


For the Land and Its People

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September-October 2023

The definition of the word “develop” is to advance the growth or strengthen the value of something. NDSU Agriculture is purposefully working to develop and enhance educational opportunities, quality of life, food systems and our state’s resources for generations to come. This issue of For the Land and Its People highlights the efforts of the College of Agriculture, Food Systems, and Natural Resources (CAFSNR); North Dakota Agricultural Experiment Station (NDAES); and NDSU Extension to enhance our mission.

Enjoy.

Greg Lardy

Vice President for Agricultural Affairs

NDSU NORTH DAKOTA STATE UNIVERSITY

College of Agriculture, Food Systems, and Natural Resources
North Dakota Agricultural Experiment Station
NDSU Extension



The hands-on experience provided during an internship can help students better understand their field of study and develop practical skills that are highly valued by employers.

NDSU Extension Internship Program Prepares Students for Fulfilling Careers

For college students who are curious about a career that serves their community, helps youth develop leadership and citizenship skills, or helps farmers and ranchers be more profitable, being an NDSU Extension agent might be the perfect fit.

Each summer, NDSU Extension offers college students a paid internship program where the student works with a host county or Extension tribal county and a mentor, to help them decide if a career in Extension is right for them. Interns also learn more about NDSU's land-grant mission and how the three branches of that mission (teaching, research and Extension) work together to meet the needs of North Dakotans.

For Jared Lovro, an NDSU student majoring in agricultural education from Granville, North Dakota, interning with NDSU Extension for two summers in a row has provided him with lifelong memories, hands-on learning experiences, and professional and personal connections.

Lovro, who interned in McHenry County in 2022 and at the North Central Research Extension Center in 2023, grew up as a member of 4-H and was familiar with NDSU Extension.

"I really wanted to understand the day-to-day life of an Extension agent, mostly to see if it had future career potential," says Lovro. "I also was interested in helping with ag research and learning more about cropping systems in the north central part of the state."

"Extension interns play a pivotal role in the NDSU Extension mission," says Jim Gray, NDSU Extension west district director and coordinator of the internship program. "Our interns' responsibilities include assisting NDSU Extension team members with delivering impactful programs to diverse audiences. They also have hands-on engagement with agriculture, natural resources, family wellness and youth development programming throughout the summer. Plus, they have a chance to earn academic credits and gain invaluable experience while making a real difference in our state."

Sabrina Dunlop of Rolla, North Dakota, interned in Richland County this past summer and was mentored by Lacy Christopher, the NDSU Extension agriculture and natural resources agent in her host county.

"I really enjoyed the variety of programs I assisted with this summer," says Dunlop. "Because I was familiar with Extension through 4-H, I wanted to understand more about the work Extension agents do in community development, wellness and leadership. I got to experience the community connection that Richland County has with NDSU Extension. Two of my best memories from the summer were helping at a livestock showmanship clinic and helping with the Richland County Fair."

"The hands-on experience provided during an internship can help students better understand their field of study and develop practical skills that are highly valued by employers," says Carrie Hammer, interim associate dean of the NDSU College of Agriculture, Food Systems, and Natural Resources. "Beyond using the knowledge they've gained in the classroom, they also get to hone their communication and networking skills, project management skills, and ultimately enhance their personal growth."

"One of the questions that I ask students at the end of their internship is, 'What did you learn about yourself?'" says Gray. "The answers I receive are always surprising and insightful, because more than anything, the internship is meant to be a learning experience."

FOR MORE INFORMATION:

www.ndsu.edu/agriculture/extension/ndsu-extension-internship-program

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Wheat

New Wheat Varieties Offer Opportunities

In 2023, the North Dakota Agricultural Experiment Station has released two new wheat varieties. Each offers unique traits such as disease resistance, and improved agronomic performance and end-use quality.

NDSU's spring wheat breeding program developed ND Thresher, which was released in July. This new variety offers the following features:

- Shorter plant height and good straw strength
- Moderate resistance to Fusarium head blight, bacterial leaf streak and stem rust
- High yields, especially in the eastern growing region
- High protein
- Good milling and baking qualities

Andrew Green, associate professor in the Department of Plant Sciences, led the development of this variety. The name, ND Thresher, pays homage to historical threshing machines.

"Threshing crews and the history of the North Dakota wheat crop go hand-in-hand, and this name was chosen to honor that heritage," says Green. "The variety does dry down well for harvesting despite later heading, which we know is an important consideration for farmers looking to maximize efficiency during harvest."

ND Allison, a new winter wheat variety developed by NDSU's winter wheat breeding program, was released in September. It was bred from segregating progeny of a cross between the Canadian variety, Accipiter, and the South Dakota variety, Ideal, that was released in 2013. Compared to other varieties, ND Allison:

- Is one to two inches shorter and one day later flowering than the variety Jerry.
- Has good winter survival and satisfactory processing quality.
- Provides broad adaptation and high yield.
- Appears more tolerant of acidic soils with improved aluminum tolerance.

The development of ND Allison was led by Department of Plant Sciences professor Francois Marais. New winter wheat varieties are named to acknowledge and honor women of all walks of life.

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Variety Trial Selection Tool: <https://vt.ag.ndsu.edu>



Hettinger REC Smart Feedlot

Tradition of Sheep Industry Innovation Continues at Hettinger REC

While sheep have not always been the focus of livestock research at NDSU's Hettinger Research Extension Center (HREC), the center's commitment to providing research that helps sheep producers be more efficient and profitable has been the focus since 1944, when the HREC first acquired sheep.

The HREC was established in 1909 to evaluate dairy cattle production systems, which were the basis of livestock production during the settlement of southwestern North Dakota. By the 1940s, producer attention shifted, and sheep were introduced to the facility.

"Since that time, the HREC has worked with sheep breeders, industry partners and stakeholders, and university researchers to target research that is valuable to sheep producers from across the nation," says HREC director Chris Schauer.

The Dakota Ram Test, a long-standing performance test hosted by the HREC, allows sheep producers to bring their rams to the center to assess their performance for use in breeding programs. The test is primarily designed for Rambouillet and Columbia breeds of sheep, and attracts breeders from North Dakota, South Dakota, Wyoming, Montana and Colorado.

In addition to the Dakota Ram Test, the center has long sought to provide cutting-edge research that directly impacts the health, performance and profitability of sheep.

"Some of our current research aims to study the genetic predictability of structural soundness in sheep," says Schauer. "Our goal is to identify genetic markers that may influence why some sheep lose their structural soundness as they near maturity."

To aid in their future research, the HREC broke ground on a new small ruminant feedlot in May 2023. The feedlot and other renovations to the HREC livestock units will give NDSU and the HREC state-of-the-art facilities for future research in genetics, feed efficiency and greenhouse gas emissions.

Completion is expected in the spring of 2024.

FOR MORE INFORMATION:

www.ndsu.edu/agriculture/ag-hub/research-extension-centers-recs/hettinger-rec
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Youth Build Life Skills Through 4-H Consumer Decision Making Contest



In today's world, we are constantly faced with decisions, from mundane choices about what to eat or wear to more significant decisions about purchases or life choices. Effective decision making is an important lifelong skill.

The North Dakota 4-H Consumer Decision Making Contest is designed to equip young people with the skills they need to make informed decisions. As they prepare for the contest, they learn to evaluate and compare options, rank them based on standards and quality, and defend their decisions.

During the contest, the participants evaluate and rank four similar items in several categories. For each category, they receive a hypothetical situation and criteria to use when evaluating the four items. After ranking the items, they must provide reasons for their decisions.

In addition, teams participate in a group evaluation component. Each team receives the same scenario and has 10 minutes to collaboratively evaluate the situation and make a final decision based on given standards. Teams are scored on how well they work together and present their solution.

"Consumer Decision Making Contests have helped me learn important life skills like managing my time and money," says Ingrid Myrdal, member of the Spirit 4-H Club in Walsh County. "I have noticed when I shop now, I have used these skills when deciding where I want to eat and shop, especially during back-to-school shopping. The more I participate in the contest the more I have gained and learned."

The decision-making skills youth develop through the 4-H Consumer Decision Making Contest translate directly to everyday problem solving, according to Meagan Hoffman, youth development specialist for NDSU Extension's Center for 4-H Youth Development.

"The problem-solving and collaboration skills developed through contests like Consumer Decision Making will be important as they transition into adulthood," Hoffman says.

FOR MORE INFORMATION:

ndsu.ag/consumerdecision

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Kids Cooking and Baking Schools Promote Lifelong Health

Less than 10% of U.S. children, including children in North Dakota, eat the recommended amount of fruits and vegetables according to the Centers for Disease Control and Prevention. Adequate fruit and vegetable consumption is linked with preventing chronic diseases such as heart disease, cancer and diabetes.

The good news is that research shows that hands-on culinary nutrition education and gardening activities can improve skills and increase the intake of fruits and vegetables.

To encourage children to eat more fruits and vegetables, as well as all other foods that fit into a healthful diet, NDSU Extension food and nutrition specialist Julie Garden-Robinson led the development of a kids' cooking school. The On the Move cooking and baking schools provide hands-on lessons that can be delivered in various settings including face-to-face, virtual, camps or after-school programs.

Since the program was launched, more than 1,800 children have participated in the multisession program, through which they gained knowledge about nutrition, food safety and health concepts. Topics include reading recipes, measuring ingredients, safe food handling, meal planning, and hands-on cooking and baking.

Surveys show the cooking and baking schools are making an impact:

- 79% of participants rated themselves as confident in following recipes.
- 74% have told others about the program.
- 76% are eating more fruit.
- 66% are eating more vegetables.
- 54% are eating more whole grains.

Feedback from parents has been positive.

"Often, parents were involved as the children learned about healthful food preparation," says Garden-Robinson. "Parents sent emails about the increased skills and confidence they observed as their children learned valuable life skills."

Through follow-up surveys, parents indicated that their children had applied the skills they learned:

- 79% talked about what they learned in cooking school.
- 64% were offering help more often with food preparation.
- 59% were independently preparing food at home.
- 55% were confidently using kitchen equipment at home.

FOR MORE INFORMATION:

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NDSU's Land-Grant Mission

The College of Agriculture, Food Systems, and Natural Resources has a tradition of excellence in educating students for real-world careers. Our students learn from and work with world-class scientists in state-of-the-art facilities. These interactions, along with a relatively low student-faculty ratio, provide opportunities for students to develop their critical thinking skills, to work in a team setting, and to capitalize on hands-on learning experiences that will allow them to be competitive in a global economy.

The North Dakota Agricultural Experiment Station consists of seven Research Extension Centers placed strategically throughout the state, the Agronomy Seed Farm in Casselton and the Main Station in Fargo. We work to develop techniques and technologies to enhance the production and use of food, feed, fiber and fuel from crop and livestock enterprises.

NDSU Extension empowers North Dakotans to improve their lives and communities through science-based education. We serve all people of the state through our 52 county and Fort Berthold offices, seven Research Extension Centers and the main campus in Fargo.

For more information on the programs in this publication, contact the faculty and staff listed. For more information about our other programs or have questions, comments or suggestions, please contact me.

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NDSU Giving Day – November 28

What is NDSU Giving Day?

NDSU Giving Day is a 24-hour, online fundraising event that brings together NDSU alumni, students and many other supporters of the University. It is a one-day opportunity to make a lasting impact at NDSU by making an online donation at ndsugivingday.com. Funds raised during NDSU Giving Day will support student scholarships and a wide range of educational priorities across the university.

HAVE YOU HEARD? SPREAD THE WORD!
GIVING DAY 
NOV. 28, 2023

Why should I give to North Dakota State University?

Your generosity will support educational priorities that set NDSU students apart and help prepare them for real-world success. NDSU Giving Day donors also support scholarships, making an NDSU education possible for talented students who are limited only by their financial resources.

What areas of the university can I support?

The NDSU Giving Day website will offer many funding options among the University's colleges, departments and programs. Giving is easy and a great way for donors to support areas of the university that they are most passionate about, like the NDSU College of Agriculture, Food Systems, and Natural Resources. To learn more, visit www.ndsugivingday.com.



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