funding is now we can test the pilot program, evaluate it and bring the data back to Congress, and be able to further it in a future farm program," explains Dickinson farmer Ed Kessel, president of the North Dakota Grain Growers

Association, which is one of RIPE's partnering organizations. "This gives us the opportunity to prove it out."

The RIPE Partnership will pay farmers \$100 per acre for practices including cover crops, nutrient management or other approved conservation practices. Unlike other climate-smart programs, the RIPE model doesn't require farmers to change practices. Rather, it rewards farmers who have already adopted conservation practices. The program also goes beyond the goal of reducing greenhouse gas emissions and includes other benefits, such as air and water quality.

"Climate-smart ag programs, both in the private sector and public, have only compensated producers for the greenhouse gas benefits," Drewes contends. "Our difference is that we're saying, regardless of if it's 0.1 or 0.4 tons of greenhouse gas reduced per acre, the greenhouse gas value is not going to cover the cost of the practice for most things, and yet those practices are providing a tremendous amount of water, soil, health, air quality, wildlife and other benefits. Those benefits should be compensated because that is the fair value that producers are delivering and because that's what makes this type of program economically viable for producers to do at scale."

Greater Visions

The RIPE Partnership's pilot program provides an opportunity for organizers to prove the

concept of paying farmers for beneficial practices. The larger goal is to make the program available to all farmers by including it in the 2023 Farm Bill.

"One of the key takeaways for us is to share with producers that the pilot itself is a really great opportunity, but the real story here is about shaping this for a national program that would be available to all producers across the country," Drewes explains. "The pilot project will be available in North Dakota in a handful of conservation districts. If you want to bring the pilot to more conservation districts, we can do that by simply getting it into the farm bill, which is a conversation underway right now."

Drewes asserts that, unlike many private programs which require farmers to change their practices in order to qualify, a more all-encompassing program needs to become available.

"We're saying, let's shift out of that private market mindset that creates all of those types of limitations and say the real need is for the whole country to scale. This is an economic opportunity for all producers," Drewes says. "The private market is great for those who it works for, but for every producer to have an opportunity, we do need a public program for delivering that large-scale public benefit."

Although the pilot project won't be completed before the 2023 Farm Bill is written, Drewes believes that there is enough existing program data to include the basic concept in the bill. Through

the pilot effort, the program could refine some of the ways that benefits would be quantified and could address the ways in which public and private programs could be integrated.

If scaled up nationally, the program could help producers reduce agricultural emissions by 55% and total emissions by 8% after 10 years.

The RIPE Partnership's pilot program will reach an estimated 5,200 operations, representing up to 600,000 acres in the initial four states. If scaled up nationally, proponents presume that as many as 80% of agricultural producers could be enrolled in the program, which would have a significant effect on global carbon emissions. Only about 3% of producers currently participate in carbon reduction programs.

For farmers, \$100 per acre or animal unit provides some security and incentive to try new conservation practices.

"If you haven't done the practice, you have the ability now to try it," Kessel states. "\$100 an acre also buys some insurance on the back side that, if something doesn't go right, you took a yield hit the next year or some unforeseen thing happens and you had a loss, the funds should help cover that risk. Sometimes, it takes a little while to learn how this practice fits your farm."

Details about the pilot program are still being finalized. Producers who are interested in learning more and possibly applying to be part of the pilot program are encouraged to sign up for the RIPE newsletter at RIPEroadmap.org so that they are alerted when pilot opportunities become available later this spring.

—Story by Daniel Lemke



(YOU)

Who's the No. 1 protein source in chicken feed?
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All soybean farmers, including you, are really big in poultry and livestock feed. How? By pooling your resources through your soy checkoff. Learn how your soy checkoff is bringing tangible returns back to you and your operation at unitedsoybean.org/hopper.



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All the Ingredients for GROWTH

Animal-agriculture proponents in North Dakota see the state as ripe for livestock growth, spurred in large part by the expansion of soybean crushing capacity. Increased soybean processing will make soybean meal, a key feed ingredient, more widely available for livestock, but that factor is not the only encouragement for potential growth with animal agriculture. North Dakota's open spaces, sufficient water resources and the opportunity to keep family members involved with the farm operation are other considerations that favor livestock growth.

Despite North Dakota's growing role as a leading grain producer, livestock production in the state has lagged behind neighboring states. An analysis by the Agricultural Utilization Research Institute (AURI) showed that, in comparison to South Dakota and Minnesota, North Dakota's animal ag sector is substantially less robust. North Dakota's estimated ratio of livestock marketing to crop value is around 15% and 85% (2020 statistics), while Minnesota and South Dakota are both closer to a ratio of 45% livestock and 55% crops. The study concludes that exploring the potential to increase livestock presents an opportunity

that would be economically beneficial to the state and regional growers as well as being synergistic with recent investments for oilseed processing facilities.

Reason for Interest

"Animal agriculture is the original value-added agriculture," says Tyler Eschenbaum of A1 Development Solutions, a South Dakota-based firm that works for the responsible development of livestock, processing and other agricultural opportunities.

Eschenbaum explains that there are many reasons why farmers would consider adding livestock to a farm operation, including revenue-stream diversification, manure availability or the opportunity to keep the next generation on the farm. He describes how animal agriculture can also help to sustain small towns.

"Small communities in the Dakotas, outside of Fargo, Sioux Falls or Grand Forks, have all probably lost 5% of their population every

decade for the last 100 years," Eschenbaum states. "We believe they stabilize and come back through livestock—when grain is walked into town, not put on a truck or shuttle train out of town."

Scott German raises hogs on his family farm near Oakes, North Dakota. German says that his father put up hog barns in the late 1990s.

"That was my ticket so I could come back to the farm," German contends.

German explains that they did commercial contract finishing for 15 years. For more than the past decade, they've done gilt development: breeding gilts and sending them off as bred animals to sow farms all over the country.

"It has been a way that's allowed me to come back to the farm," German asserts. "It's a great pathway for young producers. Hog buildings and equipment aren't cheap, but animal agriculture is an avenue for young people to come back. When my dad constructed those barns, everyone thought he was crazy, myself included. But his goal was to allow me to come back, and now, my son who is finishing college is going to farm with us, too."

Dakota Advantages

Eschenbaum and German took part in a panel at the 2023 Northern Corn and Soybean Expo; the session explored the potential for farm diversification through animal agriculture. The discussion highlighted some of the features working in North Dakota's favor.

The increased availability of soybean meal is one attractive feature for livestock production. Feed is a major input cost for most livestock production, whether its dairy, beef, swine or poultry. Locally available ingredients help to hold down the feed costs.

"It doesn't matter the species; if



Oakes farmer Scott German says livestock production can provide an opportunity for more family members to get involved in a farm operation.



Tyler Eschenbaum works to help farmers get animal agriculture enterprises up and running.

you have abundant feed available where you don't have to truck products in, it's a win. It's a win for the soybean producer because, now, he has a local market in the soybean processor," German says. "Local consumption saves the processor money by not having to rail that meal out to the west coast. The more you can consume locally, it's a win-win for everybody."

Biosecurity is a major concern for livestock producers. Having distance between operations helps minimize the risk of disease being transferred from barn to barn. North Dakota's landscape is favorable for that necessary biosecurity.

German states that regulations within the state are not terribly onerous. It has been easy to work with the organizations tasked with animal agriculture and environmental oversight.

Push and Pull

Feed and land availability is helping to raise interest for potential livestock development. Animal ag is being pushed from some areas of the country for business, environmental and other

reasons, which could present an opportunity for North Dakota to pull in new development.

North Dakota State University (NDSU) Livestock Development Specialist John Biermacher, Ph.D., describes how building a thriving livestock industry in North Dakota will take years to accomplish. North Dakota farmers finish about 150,000 head of hogs each year. Raising that number to 2 million animals annually, which is about 8% of what Iowa produces, would require the construction of 185 5,000 head finishing barns.

"It's not going to be a case of let's build it and they'll come, we have to build the industry to supply demand that's growing or take it away from someone else," Biermacher contends. "It's not a year or two process."

Furthering the Process

The pending growth for North Dakota's soybean-processing capacity is spurring many conversations across the state because animal agriculture expansion is a logical next step.

"With construction of soybean processing, this idea of livestock expansion makes incredible sense because that's where the majority of soybean meal goes," asserts Harold Stanislawski, the AURI business and industry development director.

Growth may make sense, but more analysis is likely needed to expand responsibly and effectively.

Among the recommendations from the AURI analysis of North Dakota's livestock industry is the need for an extensive study to more fully understand the livestock load that could be supported in the state. This deeper examination should determine which areas are most amenable to support livestock production. The investigation would include planning and zoning requirements, road infrastructure, energy availability, environmental

assessments, water availability and feedstock availability.

An economic contribution report would also provide more details related to the potential economic influences (at the local level) from the addition of livestock operations and processing facilities. The report would also help illustrate the value-added benefit to the region and the state as well as providing input about the effects from various operation sizes.

"Clarity brings investment," Stanislawski says.

Animal agriculture proponents point out that livestock production would boost other related industries, including feed milling, transportation and meat processing, as well as supporting jobs and creating economic activity.

—Story by Daniel Lemke, photos by Daniel Lemke, Matt Fern and United Soybean Board



Jon Biermacher, Ph.D., recently joined NDSU Extension as a livestock development specialist.

The Cover Crop and Insect Connection



There are many valid reasons why North Dakota farmers are adopting cover crops for their operations.

Cover crops can be very effective with reducing erosion, managing soil moisture, building soil health, increasing the soil's organic matter, suppressing weeds and more. However, entomologists are concerned about insects that overwinter and potentially migrate along the "green bridge," moving from the cover crop to the cash crop.

Cover crops that are still green at planting can act as a host plant until the cash crop germinates. This scenario allows the slow migration of insects from those green crops to cash crops such as soybeans.

Farmers who raise cover crops ahead of soybeans need additional management to keep the insects that call cover crops home from becoming an issue for the soybean plants.

According to North Dakota State University Extension Entomologist Janet Knodel, Ph.D., two key insect pests for soybeans in North Dakota are soybean aphids and grasshoppers. Occasionally, other insect pests, including spider mites, bean leaf beetles, seed corn maggots, potato leafhoppers, cutworms, armyworms and various foliage feeding caterpillars (green cloverworms and thistle caterpillars), also infest soybeans. These insect pests occur sporadically,

and regular scouting is the best method to detect the presence of any insect pests in soybean fields.

"Cover crops can provide a green bridge for some insect pests," Knodel says. "In this case, a hungry insect pest feeding on the cover crop may move over to the soybean cash crop when the cover crop is terminated."

Knodel continues, "Seed corn maggots need decaying vegetation or green manure to survive. Dead, decaying winter cover crops, such as radishes and barley, could become attractive for egg laying in the spring, especially if conditions are cool and wet. Planting too soon after incorporating a green cover crop can lead to a seed corn maggot infestation." Knodel recommends waiting two weeks after incorporating a green cover crop before planting soybeans.

Armyworms migrate into North Dakota each year and usually arrive in June. A spring planted cereal rye, wheat or barley cover crop could be attractive to migrating armyworms for egg laying. Knodel states, "Larvae (caterpillars) will hatch from the eggs and feed on the foliage. When the cover crop is terminated, armyworm larvae can easily move to the soybeans and cause severe defoliation if larval densities are high."

"While there are many benefits of raising cover crops from (an) agronomic standpoint, farmers

need to be aware of potential disease and insect issues related to cover crops," asserts Miki Miheguli, research programs coordinator for the North Dakota Soybean Council. "Cover crops should be evaluated appropriately based on cost and benefits."

Management Required

Even if pest insects are present in the cover crops, proper management can go a long way in keeping the insects from causing yield reducing losses to the cash crops.

"Cover crops should be terminated at least two weeks ahead of the spring planted cash crop," Knodel says. "This could help break any 'green bridge' between the cash crops and disrupt the life cycle of any insect pests present in the cover crop."

Research about insects with a cover crop and their effects on cash crops, such as soybeans, is still relatively new. Despite the benefits that cover crops provide, experts insist that farmers will have to manage the resulting insects.

The type of cover crop that growers use makes a difference. Cover crops from the same family as the cash crop can be problematic. From an insect standpoint, experts recommend that farmers use a grass cover crop with a broadleaf crop and use legume cover crops with grass crops.

Just because insects may be present in the cover crops doesn't mean those insects are all bad. Knodel recommends routine scouting to identify insects that may be present as soybean damaging insect pests or good, beneficial insects, which are also known as natural enemies.

"Research in other states has shown that having a mixture of cover crops can increase arthropod biodiversity, including the natural enemies of insect pests, compared to a monocropping system," Knodel explains.

Cover crops can have a less-

Checkoff
Investment



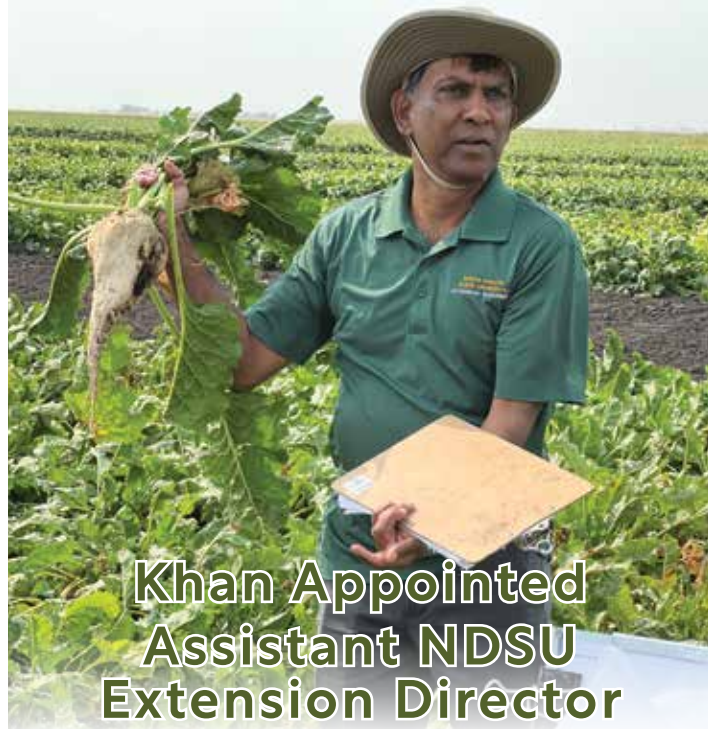
er-known benefit of helping to reduce insect pest populations by increasing natural enemies that "attack and kill" insect pests. Insects such as lady beetles, ground beetles, parasitic wasps and spiders feed on pest insects without damaging cash crops such as soybeans. Knodel says, "Cover crop residue plays an important role in protecting the soil from erosion as well as helping any insect pests and natural enemies overwinter successfully in spite of the extremes of winter."

Knodel states, "Cover crops also provide valuable food resources and habitat for pollinators like bees, butterflies, wasps, flies and beetles as well as natural enemies. However, cover crops need to be allowed to flower to provide nutritious nectar and pollen for pollinators. In most situations, pest fighting cover crops can help minimize pesticide use and input costs for insect pest control and pesticides in the environment while increasing good insects and decreasing bad insects."

While there are many benefits of raising cover crops, such as reducing soil erosion, improving soil health and managing weeds, the cover crops may present an insect challenge for the following year's cash crops because they harbor overwintering populations of both good and bad insects. Farmers need to take all factors into consideration when making soybean crop management decisions.

For more information on soybean checkoff funded research across the country, including research funded by the North Dakota Soybean Council at NDSU, visit the Soybean Research and Information Network (SRIN) website at soybeanresearchinfo.com.

—Story by Daniel Lemke,
photo by staff



Khan Appointed Assistant NDSU Extension Director

Mohamed Khan, Ph.D., has been promoted to the role of assistant director, agriculture and natural resources, for North Dakota State University (NDSU) Extension. Khan assumed the role in October, after serving as the interim director for six months.

Khan earned a Bachelor of Science (B.S.) in agriculture from the University of Guyana; a Master of Science (M.S.) in crop protection from the University of Bath, United Kingdom; and a (Doctor of Philosophy (Ph.D.) in entomology from Clemson University. He joined NDSU in 1999 as an assistant professor and the Extension sugarbeet specialist in the Department of Plant Pathology, a joint position with NDSU Extension and the University of Minnesota Extension. Khan was promoted to associate professor in 2005 and to full professor in 2011.

Because of Khan's role at NDSU Extension and the organization's focus on providing information to growers, *The North Dakota Soybean Grower Magazine* conducted a question-and-answer session to learn more about the new assistant Extension director.

What interested you in getting

involved with the leadership of NDSU Extension?

I have been involved in providing leadership to the sugarbeet Extension program for North Dakota and Minnesota for over two decades, during which time the economic impact of the sugarbeet industry has doubled to over \$5 billion. Since NDSU has made significant investments in my professional development, it was incumbent upon me to heed the call for leadership in the area of agriculture and natural resources. The agricultural industry is one of the major engines of economic growth for North Dakota, contributing more than \$30 billion in business volume, and it impacts the lives of one in every five persons employed in the state. I believe we have a high impact team at NDSU Extension that will play a critical role in North Dakota becoming a diversified and top agricultural producing state in the U.S.

What is most rewarding about the role?

I have always loved helping people. My first job was a school teacher, and it brought me immense personal satisfaction to see my students grow and become productive and responsi-

ble citizens. As an Extension educator, for several decades, this love and satisfaction of helping others has been a blessing. Now, I have the opportunity to provide the tools, skills, expertise and core competencies necessary so that our agents and specialists can provide research-based solutions to help improve the lives, livelihood and communities of our farmers, ranchers, homeowners and entrepreneurs.

Do you have any priority issues you hope to address in your role?

More than 65% of our agents have a B.S. or B.A. and have been employed for less than three years. As such, my highest priority is to ensure that our agents get the necessary training and acquire the skill sets and resources necessary to become confident, capable and competent as they interact and provide solutions to help our producers and stakeholders.

How would you describe the importance of working with commodity groups such as the North Dakota Soybean Council?

I have had the privilege and honor to work for the Sugarbeet Research and Education Board of Minnesota and North Dakota that resulted in our sugar industry becoming more efficient, vertically integrated and successful. I know the importance of getting researchers to listen and learn of the issues faced by our ranchers and farmers so that practical, sustainable and profitable solutions can be developed and delivered by Extension agents and specialists for rapid adoption by our producers. It is very important to work with all our commodity groups since they are responsible for letting us know of the issues and needs faced by their members.

How would you describe the role that Extension plays in supporting North Dakota agriculture?

Extension has always played a role in North Dakota agriculture.

As a matter of fact, Extension education was already taking place in Casselton in 1884, long before Extension was formalized in 1914. In the early days, Extension agents provided recommendations on managing wheat and flax, and discussed the importance of crop diversification and the need for capital. Our Extension agents and specialists have done a phenomenal job of gaining the confidence of our producers so that, today, North Dakota is the top five producing state of 20 commodities. In 1980, we produced 3.5 million bushels of soybeans, valued at \$25 million. Today, our growers, heeding the advice of our Extension personnel, produce over 190 million bushels of soybeans, valued at over \$2 billion.

Are there any particular challenges or opportunities that you see for North Dakota farmers and, in particular, soybean farmers?

There are many challenges faced by our soybean producers. We have to develop strategies to manage herbicide resistant weeds; (to) develop varieties that are not adversely impacted by iron chlorosis, and (to) develop a holistic system for managing soybean cyst nematodes and new and emerging pests. We also have the opportunity to seek new uses for soybean and its byproducts, and to develop a vertically integrated system to include livestock and other animal production systems, such as swine and fisheries, to utilize the many feedstocks abundantly available in North Dakota. In short, I see a bright future for our producers who will become the leaders in using our bountiful resources in a sustainable manner as they go about providing a diverse array of food, feed and fuel for our increasing population worldwide.

—Story by Daniel Lemke, photo courtesy of Mohamed Khan, Ph. D.



Carrying a Message: Northern Soy Marketing Builds Relationships in Thailand

Northern Soy Marketing (NSM) landed in Thailand in January 2023. Farmers and researchers arrived carrying the same message: There's greater value in essential amino acids (EAA) than buyers may realize.

The NSM team, which included North Dakota Soybean Council Director and NSM Secretary/Treasurer Dan Spiekermeier, worked to change the language about true protein quality during a seminar, meetings and site visits to Thai feed mills and vegetable oil companies.

"The priority is to communicate to buyers that protein is not the end all measure for quality in soybeans," says Seth Naeve, Ph.D., a University of Minnesota soybean researcher. "For many years, we have been using protein as the primary measure for quality, and it isn't a good measure overall. Therefore, we are trying to help them measure soybeans on utilizing better measures, such as essential amino acid balance."

Naeve conducts checkoff supported research on behalf of NSM. Through his research, he has found that northern grown beans contain lower levels of crude protein but higher EAA levels.

"My perspective with this is to lay the groundwork for (animal nutritionist) Dr. Bob Swick to explain the benefits of utilizing northern-grown soy in animal feed rations," Naeve states.

Swick, who lives in Australia,

spent years building relationships with Southeast Asian countries and returned to Thailand excited to rekindle those relationships during the meetings and visits.

"A lot of it is about building relationships, so people will listen to the message you have," Swick says. "I've been coming to Thailand since 1998, and it's about showcasing the value our products can have for them."

During the mission, Swick spent time building a rapport with companies by articulating the value of northern grown soybeans.

"My expertise is in poultry nutrition. This is the perfect place for me to interact with people producing poultry," Swick explains. "My message is to not just look at crude protein but to look at essential amino acids because chickens and other animals consume that meal. They don't have a requirement for protein but have a requirement for digestible amino acids."

Although there was pushback from buyers regarding crude protein and the price of U.S. soybeans, NSM board members saw opportunities for increased purchases of U.S. soybeans in the future.

One opportunity that jumped out to Spiekermeier was the sustainability of U.S. soybeans. Farming practices in the U.S. position American soybean growers from the pack, he says.

"What I liked to showcase about our farm to the Thai people is the sustainability of how

we do things in the United States and specifically on our farm," Spiekermeier states. "We strip-till and no-till and are always looking for ways to be more sustainable. We have a lower carbon footprint, and a lot of buyers are looking for things like that."

Spiekermeier also focuses on the core messaging from NSM.

"This mission really gave us the ability to broadcast the benefits of critical amino acids in our soybeans," Spiekermeier asserts. "We hope that buyers make the jump to purchase northern grown soybeans and see the benefits that we have seen through research."

Soy Many Opportunities

Thailand's populous poultry production ranks fourth in the world, according to the U.S. Department of Agriculture's (USDA) Foreign Ag Service. The

country, which has a population of roughly 71 million, purchased 4.1 MMT of whole beans and 2.9 MMT of soybean meal in MY2020/21.

Of that market size, the U.S. exported 1.1 MMT of whole soybeans and 0 MMT of soybean meal to Thailand.

While some companies may not quite be ready to change their perspective, NSM is playing the long game. The organization hopes to influence future purchasing decisions by building connections and giving buyers the content and resources that companies need to better understand the value of northern grown beans.

"The opportunities are there," farmer and NSM Chairman Patrick O'Leary declares. "Finding the right people to make the commitment is the challenge."

NSM's outreach efforts will continue throughout 2023 by visiting with other Southeast Asian countries to further communicate the value of northern grown soybeans. In February, the group traveled to Indonesia to spread its EAA message. To learn more about EAA's value, visit soyquality.com.

—Story and photos courtesy of
Northern Soy Marketing



During their January 2023 visit, Dan Spiekermeier, far left, and the other NSM team members made numerous site visits to feed mills, vegetable oil companies and other key companies purchasing soybeans.



Identity Preserved International Summit Connects Farmers, Suppliers with Foreign Buyers

More than 150 people, including 50-plus international guests, attend first-ever conference



The Specialty Soya and Grains Alliance's (SSGA) inaugural Identity Preserved International Summit took place January 11-13 in Hawaii, the "Crossroads of the Pacific." An easy flight from both the U.S. and Asia, this location provided a centralized place where U.S. growers and suppliers of identity preserved soybeans and grains could meet with foreign buyers and could discuss current trends and issues for the industry. The event was devoted exclusively to the specialty field crop sector of agriculture, and farmers who grow identity preserved soybeans took center stage.

Among the 150-plus attendees at the first-of-its-kind conference were more than 50 international guests who traveled from South Korea, Japan, Vietnam, the Philippines, Thailand, Indonesia, Myanmar, Cambodia, Nepal and India for in-depth discussions and networking, along with presentations on supply and demand, shipping and transportation, crop conditions and availability, and more.

Farmers were a vital part of the agenda, and the individuals who grow identity preserved soybeans and other specialty crops were able to explain the work and challenges that go into growing the specialty crops to the foreign buyers who purchase or consider purchasing

these crops to make high quality food products.

"This event and many of SSGA's efforts would not be possible without the great support of U.S. soybean farmers through their checkoff dollars," SSGA Executive Director Eric Wenberg says. "Our job is to convince the foreign customer that it's worth it to pay more for high quality, variety specific, identity preserved soybeans. Not only will those crops improve the quality of their own products, but premiums for those crops ultimately make their way to the farmer who grows them."

JP Lueck, a North Dakota farmer and North Dakota Soybean Council (NDSC) board member from Spiritwood, participated in the event. He introduced speakers for the Economics, Logistics and Commodity Outlook session.

"The North Dakota Soybean Council appreciates the Identity Preserved International Summit for the potential to create and expand identity preserved soybean markets for North Dakota farmers," Lueck states. "In 2022, North Dakota farmers produced over 200 million bushels of soybeans, with about 15 million bushels being identity preserved. This event allows producers and buyers to network to create new relationships to develop markets for soybeans grown in North Dakota."

North Dakota Soybean Council Director JP Lueck introduced speakers in the in the Economics, Logistics and Commodity Outlook session.

Farmers in attendance appreciated that the Identity Preserved International Summit put representatives of the entire value chain in the same room together. That group included growers, processors, shippers and others involved with transportation, along with international customers and food manufacturers.

"These are the best companies in the world who do this – on both sides of the ocean," Wenberg asserts. "The Identity Preserved International Summit gave them a chance to have real dialogue about one of the fast-growing sectors of agriculture."

SSGA Chairman Bob Sinner of North Dakota-based SB&B Foods says that the Identity Preserved International Summit put the right people in the room for conversations about a small, but significant, sector of U.S. agriculture, one with a growing demand throughout the world.

"Relationships are critical in this industry," Sinner contends. "It's important that we understand our business-partner challenges before we, together, can capture new opportunities. Suppliers and food manufacturers can grow each other's businesses by collaborating to imagine, create and implement new ideas."

Initial reaction to the summit was positive, with 82% of foreign participants saying that they are customers of U.S. identity preserved field crops and/or that they intend to purchase identity preserved products following the event.

Besides the farmer panel, other session topics included ocean shipping trends; Economics, Logistics and Commodity Outlook; the future of seed; innovation in manufacturing; testing solutions for quality food products; trade impact of maximum residue levels; and a workshop on

the U.S. Identity Preserved assurance plan, brand mark and website: usidentitypreserved.org.

The summit's keynote speaker was Suzanne Vares-Lum, president of the East-West Center, an institute for education, dialogue and research between the world's two hemispheres that was established in Hawaii in 1960. She explained how Hawaii has long been "center stage of many opportunities for progress," and that scenario was, indeed, the case during the SSGA's summit where East met West at a centralized location in order to discuss high quality, high value, identity preserved soybeans and grains.

"You know why you matter to each other, or you wouldn't be here," Vares-Lum stated.

The SSGA is a national association of companies that are focused on producing, processing and shipping U.S. Identity Preserved field crops and their related products worldwide. Its mission is to provide resources that communicate the quality, diversity and availability of the products and to support allied companies throughout the value chain, including, but not limited to, agronomy, data, finance, insurance, logistics and transportation. The SSGA is supported by the South Dakota Soybean Research & Promotion Council, the Ohio Soybean Council, the Illinois Soybean Association, the Minnesota Soybean Research & Promotion Council, the North Dakota Soybean Council and the Wisconsin Soybean Marketing Board.

To learn more about Specialty Soya and Grains Alliance, visit soyagrainalliance.org.

—Story and photos courtesy of Specialty Soya and Grains Alliance

Checkoff Investment



Culinary Opportunities with Soy

In October 2022, culinary students from North Dakota State College of Science (NDSCS) attended the North Dakota Soybean Council's (NDSC) Soy Nutrition Workshop and Farm Tour.

These students had the opportunity to visit NDSC Treasurer Jim Thompson's farm as he harvested soybeans near Page, North Dakota, and some students were fortunate enough to take a ride in the combine.

"The participants were grateful for the opportunity to see the harvest and see that whole farm-to-table journey soybeans take," says Shireen Alemadi, NDSC outreach and education coordinator.

"These students are the future of the culinary world. It is so important that they understand agriculture and how plant based foods such as soy fit into menu applications," states Linda Funk, executive director of the Soyfoods Council.

At the end of the workshop, a soy recipe contest was announced to the culinary students. There were three categories: appetizers, entrees and desserts. The top three winners for each category would be provided scholarship funds to help with tuition.

For most of the students, cooking with soy and soy based products was a new experience. "I knew soy is a growing food trend in restaurants and food service, but I had never attempted to utilize it in recipes before," explains Sean Maddock, a first-year culinary student from Davenport, North Dakota.

The recipe contest allowed students to take the information and experience they gained in October and to create delicious recipes.

"I enjoyed working with soy products," asserts Grace Stumpf, a second-year culinary student from Thompson, North Dakota.



NDSCS culinary students Grace Stumpf, Trisha Laveau, and Grace Madler showcase their first-place dishes.

"There is so many ways to include these products to enhance the flavors of meals and dishes that it

is pretty simple to include them in everyday meals."

"It opened a whole new world



Trisha Laveau's southwest TVP spring rolls with silken tofu dippin' sauce won main dish first place.



Grace Stumpf's miso-ginger marinated salmon with brown rice, pineapple edamame salsa, and honey soy glaze won appetizer first place.

of cooking and diverse ways of incorporating new ingredients into foods you are already familiar making,” declares Amber Gagnon, a first-year culinary student from Belcourt, North Dakota. “Most everyone is on track to eat healthier foods, and that is exactly what soy is, a healthy superfood.”

To find all recipes, please visit bit.ly/NDSCsoyonyourplate.

—Story and photos by staff



Grace Madler's vanilla soy milk ice cream with caramel, soynut butter and chocolate covered soynuts won dessert first place.



NDSCS culinary students Amber Gagnon and Grace Madler showcase their second-place dishes.



NDSCS culinary students Sean Maddock and Abigail Schaerfer showcase their third-place dishes.

—Story continued from page 8

(USDA) funds to assist the feed mill with innovation challenges by providing technical training and more. Additionally, Redmann visited Siem Reap to tour a fabrication center that makes in-pond raceway systems (IPRS) that WISHH had custom designed to meet Cambodia's unique challenges, including extreme water level fluctuations between wet and dry seasons. The fish raceways are valuable as Cambodian farmers work with WISHH to increase their productivity and switch to soy-based commercial feeds.

Redmann also met with representatives of the Cambodian Aquaculture Association (CAA) that WISHH launched through the USDA-funded Food for Progress Project. Fish farmers and distributors, feed millers and other aquaculture industry representatives are

joining the association, which also builds long term trade relationships for U.S. soybean growers. “CAA has already proven its worth as a strong voice for their aquaculture industry,” Redmann reports. “The organization has now ballooned to nearly 1,000 members representing all sections of the Cambodian fishing industry. As the market for U.S. soy continues to strengthen in this sector, CAA's membership will play a vital part in sustaining trade for soybean growers in the region.”

While in Cambodia, Redmann participated in an animal feed conference. The conference provided value chain members with an update on the soybean meal supply and demand in the 2023 market, with comments from North Dakota soybean processor Green Bison Soy Processing.

The event also discussed the importance of essential amino acids as

a measure of soybean meal quality, highlighting soybeans from North Dakota in the process.

Redmann then traveled to Vietnam with five Cambodian feed millers to meet with Vietnamese companies that handle U.S. soybean meal and toured a port facility. Throughout the years, more Cambodian feed millers have begun purchasing their soybean meal requirements from Vietnamese brokers and importers and then shipping the product on river barges to the feed mill. For this visit, WISHH coordinated with the with the U.S. Soybean Export Council, which supports trade development in more mature markets for U.S. soy.

At the conclusion of the WISHH mission, Redmann noted the continued growth in the region, remarking on the long-term prospects for soybean growers. “Perhaps the most impressive thing

about this mission is the sheer breadth of updates we soybean growers were able to gather,” Redmann says. “From aquaculture to the human foods program, WISHH is cultivating the market for U.S. soy in Southeast Asia, particularly in Cambodia. I'm pleased that WISHH leverages support from several funding sources to blaze a trail for trade for U.S. soy.”

WISHH connects trade and development across global market systems. U.S. soybean growers lead WISHH's work, which improves global food security and builds economic growth through the power of soy protein for human foods and livestock and aquaculture feeds. WISHH's strategic partnerships span 28 countries in sub-Saharan Africa, Asia and Latin America. Learn more at WISHH.org.

—Story and photo courtesy of ASA/WISHH




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CASSELTON CRUSH PLANT GROWS THROUGH THE WINTER



Construction progress on the NDSP site near Casselton has continued through the winter months.

Winter may not be the ideal time for construction in North Dakota, but progress on the North Dakota Soybean Processors (NDSP) soybean processing facility in Cas-

selton has forged ahead despite the wintry conditions.

NDSP is a joint venture formed by a partnership of Minnesota Soybean Processors and CGB Enterprises, Inc., and the plant is expected to process 42.5 million

bushels of soybeans in its first year. The plant will produce soybean oil, meal and soy hull pellets.

"We broke ground in August, but we needed to wait for air quality permits before construction could begin," says NDSP Commercial Manager Bill McBee. "We received those permits in November."

McBee states that, despite having to work through winter weather, project construction is moving forward as expected. Favorable fall weather allowed work to progress. Crews are now doing foundation work and pouring concrete. Construction will ramp up in earnest in the spring.

"We're on schedule," McBee explains. "We had a good fall, and crews were able to get a lot of dirt work done."

McBee describes how the goal is for the NDSP plant to begin purchasing soybeans from area farmers by mid-2024, and the plant is expected to be fully operational by the fall of 2024.

"I'm confident that we will be ready," McBee asserts.

Currently, a high percentage of North Dakota soybeans are exported as whole beans. McBee,

who will be making soybean purchases for the Casselton facility as well as leading sales and hedging, expects the plant to offer multiple positive effects for farmers, including an improved basis.

"The basis will be stronger for farmers in the region. Growers with on farm storage will be at a strong financial advantage," McBee says. "The advantage of domestic crush like this is that we will need soybeans 24 hours a day, seven days a week. We need beans every day, and that will result in a steady market for area farmers. The economic impact of this facility is immense and will be good for the agricultural community and state of North Dakota as a whole."

With increasing supplies of protein meal, a staple ingredient for livestock feed, McBee hopes that the NDSP crushing facility will also translate to growth for North Dakota animal agriculture.

"Hopefully it will spur livestock to take advantage of the availability of soybean meal. If the meal supply is there, that should encourage livestock development," McBee states.

—Story by Daniel Lemke,
photo courtesy of NDSP and staff



Bill McBee serves as North Dakota Soybean Processors Commercial Manager.

NDSGA Changes with the Times

North Dakota's soybean industry continues to grow and mature, precipitating the need for the North Dakota Soybean Growers Association (NDSGA) to adjust to the ever-evolving landscape.

At the 2023 NDSGA annual meeting, held in conjunction with the Northern Corn and Soybean Expo, grower leaders made several changes to the organization's bylaws to represent the state's soybean farmers more accurately and effectively.

"Our biggest priority is to make sure farmers have excellent representation on issues that we all deal with in our daily operations, whether we are helping mold our state or national policies," says Kasey Bitz, NDSGA president.

Among the changes approved by NDSGA members was a move to increase the number of board members from 14 to 15. Growth in the state's soybean production and NDSGA membership means that North Dakota was able to add a third director to the American Soybean Association (ASA). Justin Sherlock of Dazey now joins Josh Gackle of Kulm and Monte Peterson of Valley City as ASA representatives.

Other changes approved included revising the counties in each of the state's eight NDSGA districts, effective July 1, 2023, with varied terms for the elected representatives. Districts now include the following counties:

District 1. Dickey, Ransom, Richland and Sargent Counties:
One director, 2-year term

District 2. Adams, Bowman, Emmons, Grant, Hettinger, LaMoure, Logan, McIntosh, Sioux and Slope Counties:
One director, 1-year term

District 3. Cass, Griggs, Steele and Traill Counties:
One director, 1-year term

District 4. Barnes, Kidder and Stutsman Counties:
One director, 3-year term

District 5. Benson, Eddy, Foster, Nelson, and Wells Counties:
One director, 3-year term

District 6. Cavalier, Grand Forks, Pembina, Towner, Ramsey and Walsh Counties:
One director, 3-year term

District 7. Bottineau, Burke, McHenry, Pierce, Rolette, Renville and Ward Counties:
One director, 2-year term

District 8. Billings, Burleigh, Divide, Dunn, Sheridan, Golden Valley, McKenzie, McLean, Mercer, Morton, Mountrail, Oliver, Stark and Williams Counties:
One director, 2-year term

In addition to adopting the updated bylaws, several farmers were elected at the annual meeting to serve on the NDSGA board.

District 1: Chris McDonald of Leonard was re-elected.

District 2: Kasey Bitz of LaMoure was re-elected.

District 3: Spencer Endrud of Buxton was re-elected.

District 4: Dustin Helmick of Courtney was elected.

District 5: Caylor Rosenau of Carrington was elected.

District 6: This seat is currently vacant.

District 7: Joshua Stutrud of Barton was re-elected.

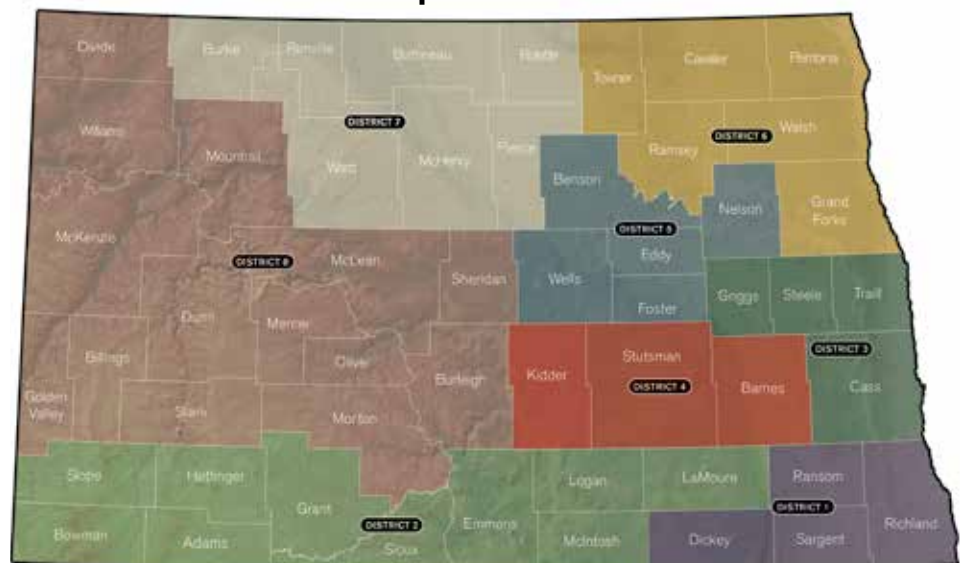
District 8: Mike Doll of New Salem was elected.

Along with their roles on the NDSGA, some North Dakota farmers have a leading role with key soybean organizations. Josh Gackle is currently the ASA vice president, and Monte Peterson recently concluded his term as chairman of the U.S. Soybean Export Council. Both Gackle and Peterson provided updates about their organizations' activities and priorities to the annual meeting's attendees.

At the annual meeting, three farmers were recognized for their service to the NDSGA. Greg Gussiaas of Carrington, Ryan Pederson of Rolette and Mike Appert of Hazelton all completed their service and will term off the board June 30.

—Story by Daniel Lemke

New NDSGA District Map



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Getting to Know the NDSC County Representative



Steven Pfeifer
Bowbells, North Dakota

Tell us about your farm.

Our farm is by Bowbells, and we are small grain producers. Typically, we are about one-third soybeans, one-third wheat and one-third canola on a normal year.

What do you like best about farming?

I enjoy that there is something different every day. There are no two days that are the same on the farm. There is also the flexibility of being able to do many different jobs within farming that is also appealing.

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

I always knew it was going to be something that I would end up

doing. I studied engineering while my dad was still active in farming since our farming operation was not big enough to support the two of us at the time. Even while I was studying engineering, I was working at Case in Fargo, so I was still involved in agriculture. I always knew I would end up farming full time one way or another.

Why did you get involved with the North Dakota Soybean Council as a county representative?

I wanted to provide representation for our area of the state. Beans are not a large presence where I am from. It felt like we were on an island from the rest of the state, so I wanted to bring

that representation to this side of the state.

Why are soybeans part of your crop mix?

I like what soybeans do for my soil; it adds a nice mix to my operation. It fits well into my crop rotation by improving soil health and suppressing weeds. It's also nice to have the flexibility of a different crop in the fields.

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

I would say higher input costs are one of the larger issues facing North Dakota farmers today. It is extremely hard to expand operations in an affordable way these days. Availability and cost of goods will be at the top of the list one way or another.

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

The precision side of agriculture has changed since I began farming. When I came back, we weren't doing variable rate on anything, but now, we do variable-rate fertilizer and many other things on our operation. Advancements in the Seed and Spray Technology have also changed farming since I've been involved.

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

I think selecting varieties based on different soil types will become

more present in our operation in the upcoming years. We also hope to incorporate more precision agriculture technologies into our farming practices. We plan to find a niche to maximize every acre, rather than blanket solutions.

What do you like to do outside farming?

My wife, two children and I travel around all winter for basketball games. We also do dirt circle track racing in the summer.

If you could go anywhere, where would it be?

Somewhere warm with friends and family during the cold North Dakota winter.

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

I would have to say data acquisition in the cab: whether in the sprayer or the combine. Equipment that can acquire data will help us make better farming decisions.

—Story and photo by staff

Steven 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, please visit ndsoybean.org/council-election

Getting to Know the Expert



Febina Mathew, Ph. D.
North Dakota State University Plant Pathologist

Where did you grow up?

I am originally from India but grew up in the United Arab Emirates.

Tell us about your education.

I completed my undergraduate studies in biotechnology and biochemical engineering at the

Indian Institute of Technology, Kharagpur, India. I received my M.S. and Ph.D. degrees in plant pathology at North Dakota State University, Fargo.

What interested you in plant pathology?

My grandparents were farmers in India, and they often talked

about how diseases impacted crop yield and quality. Their experiences sparked my interest in understanding how plant diseases emerge and how disease management strategies are developed so that farmers see reduced yield losses.

What brought you to NDSU?

North Dakota State University is a very student-focused, research university, which for me as a student meant having positive and lifelong implications for my academic development. The Department of Plant Pathology has one of the top-quality programs in plant pathology in the U.S., and the faculty members provide students with a solid footing in research to help them be on sustainable career paths. In addition, students feel a sense of belonging in the department, which makes them highly successful in their future endeavors.

What is the focus of your work at NDSU?

I study the biology of pathogens affecting broadleaf and oilseed crops, with a heavy focus on soybean, and how these

organisms interact with their hosts, leading to the development of disease management strategies with an emphasis on fungicides and host resistance.

What's most rewarding about the research you are doing?

I derive satisfaction from helping farmers and the agricultural industry through my research by solving their production problems. In addition, I have had the privilege of mentoring several students, including post-doctoral, graduate and undergraduate, from diverse backgrounds, including women and Native American communities, the last few years. Watching them develop self-confidence and skills is a fabulous payoff for the time and effort I spent advising them.

What do you like to do outside work?

I love to travel, dance and catch up with family!

—Story by Daniel Lemke,
photo by staff

Bean Briefs

Soy Leaders Urge Crop Insurance Protection

The American Soybean Association (ASA) and more than 60 members of the Crop Insurance Coalition are urging Congress and the administration to oppose harmful cuts to the federal crop insurance program during the upcoming Fiscal Year 2024 budget and appropriation processes.

The federal crop insurance pro-

gram is administered through the U.S. Department of Agriculture's (USDA) Risk Management Agency. Federal crop insurance is structured so that private insurers, the federal government and individual farmers have a financial stake in the policy, thus ensuring the program's integrity.

Crop insurance is a vital tool for soy growers and other ag producers. In letters sent to members of Congress, the groups emphasized

how a strong safety net is even more imperative because growers have faced mounting uncertainties, ranging from extreme weather to market disruptions, due to the pandemic and more over the past several years.

The groups highlighted how crop insurance supports conservation efforts and, in turn, is a good investment for taxpayers.

According to the coalition, farmers and ranchers spent more than

\$6 billion last year to purchase crop insurance policies from the private sector through a USDA-regulated program. Private sector companies compete for farmers' businesses and quickly deliver assistance to farmers, typically within just a few weeks. The structure of the crop insurance program allows producers to customize their policies to their

—Story continued on page 34

—*Story continued from page 33*

individual farm and financial needs while also facilitating additional opportunities for producers to engage in conservation practices.

Lawmakers Support Added Market Funding

A bipartisan group of lawmakers has reintroduced the Expanding Agricultural Exports Act of 2023 to double the U.S. Department of Agriculture's (USDA) Market Access Program (MAP) and Foreign Market Development (FMD) program funding.

The legislation would increase mandatory MAP funding from \$200 million to \$400 million annually and would increase mandatory FMD funding from \$34.5 million to \$69 million annually.

MAP and FMD are vital to U.S. soybean farmers because the programs provide opportunities to develop new markets and increase the demand for U.S. products in foreign markets. Utilizing MAP and FMD funds, the American Soybean Association (ASA)—through the World Initiative for Soy in Human Health (WISHH) and the U.S. Soybean Export Council (USSEC)—has leveraged those dollars to increase market access, to address technical barriers to entry, and to create on-the-ground capacity and demand for U.S. soy.

A May 2022 econometric study conducted by IHS Markit and ag economists at Texas A&M University predicted that doubling the funding for these programs would generate an additional \$44.4 billion in U.S. ag exports during 2024-2029. This investment would directly benefit farmers, livestock producers, dairy operators and small businesses as they work to maintain and expand their global presence. Additionally, these programs generate a net return

of \$24.50 for every dollar spent and have contributed to the creation of 225,800 full- and part-time jobs across the U.S. economy.

The value of agricultural exports, when adjusted for inflation, has approximately doubled in the past 30 years. While there are many reasons for this increase, research has shown that part of the growth can be attributed to programs that help market U.S. agricultural goods to foreign buyers. MAP and FMD are two programs that have been important in expanding U.S. exports; however, MAP funding hasn't increased since 2006, and FMD funding hasn't increased for two decades.

House Republicans Urge the Administration to Rescind the WOTUS Rule

A majority of House Republicans are urging President Biden to rescind the recently released Waters of the U.S. (WOTUS) rule. In a letter to the administration, the legislators argue that the new rule does not provide the much-needed clarity about defined navigable waters.

The lawmakers are also concerned about changes in the new rule regarding agency permits that could be required for normal farming activities, such as removing debris and vegetation from a ditch, applying pesticides, changing the type of crops grown on a field, or constructing a fence or pond. The letter also points out that this new rule completely discounts a pending United States Supreme Court decision for *Sackett v. EPA*, which will address the scope of the agency's authority which was granted by Congress in the Clean Water Act.

Ag Groups Push for Biotechnology Regulatory Modernization

The American Soybean Association (ASA) submitted comments and has joined two coalitions' comments in response to a request for information that was published by the administration to assist with identifying regulatory ambiguities, gaps, inefficiencies or uncertainties in the Coordinated Framework for the Regulation of Biotechnology.

For more than 20 years, agricultural biotechnology has offered numerous benefits, including environmental benefits, through crop trait varieties, yet ongoing regulatory hurdles continue challenging access to these valuable tools.

"Biotechnology and novel genetic techniques, including gene editing, have immense potential to improve agriculture, making our food supply safer, more abundant and more affordable, all while reducing the environmental footprint of production," the ASA states in its comments. "However, these opportunities are not a given. For the past three decades, biotechnology has faced significant domestic regulation, often not risk based or grounded in science, which has significantly limited its applications."

The ASA's comments specifically underscore concerns with the Environmental Protection Agency's (EPA) proposed draft rule for plant-incorporated protectants (PIPs), provide data emphasizing the effects of the Food and Drug Administration's (FDA) flawed regulatory approach for animal biotechnology and highlight plant-grown proteins as a potential future innovation.

The ASA continues emphasizing the need for timely, science-based approvals and stands ready to assist with developing the predictable, efficient and transparent regulatory system necessary to support the safe use of these vital innovations.

Proposed Changes to School Meals Could Address Growers' Priorities

The U.S. Department of Agriculture (USDA) has announced some proposed changes for school-meal requirements to support child nutrition and health.

Of interest to U.S. soy, the proposal would create a new name for the meal-component category that includes commercial and standardized tofu and other soy products: The category name would change from "meat/meat alternate" to "protein sources." Soy growers have long supported the increased use of soy protein in school lunches while also opposing the labeling of plant-based food products as meat, and this change may address both soy priorities.

Also in the proposal, the USDA is specifically requesting feedback about the use of "fortified soy beverages" in school lunches. The National School Lunch Act (NSLA) requires that students who wish to have access to soy beverages as a dairy alternative must have a doctor's note in addition to other requirements that create burdens for schools and families, meaning that some schools opt not to provide soymilk substitutes to children who prefer not to drink cow's milk. While the USDA does not have the authority to change the NSLA requirements, a better understanding of the challenges associated with the current process may help the USDA to address the concerns raised by commenters. Soy growers oppose the doctor's note requirement and will use this opportunity to provide feedback to the USDA.

—*Story by Daniel Lemke*

WISHH works with international associations to build lasting potential for **U.S. soy** trade.



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