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Explore Specialty
Crops and Recipes

Sugarbeets
Are a Sweet
Industry



SISTER ACT

3 Farm Daughters launches locally sourced, high-fiber pasta line



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Over **100 YEARS**



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The Sproule sisters started their own pasta company, 3 Farm Daughters, a Pride of Dakota member, in Grand Forks.

Photo by Jill Ockhardt Blaufuss

PHOTOS, FROM TOP: JILL OCKHARDT BLAUFUSS; SOOMA STUDIOS

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Where some only see a handful of beans, we see endless possibilities. That's why, from cooking oil to candles, U.S. Soy can now be found in nearly every room in the house. Discover how soy could be used in your home below.



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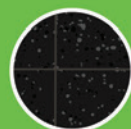
SOY GLUE



SEALANT



TIRES



ASPHALT



TURF

Discover the many ways your state and national checkoff dollars support the development of soy products in the home by visiting unitedsoybean.org and ndsoybean.org.



North Dakota AGRICULTURE

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Commissioner Goehring is a third-generation farmer who operates a 2,800-acre, no-till farm near Menoken in south-central North Dakota with his son, Dustin.

Welcome to the eighth edition of *North Dakota Agriculture!*

Whether you live in our beautiful state or are just visiting, we invite you to take some time to get to know a few of our 25,000 farmers and ranchers and explore this vital industry where one in four jobs in the state are supported by agriculture.

In this issue, we'll tell you about three sisters who created the 3 Farm Daughters brand to bring high-fiber pasta to pantries across the nation.

We'll show you how the National Agricultural Genotyping Center helps us stay ahead of emerging threats to agriculture.

You'll learn about the new *Fresh from North Dakota* webisode series, which showcases local North Dakota specialty crops with easy-to-make recipes.

We'll tell you about recently passed livestock-friendly legislation that aims to bring more animal agriculture to North Dakota.

Come along with us as we tell you about more options to ship products with intermodal service, how one unique company is growing greens and herbs vertically, our growing bison industry, and the big impact made by sugarbeets. You'll find the story of how zoogoers learn about bees through new bee observation units at one local zoo.

And finally, you'll hear how FFA is bringing new programs, new chapters and new teachers to its program, how agriculture comes to life for fourth graders, and all the latest stats on North Dakota agriculture.

North Dakota has been blessed with abundant resources and a varied landscape that enable our farmers and ranchers to produce food, feed, fiber and fuel for families near and far. It is my hope that by sharing an in-depth look at North Dakota agriculture, you will come away with a greater understanding and appreciation for the men and women who produce the wide array of products that are used here, across the nation and around the world.

While it's my honor to serve as agriculture commissioner, I am also a third-generation farmer. My son and I operate a 2,800-acre, no-till farm near Menoken in south central North Dakota, where we raise corn, soybeans, spring wheat, sunflowers and barley. As farmers and ranchers, we want to show you how agriculture touches all of our lives.

Enjoy this issue of *North Dakota Agriculture!*

Sincerely,

Doug Goehring
 North Dakota Agriculture Commissioner

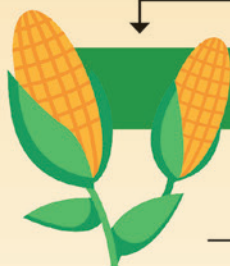
ETHANOL

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Economic contribution

North Dakota's ethanol industry annually contributes:

- \$1.7 billion in economic impact
- 1,200 direct and indirect jobs

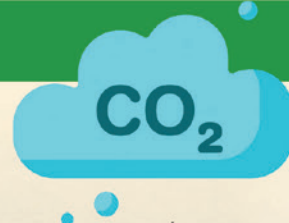


Homegrown

- Uses 40-60% of North Dakota's corn annually
- Purchases 80% of its corn from North Dakota farmers

Carbon-conscious

- North Dakota is a national leader in carbon capture and storage (CCS) and home to two of the three commercial CCS projects operating in the U.S.
- Capturing and permanently storing approximately 375K metric tons per year - the same effect as removing about 75K vehicles off the road



Cost-effective

- Unleaded88 (E15) saved Americans up to \$1 per gallon in the summer 2022

Opportunities

North Dakota's ethanol industry is well positioned to take advantage of several future opportunities, including:

- Sustainable aviation fuel (SAF)
- Biochemicals
- High-protein feed for livestock, pet food and aquaculture



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North Dakota Ag

An overview of the state's food, farming and agribusiness sectors



North Dakota ranks No. 1 in the U.S. for production of:

- Canola **(85%)**
- Flaxseed **(79%)**
- Sunflowers **(47.7%)**
- Dry edible beans **(39.9%)**
- Honey **(24.9%)**
- Oats **(23.4%)**
- Rye **(22.4%)**
- All wheat **(18.2%)**

25,068

Total number of farms

38.5M

Total number of farm acres



1,537

Average farm size in acres



North Dakota dairies produced **319 million** pounds of milk in 2022.

In 2022, North Dakota's top five agricultural exports were:

- All wheat **(\$1.5 billion)**
- Soybeans **(\$1.4 billion)**
- Other oilseeds and products **(\$765 million)**
- Corn **(\$421 million)**
- Feeds and other feed grains **(\$309 million)**

7,306

Principal female producers



86% of North Dakota farms are family-owned.

Sources: North Dakota Department of Agriculture, U.S. Department of Agriculture

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Find even more online about North Dakota agriculture, from education to agritourism and more.



Shop in Season

When will your favorite fruits and vegetables be available? Download a produce calendar showing what's ripe right now in North Dakota.



Stay Informed

Discover facts and stats about agriculture in North Dakota, from the average farm size to the number of family farms.



Cook with Local Products

Find tasty recipes using North Dakota's top products such as beef and more.



Have a Field Day

Discover agritourism destinations from wineries to U-pick flower farms and more.

Read the Digital Magazine

OPTIMIZED FOR ONLINE:

Each article can be read online, as a web article or within our digital magazine.

SHARE THE CONTENT:

Embed our digital magazine in your website to offer compelling information about North Dakota agriculture to your site visitors.



FARM FLAVOR

To learn more about what's growing in North Dakota, visit FarmFlavor.com.



Finding Local Foods

Finding local foods has never been easier thanks to the North Dakota Department of Agriculture’s Local Foods Map. This online search tool connects consumers with local farmers, ranchers and businesses that grow, produce and sell their own products in North Dakota. The user-friendly search tool will help you find a specific North Dakota business, farmers market or product. Search for things such as fruits and vegetables; eggs; beef, poultry, pork and other meats; honey; pickles, jams and jellies; baked goods and more.

The map shows farmers markets, on-farm sales, roadside stands, community supported agriculture, retail food businesses, U-picks, wholesale options and online ordering opportunities. Explore the Local Foods Map at ole.ndda.nd.gov/localfoods.

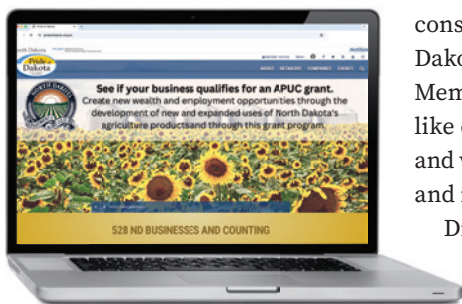
Pride of Dakota

North Dakotans are very supportive of products made, manufactured, processed or produced in the state – which is precisely what the Pride of Dakota program is all about.

Started in 1985, Pride of Dakota helps local businesses with the development and marketing opportunities they need to be successful. Currently, more than 500 companies participate, including everything from food and beverage companies to gift manufacturers to commodity groups and more.

Members can use the Pride of Dakota logo for packaging and advertising purposes, helping consumers easily identify North Dakota-made goods and services. Members also receive benefits like export assistance, seminars and workshops, retail promotion, and more.

Discover more about Pride of Dakota and its members at prideofdakota.nd.gov.



North Dakota produces enough wheat in one year to make **12.5 billion** commercial loaves of white bread. One bushel of wheat produces **42 loaves**.

Farms and ranches comprise nearly **90%** of North Dakota’s total land area.

North Dakota ranks No. 2 in the U.S. for production of **lentils, barley, dry edible peas** and **sugarbeets**.



Agriculture is the No. 1 industry in North Dakota, accounting for almost **25%** of the state’s economic base.

North Dakota FFA has more than **7,000** members across **95** chapters and about **5,750** youth in North Dakota 4-H through about **350** clubs.

Sources: AgWeek, North Dakota Department of Agriculture

What's Growing in North Dakota

A glimpse at the state's leading ag products based on cash receipts*



CORN \$2.08B

In 2022, North Dakota's corn harvest spanned more than 2.8 million acres, including 2.65 million acres of corn for grain and 230,000 acres of corn for silage, which produced over 344.5 million bushels of corn for grain and nearly 3.5 million tons of corn for silage.

*What are cash receipts?

Defined by the U.S. Department of Agriculture's Economic Research Service, cash receipts refer to the total amount of crops or livestock sold in a calendar year.



CATTLE & CALVES \$1.27B

North Dakota's cattle and calf inventory totaled 1.74 million as of Jan. 1, 2023, including 876,000 beef cattle and 14,000 dairy cattle. Morton County leads the state in beef cattle inventory, followed by McKenzie and Burleigh counties.



DRY BEANS \$342.9M

North Dakota ranks No. 1 in the nation for production of all dry edible beans. The state produced nearly 40% of the nation's total in 2022 from a harvest encompassing 560,000 acres. North Dakota leads the U.S. in pinto bean production, is No. 2 for production of pink and small red beans, and comes in at No. 3 for production of navy and black beans.

SUGARBEETS

\$386.4M

North Dakota's sugarbeet harvest encompassed 249,000 acres in 2022, resulting in the production of nearly 6.5 million tons of sugarbeets.



SOYBEANS

\$2.67B

Soybeans are North Dakota's No. 1 agricultural commodity in terms of cash receipts. In 2022, North Dakota farmers harvested more than 5.6 million acres of soybeans for a total production of over 198 million bushels of the crop.



WHEAT

\$2.17B

North Dakota led the nation in production of all wheat in 2022. Farmers across the state produced nearly 300 million bushels that year from a 6.1 million-acre harvest. Total wheat production included about 263 million bushels of spring wheat, 31.2 million bushels of durum wheat and 5.7 million bushels of winter wheat.



BARLEY

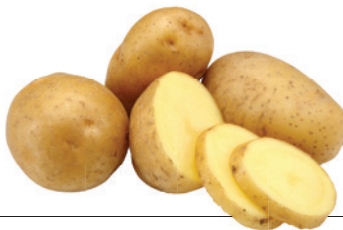
\$236.7M

North Dakota's 2022 barley production totaled more than 47 million bushels from a 650,000-acre harvest. The state ranks No. 2 nationally in barley production.

POTATOES

\$241.9M

North Dakota ranks fifth nationally in potato production. In 2022, the state produced nearly 21.8 million hundredweight of potatoes from 72,500 harvested acres.



SUNFLOWERS

\$286.4M

In 2022, North Dakota led the nation in sunflower production, harvesting 698,000 acres of the crop for a total production of more than 1.3 billion pounds of sunflowers.



Find more online

Learn more about agricultural crops and commodities in North Dakota online at [NDagriculture.com](https://www.ndagriculture.com).

CANOLA

\$925.9M

North Dakota ranks No. 1 in the nation for canola production. In 2022, farmers across the state harvested more than 1.78 million acres of canola, producing over 3.2 billion pounds, equivalent to 85% of the country's total canola crop that year.



SISTER ACT

3 Farm Daughters brings high-fiber pasta to pantries across the nation



Annie Sproule Gorder,
Mollie Sproule Ficocello
and Grace Sproule Lunski
run 3 Farm Daughters.



Red River Valley farmer Paul Sproule was already growing a naturally high-fiber wheat variety when he challenged his three daughters to use it in creating a product. They proved to be just the dream team for the job.

The youngest, Grace Sproule Lunski, started her first company at 16, has expertise in marketing and holds an MBA. Middle daughter Mollie Sproule Ficocello is an attorney and logistics maven, and the oldest, Annie Sproule Gorder, is a three-time

entrepreneur, also earned an MBA and focuses on finance.

As the sisters grew up, they'd watched their mom, Susie, and dad, Paul, demonstrate successful farming and entrepreneurship. And perhaps most importantly, all three women were starting families and had become passionate advocates for naturally healthy foods providing good nutrition.

Farm to Pantry

Today, 3 Farm Daughters LLLP is a Grand Forks-based, majority-

woman-owned company bringing pasta made from high-fiber wheat flour to pantries across the country. Lunski, who handles the company's marketing, says their marketing mantra is "three daughters, two ingredients, one extraordinary pasta."

The two ingredients – a high-fiber wheat flour and semolina (durum wheat) – are milled at the North Dakota Mill from wheat grown on their farm and elsewhere in the Midwest. The pasta is also manufactured in North Dakota.

Their pasta bridges a gap between traditional pantry pasta and alternative pasta.

"We did our R&D projects with Northern Crops Institute in Fargo, and even in our first batches, the pasta was coming out phenomenally in taste, texture and performance," Lunski says. "That was one of our first moments where we thought,



“The farming roots grow really deep, and we all have this huge family connection and passion for agriculture.”

- Grace Sproule Lunski, 3 Farm Daughters co-owner

‘This is amazing.’ We loved that it had high prebiotic fiber and that it performs really, really well, especially for restaurants who are able to keep the pasta nice and firm and still have that perfect, al dente bite.”

Their five products – cavatappi, elbow, penne, rotini and spaghetti – are available in about 1,200 retail locations nationwide and online at 3farmdaughters.com. Retail has been a huge learning curve, Lunski admits.

“When we get in front of a buyer in person, we can share our story really well,” she says, noting events, like Pride of Dakota (POD) Showcases, help them connect with new customers. “Face-to-face contact with our consumers is so valuable.”

3 Farm Daughters offers cavatappi, elbow, penne, rotini and spaghetti.

Those showcases are a great way for POD companies to introduce themselves to customers, says Katie Huizenga, POD specialist for the North Dakota Department of Agriculture.

“We have over 40,000 people attend the showcases,” Huizenga says.

POD, a statewide branding program, also helps companies

get their products into the retail market. It offers networking opportunities and business conferences to help North Dakota-made, manufactured or processed products gain traction.

Deep-Rooted Passion

The three daughters grew up riding along on the farm equipment with their dad who grows sugarbeets, wheat, soybeans, edible beans, corn, potatoes and other crops. As young girls, they took food to the fields, and as young women, they’re still doing that, helping nourish their dad and cousin, Mike.

Lunski says 3 Farm Daughters pasta just completes the loop of being farmers by bringing the fruits of the labor of growing food to the end consumer.

“This was a really natural progression for us as sisters who are really driven to find food that is nutrient-dense,” Lunski says. “And being part of the family farm is incredible. We all went away to college and lived in Minneapolis for various number of years, and we all couldn’t wait to get back. The farming roots grow really deep, and we all have this huge family connection and passion for agriculture.”

– Kim Hill



Find more online

Find recipe ideas and other great tips on the 3 Farm Daughters Instagram and Facebook pages. Customer feedback on social media helps the sisters develop new products and tweak current products. To learn more, visit 3farmdaughters.com.



Peppers and Sausage Penne

Ingredients

- 1/2 cup plus 1 tablespoon olive oil
- 3 large cloves garlic, lightly crushed
- Red pepper flakes, to taste
- 1 pound spicy Italian sausage, casings removed
- 1 red bell pepper, sliced
- 1 green bell pepper, sliced
- 1 box 3 Farm Daughters penne
- 1/4 cup fresh parsley, chopped
- 1/2 cup Parmesan cheese, grated

Instructions

1. In a small pan, heat 1/2 cup oil over medium heat. Add the garlic and saute until light brown, being careful not to burn. Remove and discard the browned garlic from the oil. Add the red pepper flakes

and saute for 1 minute. Remove from heat and set aside.

2. In a large skillet, heat 1 tablespoon oil over medium-high heat. Add the sausage and cook until browned while breaking into small pieces. Add the peppers and saute until soft.

3. While peppers cook, fill a large pot with water and bring to a boil. Cook penne according to package instructions. Reserve 1/2 cup of pasta water before draining.

4. Add the cooked pasta to the sausage skillet and stir to combine. Add the garlic oil and reserved pasta water as needed to create sauce.

5. Top penne with parsley and Parmesan and serve immediately.

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Fresh to Your Table

Webisode series showcases local North Dakota specialty crops with easy-to-make recipes

North Dakota is known as a major producer of crops like wheat and soybeans. But the state produces a diverse range of specialty crops as well. Everything from fresh vegetables to honey to lentils and

beans can easily be found at farmers markets across the state.

To help promote these crops and give consumers easy ways to use them, the North Dakota Department of Agriculture developed

the *Fresh From North Dakota* webisode series, which launched in August 2023.

“We wanted a fun way to promote specialty crops, and this idea fit the bill,” says Michelle Mielke,

public information officer for NDDA. “Some people are unaware of how to prepare certain specialty crops. The video recipe series, along with having recipe cards available, is the perfect way to do that.”



The *Fresh From North Dakota* webisode series features local chefs using North Dakota-grown ingredients.



Calling in the Locals

The webisode series kicked off with four episodes, all hosted by prominent North Dakota chefs who are familiar with the state’s agricultural industry.

Each video includes digital recipe cards available for the dishes made in the video, and the website features a map with farmers market and specialty crop locations. Printed recipe cards were also available at farmers markets and by request from NDDA.

Stephanie Miller owns Butterhorn restaurant in

Bismarck with her husband, Shane. They’re both featured in two *Fresh From North Dakota* episodes, showcasing how to make a fresh charcuterie board, honey-carrot mocktail, carrot top pesto, pea pasta salad and more – all with local ingredients. As someone who grew up on the farm, Miller says she jumped at the opportunity to be part of the campaign.

“I was extremely excited when they called

me,” Miller says. “I only needed to hear about one sentence, and I was in. Videos are a really great way to show the public what they can do with North Dakota products.”

She adds that using local ingredients, like local wheat for fresh pasta, in her restaurant is extremely important, and she loves sharing it with others.

“It’s showcasing just how important our farmers in North Dakota

are, and I think they’re a little underappreciated in today’s society,” she says. “If we didn’t have them, we wouldn’t have food on our tables.”

Jeff Benda is another North Dakota native who has been an outdoor writer and recipe creator for more than 20 years. He’s featured in two episodes: one focused on pickling fresh vegetables and another showcasing how to make a Spanish bean soup with local game and produce.



“It’s showcasing just how important our farmers in North Dakota are, and I think they’re a little underappreciated in today’s society. If we didn’t have them, we wouldn’t have food on our tables.”

- Stephanie Miller, *Butterhorn* owner and chef

A Successful Start

NDDA worked with a Midwest advertising agency, LEVEL Mpls, to launch the series. Kim Thelen, LEVEL Mpls president and chief client officer, says *Fresh From North Dakota* became more than just a video series.

“There was a bigger vision to it,” she says. “We knew we had to brand the series as something more that demonstrated a commitment to North Dakota producers and connect with consumers.”

With just four videos in the first wave of the

series, it’s already received a tremendous amount of positive response and engagement.

“Having the recipe cards available with the videos and the food personalities who are well known locally has really gotten a lot of people

engaging,” Thelen says.

Mielke adds that website and social media traffic for NDDA has increased as well.

Production has already started on the second set of webisodes featuring new North Dakota chefs.


“We’ll be releasing four more webisodes next August and are looking to continue the program beyond that,” Mielke says.

Watch the current webisodes and learn more at ndda.nd.gov/fresh-north-dakota.

– Rachel Stroop



Find more online

 For a map and information on where to find local foods near you, scan the QR code with your smartphone.



PHOTOS: LEVEL MPLS WITH EVERGREEN PICTURES

Homegrown Learning

Living Ag Classroom brings North Dakota's diverse agriculture to life



When diners around the world enjoy the crisp, golden fries at McDonald's, they probably have no idea part of the magic comes from the Dakota Russet potato. North Dakota is one of the leading suppliers of potatoes for the restaurant, one of the top two producers of Bush's Beans and leads the nation in honey production.

These are just a few fun facts North Dakota fourth graders learn in the Living Ag classroom – a voluntary, collaborative program of North Dakota commodity groups, now on its third generation of students.

“Everybody needs to understand where their food comes from – not just the grocery store

or Amazon,” says Nicole Wardner, North Dakota Beef Commission executive director. “If they grow up in Fargo and move to Chicago or Nashville, we want them to understand the ag story from where they grew up.”

Classroom Cultivation

Karla Meikle, 4-H activities coordinator for North Dakota, heads up the program in Bismarck and says the events complement the North Dakota Studies Unit, helping students learn about the vital role their state plays in feeding the nation and the world.

“Although we think of our state and communities as being somewhat rural, it is becoming more and more obvious that most

of our children are generations removed from the farm,” Meikle says.

The program is hosted three times a year in Minot, Bismarck and Fargo and reaches about 4,000 students.

Each commodity group gets six minutes to tell their ag story at one of 15 interactive exhibits covering topics from soybeans to careers in agriculture. In some areas, students enjoy a hands-on experience like petting sheep or bottle feeding a calf.

In 2021, the program was virtual due to COVID-19. Each commodity group produced videos still available for use on the program's website.

Meikle says the program encountered some challenges in 2023 with bus driver shortages and funding for field trips, and while resources are

available virtually, she emphasizes the value of in-person learning.

“When students can see and feel the items we discuss during the in-person Living Ag Classroom, there really is no comparison,” Meikle says.

Despite past hardships, the program carries on strong and hopes to educate as many students as possible.

“Exposure is the ultimate goal,” Wardner says. “If we can get them to understand where their food comes from and that North Dakota raises a lot of it, we have hit a home run.”

– Sherri Adcock

Find more online

To learn more about the Living Ag in the Classroom program, visit ndda.nd.gov/livingagclassroom.



A Golden ANNIVERSARY

Red River Commodities celebrates 50 years

For Red River Commodities, the last 50 years have been filled with growth, perseverance and grace – similar qualities of its primary crop – sunflowers.

Founded in 1973, the Fargo-based company transforms sunflower seeds and other specialty crops into food ingredients and products like SunButter



sunflower seed butter, wildlife food and more.

In 2023, the company celebrated 50 years of success with a look back at its humble beginnings.

“In the sunflower industry, just to look at what has transpired over the last 50 years, it’s kind of mind-boggling,” says Curtis Kuntz, vice president of the Wildlife Division and a 20-year employee at RRC. “There have definitely been challenges and pressures, but we’ve been able to adapt, diversify and be creative, strengthening the bonds within our company as well as our community.”

RRC started as a specialty grain trading company, expanding into a sunflower hybrid seed program and eventually a greenfield processing plant for human food products.

Throughout the years, the company has seen tremendous growth with several acquisitions, expansions and new products. The firm now handles millet, flax, milo and safflower in addition to the original sunflowers at its crop processing facility and has a Horace facility that provides custom roasting and

product packaging.

“Over our 50-year history, we’ve planted 6 million acres of sunflowers and processed 6 billion pounds of sunflower seeds,” says Koert Liekelema, CEO.

Numbers like that, and the vast amount of diversification, are a testament to RRC’s growth. But Kuntz and Mike Kotzbacher, senior vice president, say one thing that hasn’t changed is the company’s commitment to its values of integrity, passion, safety, pride and family.

“We have a culture



of people,” says Kotzbacher, who has been with the company 18 years. “If you’re a parent and your child has a sports game, we want you to be there.”

He says that being able to grow as a company while retaining long-term employees is paramount.

RRC’s people-first culture transfers to the community as well. Since 1998, RRC has given more than \$100,000 to local students and is a Live United partner with United Way.

“We have a great relationship with our community,” Kuntz says.

“Not only in giving back but with our products. For example, our bird feed brings enjoyment to people’s lives, helping them connect with nature. There’s value in that.”

As for the next 50 years, RRC has plans to keep growing while staying true to its original principles.

“We’re always looking at acquisitions and product development,” Kotzbacher adds. “And we’re going to keep doing what we’re doing – continuing that family culture, being a top 25 employer in the area and focusing on the values that drive us.”

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COVER STORY Story and photos by Mikkel Pates, Agweek

Amazing changes
■ Red River Commodities adapts to global markets

FARGO, N.D. — In March 2009, Bob Majkrzak quietly marked 20 years at the helm of Red River Commodities Inc., one of the premier and pioneering sunflower processing companies in the region and nation. The home of fice is in Fargo, N.D. — a green elevator complex, dominating in the city's industrial complex horizon to the west from Interstate 29 as motorists pass through town. It is both a major processing center for the company and a home office for key parts of

SUNFLOWERS: See Page 8

▲ SunButter, developed in 2003, now includes combinations of creamy, natural, chunky, Omega-3 and organic products.

▲ Red River Commodities, based in Fargo, N.D., is home to one of the nation's most important confection sunflower processing companies, with northern and southern operations.

▲ Sunflower kernels come off the line in Red River Commodities' human food division in Fargo, N.D.



Livestock-Friendly LEGISLATION

New laws aim to bring more animal agriculture into North Dakota

Clark Price, who raises cattle in Hensler, never quite understood why North Dakota fell behind when it came to animal agriculture. After all, the state has a rich heritage of raising livestock. Plus, farmers produce a lot of economically priced feed.

“There’s huge opportunity,” he says. “It always boggled my mind why we just didn’t get more animal development in the state.”

Though North Dakota brings in \$30.8 billion thanks to agriculture, less than 10% of that is related to animal husbandry. And that low-cost feed North Dakotans produce? Most of it is sent to neighboring states like South Dakota and Minnesota. Meanwhile, North Dakota imports more than 90% of its milk, pork, beef, eggs and poultry.

But change is on the horizon, as the state makes a concerted effort to increase animal agriculture, including a handful of newly passed livestock-friendly laws.

“I think people have realized that livestock can be a very big economic driver in rural North Dakota, and we need to bring it back,” says Shaun Quissell, grain and livestock licensing division director for the North Dakota Department of Agriculture.

Clark Price raises cattle with his son, Brennan, in Hensler.



“The word corporation scares people, but to me, it’s neighbors working together to do something to advance animal ag and to advance their operations from what they are today.”

- Clark Price, *cattle farmer*

Lawmaking Change

NDDA watched and advised on a handful of animal agriculture bills during the 2023 legislative session.

This included HB 1371, which Gov. Doug Burgum signed in

April 2023. In a nutshell, the bill lets farmers partner with corporate entities and LLCs to incorporate and create or operate an animal agriculture operation.

Price thinks this legislation will be helpful to farmers looking to expand.

“The word corporation scares people, but to me, it’s neighbors working together to do something to advance animal ag and to advance their operations from what they are today,” he says.

For instance, if a farmer wants to build a feed yard, utilizing an LLC can help because there is a little less risk.

“You’re risking the investment that you put into it; you’re not risking

your whole farm,” Price says.

The bill’s primary sponsor, Rep. Paul Thomas of Velva, reiterated that individual producers will still manage day-to-day operations under the new law.

Another recently passed bill, HB 1276, created an agricultural fund providing \$10 million in grants and loans to fund infrastructure programs like road construction to help support animal or value-added facilities like feed processing plants.

Thomas says this kind of

state-level financial support aims to ease any tension between farmers and taxpayers, who might not want to absorb the costs of someone else’s agricultural operations.

Thomas adds that he and other legislators want to ensure they’re not just making laws but are willing to back the laws with funding as well.

HB 1423, which passed in April 2023, helped create a model zoning task force with the goal of fostering collaboration between various stakeholders, such as planners, environmental regulators and local townships. The task force will review zoning laws and modernize them to meet the needs of today’s animal livestock developers.

Two more pieces of legislation, HB 1437 and HB 2373, helped to create regional livestock planning grants and the livestock-friendly county designations. These bills will help identify areas suitable for animal agriculture and ensure local communities are open to it.

Price says with all the resources now available for livestock producers in the state, he feels optimistic animal agriculture will increase.

To that end, Thomas says he sees tremendous growth potential in the swine industry and for the establishment of larger dairies. Plus, with more feed staying in the state, crop farmers should benefit as well.

“We know that animal agriculture is a win-win if done correctly,” Thomas says.

– Tina Deines

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Find more online

For more information about agriculture legislation and North Dakota livestock, visit [NDagriculture.com](https://www.ndagriculture.com).

Caramelized Onion & Swiss Beef Sliders

Prep Time: 25 minutes | **Cook Time:** 55 minutes | **Makes:** 12 sliders

Ingredients

For the Caramelized Onions

- 1 large yellow onion, chopped (approximately 2 cups)
- 1 tablespoon unsalted butter
- 1 tablespoon olive oil
- 1 teaspoon kosher salt

For the Burgers

- 1 1/2 pounds ground beef
- 1 teaspoon kosher salt
- 1 teaspoon black pepper
- 1/2 teaspoon granulated garlic
- 6 slices Swiss cheese, cut in half

For the Slider Assembly

- 12 slider buns
- Arugula (optional)
- Spicy mustard (optional)
- Sliced pickles (optional)

Instructions

1. Heat a large pan to medium heat and add butter and oil. Add onions and cook on medium-low heat for 5 minutes or until onions are starting to soften. Add salt and continue to cook for 25 to 30 minutes or until onions are slightly browned and caramelized, stirring occasionally.

2. Preheat oven to 425 degrees. Place a wire cooling rack on top of a baking sheet lined with parchment paper (to catch the grease from the burgers).

3. Let the onions cool a bit, and then add them to a large bowl along with the ground beef, salt, pepper and garlic. Divide into 12 small patties.

4. Place the burgers on the wire rack and bake for 15 to 20 minutes. Remove from oven and top with Swiss cheese. Turn on broiler and melt cheese for about 2 minutes.

5. Place the burgers on the slider buns and top with arugula, spicy mustard and pickles if desired. Serve immediately.



AGTEGRA COOPERATIVE SUPPORTS NORTH DAKOTA

Agtegra Cooperative is dedicated to supporting the success of our members and the health of our communities for generations to come. As an agricultural cooperative, our values help guide us in providing our members with access to the best products and services available in the industry so that their farms and ranches can meet the needs of the growing world. From our legacy-rich strength and stability, we seek to apply our resources to sustaining local, small-town service.

STRONG. STABLE. DEPENDABLE. LOCAL.



AGTEGRA FACTS

- Agtegra offers agronomy, energy, feed, farm supply, and grain services throughout our territory.
- Agtegra intentionally creates boards with representatives from communities we serve. In 2024, eight delegate representatives and one director are from ND.
- Agtegra locations across ND include the following communities: Berlin, Eldridge, Fullerton, Hague, Oakes, Strasburg, & Steele.

DID YOU KNOW...

In 2001, Agtegra Cooperative and Norway Spur Farmers' Cooperative formed a joint grain venture to serve their member-owners within their communities. James Valley Grain, LLC, (JVG) started in Oakes, North Dakota, and was designed to be a one-stop shop for producers by offering a complete line of services consisting of grain storage and handling. Today, JVG has locations in Verona, Berlin, and Oakes.



**Norway Spur
Farmers'
Cooperative**



In 2023, Agtegra contributed to the following organizations in North Dakota

 16 Food Security organizations

 7 First Responder organizations

 27 Ag Education organizations

- 62 employees across our seven ND locations.
- 1,417 Agtegra members are from ND.



ABUZZ WITH





INNOVATION



National Agricultural Genotyping Center tests work to save the honey bees and crops

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MICHAEL CLINE SPENCER



In the ever-evolving landscape of agriculture and apiculture, staying ahead of emerging threats is paramount, and the National Agricultural Genotyping Center (NAGC) stands at the forefront of that mission.

The Fargo-based nonprofit laboratory continuously expands its testing menu to meet the diverse needs of farmers, Extension agents and U.S. Department of Agriculture professionals, says Zack Bateson, NAGC research manager.

In 2023, the center introduced a groundbreaking test for the *Tropilaelaps* (Tropi) mite, an emerging menace to honey bee colonies. It also unveiled the new CropFiler tests to safeguard the integrity of a greater number of crop varieties.

Detection Test

At the heart of NAGC's new services is the TLC test for detecting Tropi mites in honey bee colonies, a major pest in Asia that is yet to be detected in the U.S.

NAGC's test is a preemptive diagnostic tool developed in collaborative conversation with North Dakota commercial beekeepers and the North Dakota Department of Agriculture.

"All NAGC diagnostic tests use PCR (polymerase chain reaction), a familiar acronym as it is the same technology for detecting the virus that causes COVID-19," Bateson says.

Using the PCR technology, the TLC test co-detects three pests, including the elusive mite.

"The test offers a rapid and accurate means of identifying mite DNA in hive debris, comb and other nonliving samples," Bateson says.

"This saves time and enhances the sensitivity of detection, crucial for assessing possible exposure even when mites are at low levels within colonies."

When they are at such low levels, visual evidence is nearly undetectable, says Samantha Brunner, apiary inspector for NDDA who assisted with the test development.

"Tropi is following a similar spread as *Varroa destructor* followed prior to its arrival in North America in the 1980s, but this mite is smaller and moves faster than the *Varroa* mite," she says. "New detection methods, like the test the NAGC

“Whether addressing the health of honey bees or the genetic integrity of crops, our molecular diagnostics serve as a versatile multitool to answer a broad range of agricultural questions.”

- Zack Bateson, NAGC research manager

developed, are needed for early detection and possible eradication.”

Varroa is typically considered the industry’s top threat, but unchecked, Tropi might surpass it in colony loss and virus transmission rates, Bateson explains. The Tropi mite, like the larger Varroa, feeds on honey bee brood – the next generation of workers – leading to rapid brood failure and transmission of pathogens.

Crop Fingerprinting

NAGC also uses PCR technology to offer CropFiler tests to genetically confirm that seed lots match their variety designation. The lab currently focuses on wheat, barley and field pea, but by the end of 2024, it expects to expand offerings to include durum and chickpea.

Developed in collaboration with the North Dakota State Seed Department, these tests reveal the unique genetic fingerprint for each crop variety. This aids in protecting the purity of seed lots and ensures farmers receive the expected variety with its specific qualities that help maximize yield, Bateson says.

“Variety identification is challenging when relying only on visual characteristics during field inspections,” he says. “Plus, it takes a decade or more to create a new variety, so these long-term investments deserve efforts to protect their purity within the market.”

The genetic tests to confirm crop varieties are important because varieties differ in disease resistance, maturity rate, shelf life and even consumer preferences.

Partners in Ag

The laboratory processed more than 9,000 total samples in 2023. The shared foundation for all the tests lies in the search for information within the code of life: DNA or RNA.

“Whether addressing the health of honey bees or the genetic integrity

of crops, our molecular diagnostics serve as a versatile multitool to answer a broad range of agricultural questions,” Bateson says.

For Brunner, the collaboration with NAGC has revolutionized her ability to identify and manage honey bee colony issues.

“The rapid turnaround time, extensive range of pests identified and cost-effective solutions have made NAGC an indispensable partner,” she says.

– Tracey Hackett

Find More Online

To learn more about the research and work happening at the National Agricultural Genotyping Center, visit genotypingcenter.com.

Scan the QR code with your smartphone to learn more about the important

role honey bees and beekeepers play in North Dakota.



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Agriculture Commissioner
Doug Goehring



Coming 'Round the Bend

North Dakota's intermodal service transcends shipping

North Dakota leads the nation in the production of important agricultural commodities such as beans, canola, durum wheat, flaxseed and honey, among others. In 2020, the state expanded shipping capabilities by strategically supporting the Minot Intermodal Facility. It allows for the centralized, direct loading of containers on rail for transport.

“What our producers and farmers have been asking for years is more in-state options for shipping their products to international markets,” says Brekka Kramer, Minot Area Chamber Economic Development Corporation (EDC) president and CEO. “This benefit is now available.”

The Minot Intermodal Facility at the Logistics Park of North Dakota provides an alternative for producers, processors, miners and

shippers of farm goods, minerals, manufactured products and more.

After nearly two decades of effort, this intermodal service has come to fruition via collaboration by the Minot Area Chamber EDC, City of Minot, North Dakota congressional delegation, North Dakota Trade Office, private industry, state legislators, and the state departments of Agriculture, Commerce and Transportation, as well as key partnerships with the Northwest Seaport Alliance (NWSA), BNSF Railway, and Rail Modal Group, the operator of the Minot Intermodal Facility.

A key strategic advantage for shipping through the Minot Intermodal Facility is the fact that the BNSF Railway delivers loaded unit-trains directly to docks at two terminals in Seattle, Washington.

As a result, costs are reduced for producers and shippers because goods have fewer touchpoints.

All Aboard

Kramer says having regular containerized service out of Minot has allowed both longtime export producers and export novices to employ another reliable choice. To date, 13 shippers have utilized the facility.

“This has included shipments of DDGs (distiller’s dried grains) from ethanol plants, byproducts from sugarbeet cooperative plants, products destined for international markets made directly in Minot and many others,” Kramer says.

Relatively young shippers are embracing the opportunity to test run single containers to new markets. That’s something that



In early 2024, a North Dakota delegation met with the Northwest Seaport Alliance in Tacoma, Washington, to showcase the first three years of success at the Minot Intermodal Facility and discuss further plans for state exports.

United States Trade Representative.

Thanks to the launch of the Minot Intermodal Facility, North Dakota commodities and products are now shipped in containers from in-state to ports in more than 21 countries, including Brazil, Chile, Japan, Indonesia, Peru, Spain, Thailand, Turkey and Vietnam.

Kramer reports that in the first three years of operation led by Rail Modal Group, 74 full unit-trains with more than 15,000 40-foot containers and over 850 20-foot containers were shipped to the West Coast.

The Minot Intermodal Facility at the Logistics Park of North Dakota is praised as the first successful project under the NWSA's Inland Rail Hub Strategic Initiative. Plus, it was also the Economic Development Association of North Dakota's Development Project of the Year in 2022.

Future plans include increasing the regular service at the Minot Intermodal Facility from three or four unit-trains released in a month up to five or six unit-trains released in a month by the end of 2024. Additional storage and transfer facilities are also being built on-site to accommodate this growth.

– Nancy DeVault

would not have been financially feasible if it weren't for the facility's centralized and accessible location, according to Kramer.

“The Minot Intermodal Facility at the Logistics Park of North Dakota provides easy access from all four directions, thanks to U.S. Highways 2, 52 and 83, all going through Minot – within just a few miles of the facility,” Kramer says. “The operator, Rail Modal Group, is an NVOCC (non-vessel operating common carrier) and can provide a range of options for shippers and producers when it comes to taking their North Dakota product to international buyers.”

On Track for Shipping

North Dakota exported \$5.2 billion worth of goods in 2022, an increase of 22% since 2012, according to the Office of the

Ag by the Numbers

The agriculture industry significantly impacts North Dakota's economy in many ways.

30,000
jobs supported by North Dakota goods exports in 2021

25%
of North Dakota's workforce is employed by agriculture

90%
of land in North Dakota supports agriculture

50+
commodities produced by farmers and ranchers in North Dakota

Sources: U.S. Department of Agriculture, U.S. Trade Representative

GROWING UP

College classmates become colleagues in agriculture venture

When college buddies Dylan Kallman, Jon Wyffels and Lee Vetsch graduated from North Dakota State University and began their careers, they knew they shared a friendship, an entrepreneurial spirit and a passion for agriculture. But they weren't sure where those commonalities would take them.

The innovative trio was troubled by the fact that their home state is known for livestock and row crops but can often become a fresh food desert.

"We paid attention to the needs of the Fargo-Moorhead community, and vertical growing came to mind," Vetsch says. "It was a solution the area could use and complementary to what the state was already doing agriculturally."

Inside the Box

"North Dakota imports 95% of our fresh produce from California, Arizona and Mexico in the winter," Kallman says. "Vertical growing helps diversify North Dakota agriculture, and this option was less intensive than buying a whole farm."

Vetsch is the one who came across the investment opportunity to purchase a 40-by-9-foot retrofitted shipping container, which they utilize to grow produce indoors using hydroponic practices.

However, it is Kallman who



remains on the farm in Fargo day to day, overseeing the business. Vetsch and Wyffels come up to help on-site as they can, and Wyffels helps run social media while Vetsch handles some of the accounting.

Great Plains Greens (GPG) grows and supplies fresh leafy greens across the Fargo-Moorhead metro. The fully controlled environment

allows them to supply fresh produce 365 days a year while simultaneously locating their farm near the consumer. Because of the technology and infrastructure, they utilize zero pesticides and 99% less water than traditional growing.

Pride of Dakota

A grant from the Agricultural Products Utilization Commission helped the fellows kick off their entrepreneurial venture.

"This was something completely different for them," Wyffels says. "They took a chance on us, and we owe credit to them for that."

GPG is proud to represent the Pride of Dakota (POD) brand, which helps them be recognized in new markets. What makes wearing the

College friends Dylan Kallman, pictured, Jon Wyffels and Lee Vetsch started Great Plains Greens in the Fargo-Moorhead area.



POD stamp even better is that the owners know they're not stealing market share from other farmers but rather creating a new market.

"It is winter for half the year in North Dakota, and farmers have a very small growing window," says Katie Huizenga, North Dakota Department of Agriculture POD specialist. "Great Plains Greens is able to harvest year-round, so a restaurant can have access to fresh lettuce or produce year-round."

Seventy percent of their crop

is a lettuce variety and depending on how the farm is organized, GPG can harvest 880 heads of lettuce each week.

"We also have cut leaf lettuce/spring mix and in that case, the head will stay on there and continue to grow," Vetsch says.

In March 2023, the first heads of lettuce were harvested. Initially, GPG sold bulk wholesale to restaurants but recently has been working with the Red River Harvest Cooperative with an online

e-commerce platform to sell directly to consumers.

Additional Growth

GPG has also trialed many herbs such as basil, cilantro, thyme, oregano and rosemary, and they unanimously agree that growing niche crops has been the most interesting.

"You can always find lettuce if you need it, but one crop you can't find and is hard to source, is basil," Kallman says. "Basil is a very fragile crop and has a shorter shelf life, and people are always amazed we can grow it so well here in Dakota."



Great Plains Greens is able to harvest year-round, so a restaurant can have access to fresh lettuce or produce year-round.

- Katie Huizenga, *Pride of Dakota specialist*

While they're still mastering their farming knowledge using one shipping container, GPG knows once that knowledge is secure, they can scale the concept to other containers.

"In our case, the environment is completely the same," Vetsch says. "We know with strong certainty what our productivity is going to be, which makes it easy to have those conversations with customers about how and when to add containers."

- Katie Alt

The poster features a honeycomb background with a bee illustration. At the top is the 'Pride of Dakota north dakota originals' logo. The main title is '2024 Pride of Dakota Showcase Dates'. Below this, it lists 'Pride of Dakota Showcases' with dates and locations: September 13 & 14 at Dickinson West River Ice Center, and October 25 & 26 at Minot Magic Place. It also lists 'Pride of Dakota Holiday Showcases' with dates and locations: November 1 & 2 at Fargo Scheels Arena, November 22 & 23 at Grand Forks Alerus Center, and December 6 & 7 at Bismarck Event Center. At the bottom left is the North Dakota Department of Agriculture logo with Agriculture Commissioner Doug Goehring's name. At the bottom right is contact information: prideofdakota.nd.gov, 701-328-2307, and pod@nd.gov.

Find more online

To learn more about Great Plains Greens, visit greatplainsgreens.co.

Tomato Peach Caprese Salad *Prep Time: 10 minutes | Makes: 4-6 servings*

Ingredients

- 4 ripe peaches, pitted and sliced into wedges
- 3 large tomatoes, cut into thick slices
- 8 ounces fresh mozzarella, thinly sliced
- Fresh basil leaves
- 3 tablespoons extra-virgin olive oil

- 1 tablespoon balsamic vinegar
- Salt, to taste
- Pepper, to taste

Instructions

1. On a large serving platter, arrange the peaches, tomatoes, mozzarella slices and basil leaves in an overlapping pattern.

2. In a small bowl, whisk together the oil and vinegar. Drizzle vinaigrette evenly over the peaches, tomatoes, mozzarella and basil.

3. Season with salt and pepper to taste. Serve immediately.





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North Dakota 4-H
ndsu.edu/agriculture/extension/extension-topics/north-dakota-4-h-youth-development

North Dakota Department of Agriculture – Mediation Service
ndda.nd.gov/ndms

North Dakota Department of Agriculture – Pride of Dakota
prideofdakota.nd.gov

North Dakota Department of Agriculture – Specialty Crops
ndda.nd.gov/scbgp

North Dakota Department of Commerce – Tourism
commerce.nd.gov/tourism-marketing/industry-toolkit/north-dakota-agritourism

North Dakota Ethanol Council
ndethanol.org

North Dakota Farm Bureau
ndfb.org/urfuture

North Dakota Honey Promotion Fund
ndbeekeepers.org

North Dakota Mill & Elevator
ndmill.com

North Dakota Soybean Council
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North Dakota State University
ndsu.edu

North Dakota Trade Office
ndto.com

Northland Potato Growers Association
nppga.org

Red River Commodities
redriv.com

Strengthen ND
strengthennd.com

GROWTH SPURT

New programs, new chapters and more teachers help further FFA learning



Much as modern agriculture has grown and evolved, so has North Dakota FFA.

In the past 10 years, North Dakota FFA has added nearly 20 chapters, bringing the total number to 95, says Nikki Fideldy-Doll, advisor for the North Dakota FFA Association.

“In addition to programs, we’re also growing by the number of ag teachers,” Fideldy-Doll says. “More teachers are able to serve more students.”

She says more female students are taking leadership roles at all levels – local, district, state and national. Fideldy-Doll is an example as she is North Dakota’s first female FFA state advisor.

Diverse Pathways

To help keep ag education relevant to today’s students, leaders and teachers showcase the diversity of the ag industry.

“We know less than 10% of people in ag are involved in production agriculture, for example,” she says. “So, we want to provide opportunities to show students they can be involved in agriculture in many different pathways.”

Some of those pathways include food science and natural resources. For example, a unique mobile meat processing unit is essentially a butcher shop on wheels, providing opportunities for ag students around the state to learn about food sanitation, kitchen safety, meat processing and retail cuts.

“We are also seeing students show a huge interest in programs



Dylan Severson of Southeast Region Career and Technology Center harvests frames of honey for his agriculture products and processing class.

in natural resources, so we are working to increase those opportunities,” Fideldy-Doll says.

At the state Agriscience Fair, students apply scientific principles and emerging technologies in agricultural enterprises through several categories, including food products and processing, social science, and animal science, to name a few.

“It’s amazing how students can find something they are wondering about, and then apply the concepts they’ve learned in science, math and ag to solve a problem,” Fideldy-Doll says.

That might range from rating

different kinds of insulation in building construction to studying various types of feed in egg production in poultry.

Overall, FFA focuses on educating students to become informed consumers.

“We’re at the forefront of helping prepare students to solve problems, those we see now and those that haven’t even been identified,” Fideldy-Doll says. “Every student, every adult, every business in the state has a place in donating their time and talents to help provide authentic opportunities for students to learn.”

– Kim Hill



Quality & Quantity

North Dakota bison industry works to maintain herd sustainability and high quality meat

The story of the majestic American bison is woven deep within our nation's history, from the verge of extinction to a remarkable comeback. Now, ranchers and family farms in North Dakota and other parts of the United States are raising them, helping create a sustainable food source.

In New Rockford, a small town with a population of only 1,520 residents, a sense of pride can be found amongst the employees of North American Bison LLC for



Ryan Homelvig raises bison with his nephew, Dylan Rossow, and father, Lynn Homelvig, on their ranch, Kenmar Bison Ranch, in New Rockford.



PHOTOS: CLOCKWISE FROM LEFT: NORTH AMERICAN BISON LLC (1-2); ISTOCK.COM/BANUR

their efforts in the growth and success of the bison industry.

This healthy, humanely raised and all-natural protein product is in high demand among consumers.

Investing Locally

Working with 65 independent ranchers total, 30 of which are in North Dakota, Jim Wells, North American Bison CEO and president, feels strongly about the work he and the company's employees are doing through efforts to support regenerative farming and increase

growth in the bison herd, as well as the industry.

"Having a true concern for the land and keeping it healthy, as well as the regeneration of the bison herd, are two things that strike me as very powerful," Wells says. "Bison is the healthiest protein product that consumers can find out there, and there's a high demand for it, globally and stateside."

Operating under the TenderBison brand, the higher demand for the product meant looking for better and more sufficient ways to increase the

number of bison harvested per year, in addition to other changes to the processing plant in New Rockford.

All of this resulted in the North American Bison plant's \$8.4 million expansion. Being the largest employer in the town, the company focused on many changes during the expansion, with the biggest investment utilized to improve the freezer and cooler areas. However, all the expansion focused on employee welfare and an improved work environment.

"We spent a lot of money on



reconfiguring the plant with custom workstations where employees can adjust their workstation for height and other factors,” Wells says. “We also installed a lot of hydraulic equipment and lift equipment. The improvements we implemented were centered around making the jobs for our employees less physically demanding.”

The company also prioritized comfortable spaces for workers to recharge in their downtime.

“We also added an employee welfare area where we built a gorgeous lunchroom and breakroom and expanded the office spaces,” Wells says.

Quality in High Demand

Shanna Johnson, North Dakota Department of Agriculture international and domestic marketing coordinator, works with North American Bison and

“*North Dakota is special in that we are known for great quality. We have good air and soil quality, which makes our crops exceptional and our ingredients better than the rest.*”

- Shanna Johnson, *NDDA international and domestic marketing coordinator*

other local companies at domestic and overseas shows.

“Trade shows are all over the U.S. and the world,” Johnson says. “It’s a really big community. Both international and domestic buyers come to the domestic shows, and there is a ton of opportunity to get your product out into the world by going to both types of trade shows.”

North Dakota has a reputation for producing quality products, which puts the state’s commodities in demand at the trade shows. These

products are available in grocery stores and served in restaurants in the states as well as globally.

“North Dakota is special in that we are known for great quality,” Johnson says. “We have good air and soil quality, which makes our crops exceptional and our ingredients better than the rest.”

- Tathel Miller

🔗 Find more online

To learn more about North American Bison, visit tenderbison.com.

Bison Kabobs

Ingredients

- 1/4 pound TenderBison tenderloin, cut into 1-inch cubes
- 1 red onion, cut into 1-inch slices
- 1 zucchini, cut into 1-inch slices
- 1 red bell pepper, cut into 1-inch slices
- 8 mushroom caps
- Cherry tomatoes
- 1 cup red wine
- 2 tablespoons olive oil
- 2 cloves garlic, minced
- 1 tablespoon fresh parsley, chopped
- 1 tablespoon fresh oregano, chopped
- 1 tablespoon fresh rosemary, chopped



Instructions

1. Arrange meat and vegetables on skewers in attractive patterns and place in a shallow dish.

2. In a small bowl, combine the wine, oil, garlic and herbs. Pour mixture over the kabobs.

3. Marinate kabobs in the refrigerator for about 2 hours, turning occasionally.

4. Prepare the grill. Place skewers on grill and baste with marinade. Grill while continuing to baste, turning every few minutes, until cooked through, about 8 minutes.

PHOTO: ISTOCK.COM/ELENA_DANILEIKO

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Moving to the BEET

The sugarbeet industry impacts North Dakota's families, fields and economy

A perishable vegetable weighing around 4 pounds and measuring a foot long, the sugarbeet is grown in climates that are too cold for sugarcane. With a five-month growing season, sugarbeets originate from the same species as Swiss chard and red beets, the Altissima cultivar group of the common beet (*Beta vulgaris*).

Sugarbeets are big business to the American economy. More than

150,000 people across 22 states are employed by the sugar industry of sugarcane and sugarbeets, with an annual economic impact of nearly \$23 billion on the U.S. economy.

Eastern North Dakota and western Minnesota's Red River Valley are the largest regions for sugarbeet production, with more than 3,700 sugarbeet growers who are part of three area cooperatives making a \$6 billion impact in the area.

Cooperative Cultivation

Three North Dakota cooperatives – American Crystal Sugar Company, Southern Minnesota Beet Sugar Cooperative and Minn-Dak Farmers Cooperative – support more than 16,000 jobs.

Combined, they provide more than \$1.6 billion in labor income and nearly \$200 million in local and state government taxes for North Dakota, helping the economy to flourish.





“Sugarbeets keep tire shops, cafes, schools, banks and all other businesses thriving,” explains Brent Baldwin, sugarbeet grower and Red River Valley Sugarbeet Growers Association (RRVSGA) president.

Baldwin comes from a long line of sugarbeet growers.

“My family traces its sugarbeet roots back to 1926 when my great-grandfather started raising a few acres to diversify and generate more income,” he says. “My entire lineage has continued to raise sugarbeets since then.”

Since 1926, the RRVSGA has represented sugarbeet growers who grew sugarbeets for the old American Beet Sugar Company, later becoming the American Crystal Sugar Company.

Concerned about the future of the sugar industry, RRVSGA members purchased American Crystal and formed a grower-owned cooperative in 1973. So, unlike an investor-owned business, sugarbeet growers own American Crystal, with each member having one vote at meetings, and it operates for the benefit of the members.

Supporting the industry and growers, the RRVSGA focuses

on federal politics, including the U.S. Department of Agriculture Farm Bill and the U.S. sugar program.

By having a strong sugar program, the industry can continue to provide a safe, reliable and affordable product to American consumers at no cost to U.S. taxpayers.

Sugarbeet growers like Allen Tucker appreciate RRVSGA’s commitment, which allows his family to focus on growing sugarbeets and maintaining strong family ties.

“My grandparents raised their first crop of sugarbeets in 1928, and our family has grown them annually,” Tucker says. “We hope to do it for another 95 years and beyond.”

With strong family and association commitments, sugarbeets will be a staple in the North Dakota landscape and economy for years to come.

– Danielle Rotella Adams

Find more online

For more information about the Red River Valley Sugarbeet Growers Association, visit rrvsga.com.

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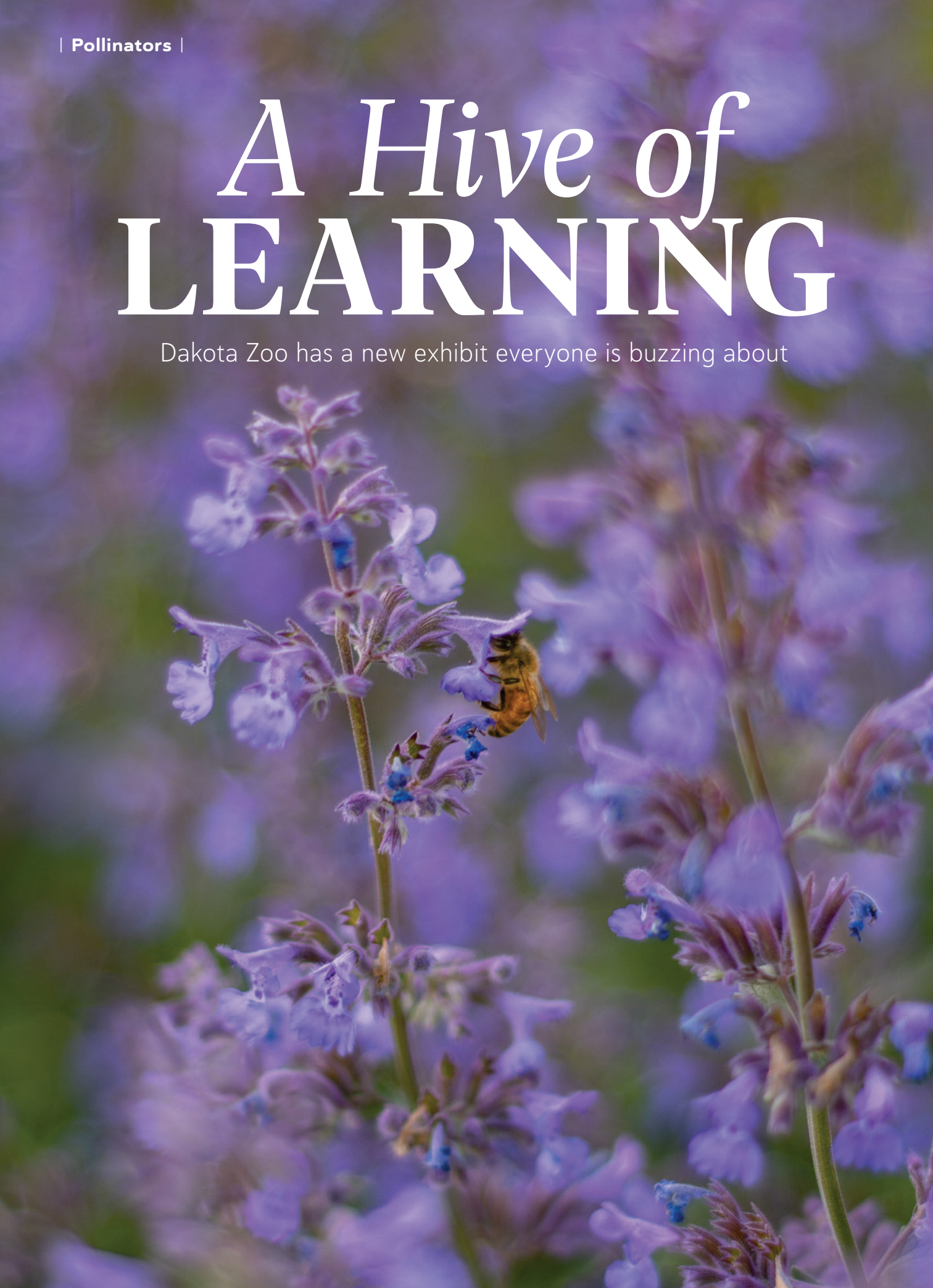
Agriculture Commissioner
Doug Goehring

www.ndda.nd.gov/scbpg

| Pollinators |

A Hive of **LEARNING**

Dakota Zoo has a new exhibit everyone is buzzing about



Bees, one of the most important pollinators, are vital to our ecosystem. The world's food production depends upon the intricate work of bees.

Yet most people aren't buzzing about the agricultural impact these insects make. However, thanks to a grant through the North Dakota Department of Agriculture, guests are swarming to an inside look at a bee colony recently added at the Dakota Zoo.

Working Wings

The Dakota Zoo in Bismarck is home to 125 species of birds, insects, mammals and reptiles. Samantha Brunner, NDDA state apiary inspector and key collaborator on the bee exhibit, explains people may not flock to the zoo just to see the bees per se, but the interactive expansion pleasantly stings with engagement.

"A lot of people are frightened of bees, and, with this exhibit, they can view the bees and still feel completely safe," says Brunner, who has been a state apiary inspector for more than 10 years. "There are fun bee facts surrounding the colony, magnifying glasses to take a closer look and more visible frames to see lots of bee activity."

Little learners especially gravitate toward the playground equipment for hands-on enrichment. The zoo worked with Dakota Playground to build the custom interactive equipment right under the hive, so kids can safely view the hive while they enjoy the playground, which includes pollinator theming throughout as well as interactive learning elements coordinating with the exhibit. The exhibit space is much larger than the zoo's former bee display.

"We went from one small hive to two larger observation units



A North Dakota Department of Agriculture grant allowed for a new Dakota Zoo exhibit giving guests an inside look at a bee colony.

that are connected,” says Allison Malkowski, Dakota Zoo assistant director. “Plus, we have the ability to add on three other observation slots as the hive grows via ports that connect them.”

Malkowski says the unique habitat design grants visitors up-close access to see bees cleaning debris out of the hive, enter the hive with pollen sticking to their legs and waggle dancing, a figure-eight style dance bees do to communicate about the direction and distance to pollen sources.

The exhibit supports one queen bee and hundreds of other busy

bees, with a great probability of expansion. Unlike other colonies that are seasonally relocated to California, Florida, Texas or other warm-climate regions, the Dakota Zoo doesn’t disrupt the hive.

“We’re able to keep our hive at the zoo year-round. So, we winter them right here – with supplemental feeding like sugar water – and then open back up when seasonal resources replenish,” Malkowski says of the mostly self-sufficient bees.

A Sweet Commodity

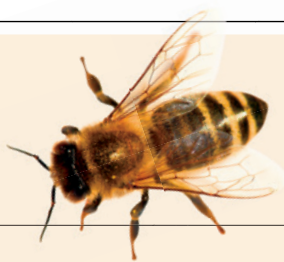
North Dakota is the top honey-producing state in the country,

with North Dakota bees producing 31.2 million pounds of honey in 2022. This sweet commodity may be purchased at the Dakota Zoo’s gift shop and other retailers throughout the state.

“North Dakota producers plant a variety of flowering crops, including alfalfa and canola as well as sweet clover, that bloom in the summer,” Brunner says. “All of these help with the high production numbers, but the largest factor for honey-producing success is the number of honey bees in our state each summer. In 2023, there were 356 beekeepers, 843,411 colonies and 20,943 registered locations.”

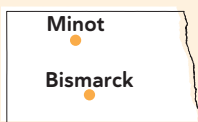
Pollinator Buzz

Bees are efficient, **producing their own food**, as well as excess.



Worker bees, which are female, collect pollen and nectar to bring back to the hive.

Drone bees, which are male, help fertilize the queen to make more worker bees.



While not all zoos have a honey bee colony, in North Dakota, both the **Dakota Zoo** and the **Roosevelt Park Zoo** in Minot each have a colony.

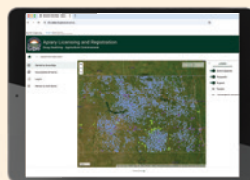
50 to 100

Number of flowers a honey bee visits during a collection trip

2 Million

Number of flowers honey bees must gather nectar from to make 1 pound of honey

NDDA has a bee map (Sensitive Area Map) for locating hives, beekeepers, managing beekeeper accounts (licensing and apiary registration), and pesticide applicator accounts. Visit ole.ndda.nd.gov/apiary/map to view it.



Sources: Dakota Zoo, The Honey Association, North Dakota Department of Agriculture

Pollinator Pride

NDDA and the Dakota Zoo will continue to collaboratively monitor the well-being of the bees and work to promote conservation efforts to halt the decline among pollinator species.

“It’s invaluable for people to learn about pollinators of all kinds – especially bees because of how important the symbiotic relationship between bees and our cropland in North Dakota is,” Malkowski explains.

Beyond its rose garden, the Dakota Zoo has peppered in more pollinator plants, like allium bulbs, sage and sedum. Both in the ground and potted, these native pollinators flourish near the Discovery Center, as well as near the aoudad and prairie dog exhibits. These garden spaces help visitors witness honey bees foraging in the summer throughout the entire zoo property.

To learn more about Dakota Zoo, visit dakotazoo.org.

And while efforts spearheaded by beekeepers and zoologists are crucial, at home, gardeners can likewise grow native wildflowers and reduce the use of harsh pesticides to help honey bees.

– Nancy DeVault



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