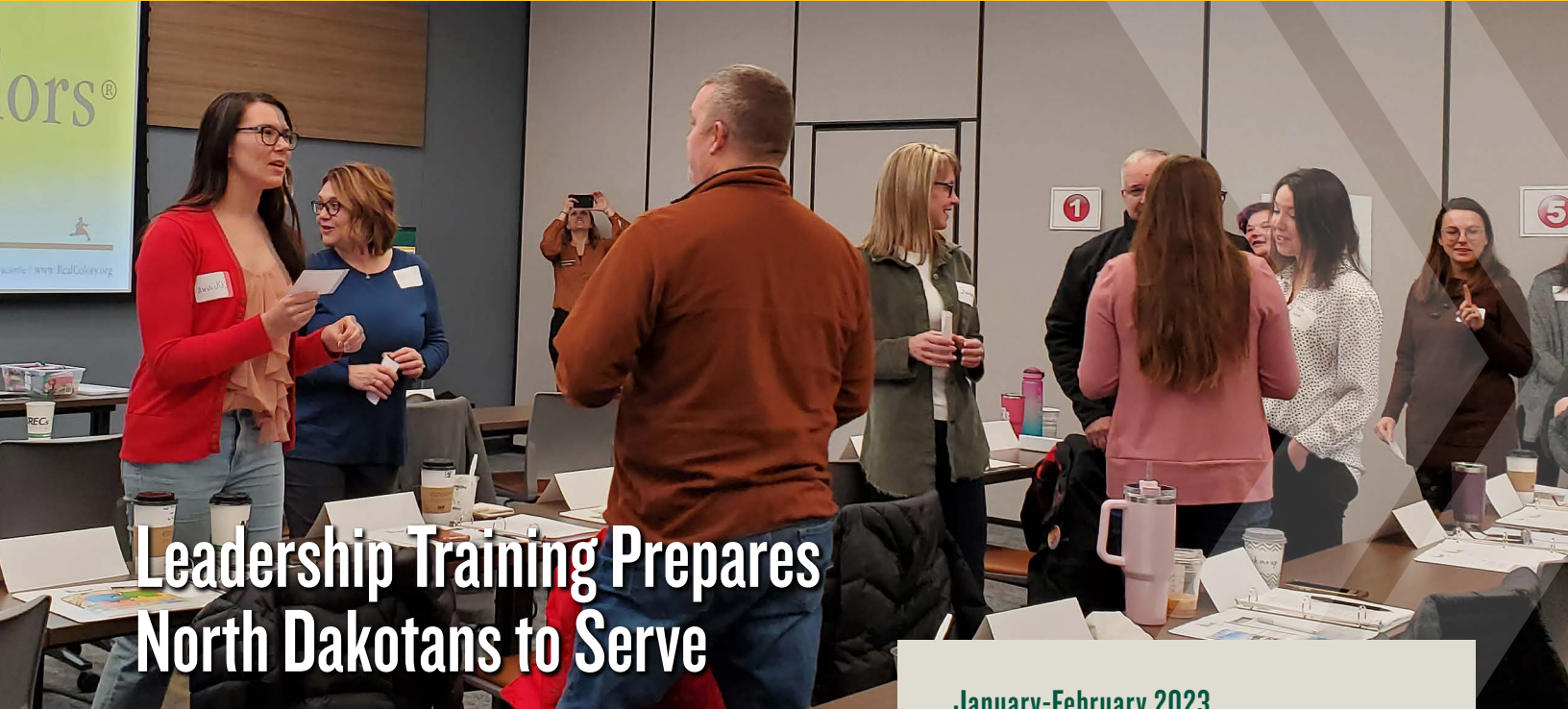


For the Land and Its People

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Leadership Training Prepares North Dakotans to Serve

NDSU Extension Helps Ranchers Weather Winter Storms



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Giving Hearts Day 2023



January-February 2023

Teamwork is the collaborative effort of a group to achieve a common goal or to complete a task in the most effective and efficient way. Everyday I'm proud of the effort our team displays to fulfill the land-grant mission and navigate change. This includes research and education that benefits our communities, recommendations for weathering hardship and preparing youth and students for their future. We invite you to learn more about how the College of Agriculture, Food Systems, and Natural Resources; North Dakota Agricultural Experiment Station; and NDSU Extension are working together to serve North Dakota citizens.

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



Leadership Training Prepares North Dakotans to Serve

Leaders across the state know that it can be a challenge to find enough people willing to serve on boards, councils and committees.

North Dakota has an estimated 2,665 governmental bodies and 5,815 nonprofit organizations, public charities and private foundations that need leaders. This means that one out of every 23 residents over age 18 would need to serve in a leadership role.

When asked what holds them back from serving on local boards, councils and committees or running for local offices, many North Dakotans admit they don't feel prepared.

To help elected, appointed and aspiring leaders develop the skills and confidence to serve their communities, NDSU Extension offers Lead Local, a one-day, interactive program. Participants learn and practice leadership skills such as running efficient meetings, parliamentary procedure, working with different personalities and conflict resolution.

For Morton County commissioner Nathan Boehm, who attended a recent Lead Local program in Mandan, the workshop was a valuable experience well worth his time.

"Lead Local will do justice in training more individuals in leadership roles," says Boehm.

More than 550 North Dakotans across the state have participated in a Lead Local training. Evaluation data shows that 87% of participants feel more prepared to serve in a leadership role because of their participation in Lead Local. Many commit to taking action in the six months following the program, such as sharing what they've learned, improving the way they run meetings or taking on a new leadership role.

Raymond Morrell, another Morton County commissioner who also attended Lead Local, encourages other citizens to take part in the program.

"Through its presentations and instruction, participants garner a renewed assessment of their ability to become engaged within their communities and lead organizations," says Morrell. "Tomorrow's leaders will not evolve if today's citizens do not see their own capabilities."

MORE INFORMATION:

NDSU Extension Lead Local Program - www.ndsu.edu/agriculture/extension/extension-topics/leadership-and-civic-engagement/leadership-development-programs/lead
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87% of participants feel more prepared to serve in a leadership role because of their participation in Lead Local.

NDSU Extension Helps Ranchers Weather Winter Storms

The winter storms that much of North Dakota experienced in April of 2022 will be recorded in history, and not favorably. Areas of North Dakota experienced snowfall amounts that broke records, and the subsequent extended windy, cold weather severely impacted the health and mortality of livestock in the regions that were hardest hit.

Although conditions varied wildly across the state, they included approximate snowfall totals up to 48 inches and wind speeds up to 60 mph.

“This storm was especially detrimental to ranchers because of the time of year,” says Miranda Meehan, NDSU Extension livestock environmental stewardship specialist. “Many ranchers were in the middle of their calving season and/or had young calves on the ground.”

To help state and federal agencies assess storm damage, NDSU Extension conducted a county-based survey to determine the impacts of the storm on North Dakota livestock.

In total, 41 counties participated in the spring storm impact assessment. Most counties reported major impacts, with the most common storm-related challenges reported by livestock farmers/ranchers being livestock health, lack of bedding, inadequate and/or damaged buildings, structures or facilities, lack of windbreaks and inadequate feed supplies.

In addition to the storm assessment survey, NDSU Extension specialists and county agents worked to provide information to ranchers through:

- Five news releases with educational information, reaching more than 20,000 individuals
- 12 radio and TV news interviews, reaching an estimated 500,000 individuals
- Social media posts with a reach of 191,089 views and 4,887 engagements
- 10 educational videos that received 2,648 views
- Development of a dedicated winter weather resources page on the NDSU Ag Hub website

Because of the assessment work done by NDSU Extension and the resulting information, the Farm Service Agency’s request to change the Livestock Indemnity Program (LIP) payment rates for calves less than 250 pounds was approved. This resulted in the rate increasing from \$175.27 to \$474.38 per head for beef. Rates were also increased for bison, beefalo and dairy.

In North Dakota, 1,982 ranchers have reported livestock losses for 2022. To date, 362 LIP applications have been paid, totaling \$2.8 million.

FOR MORE INFORMATION:

NDSU Ag Hub Winter Weather Page - <https://www.ndsu.edu/agriculture/ag-hub/ag-topics/disasters/winter-weather>
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A Team Effort:

New NDSU Hard Red Spring Wheat Variety Development Takes Collaboration

It takes about 10 years to successfully release a new seed variety to farmers, says Andrew Green, NDSU spring wheat breeder. But it is not just the time it takes that makes a new variety successful, it's the hundreds of steps it takes and the collaboration among plant breeders, scientists, agronomists, NDSU Research Extension Centers, Extension agents, seed distributors and farmers.

Recently released by NDSU, ND Heron is a new hard red spring wheat (HRSW) variety developed by the hard spring breeding program that is best suited for growing in western and central North Dakota. ND Heron was named after the water-loving bird because of its water-absorption capacity, which is an interesting end-use property for milling and baking.

"We have two customers in mind when we start breeding for a new seed variety," says Green. "The first is the farmer that will grow it. So, we are selecting experimental lines based on straw strength, maturity date, test weight and grain yield, as well as resistance to disease."

"The other customer is the end-user," Green continues. "Hard red spring wheat from the northern Great Plains is known around the world for its excellent end-use quality."

Millers and bakers consider many factors in determining the quality and value of wheat they purchase. Several key parameters are high test weight for optimum milling yield and flour color, high protein content and excellent protein quality for superior bread making.

Based on the years of trial data, ND Heron has shown to have a competitive yield package coupled with high test weight and protein. It has excellent end-use quality and good disease resistance to fusarium head blight, bacterial leaf streak and common rust races.

To help develop new varieties, NDSU's Research Extension Centers are positioned across the state, and work with plant breeders and scientists to grow the experimental varieties and collaborate with the breeders on all parts of the process.

"Because of ND Heron's suitability for central and western North Dakota, the North Central Research Extension Center (NCREC) at Minot, was selected as one of the locations where the variety would be grown and tested for six to seven years before its release," says Shana Forster, NCREC director. "Part of our mission is to help screen potential varieties and ultimately produce foundation seed that benefits farmers in our region. RECs are part of the team effort in a collaborative that brings new ideas, education and products, such as seed, to the citizens we serve."

"Our partners at the RECs don't just grow variety trials for the plant breeders back on campus," says Green. "They play an integral role in developing the land resources we need, scouting for pests and disease, collecting data, sharing feedback and making recommendations."

Once a variety is selected to be released to the public, the NCREC is one of four RECs and the Agronomy Seed Farm in the state that grows foundation seed. The foundation seed is then distributed to certified farmers through the North Dakota County Crop Improvement Association seed increase program.

"We rely on our NDSU Extension agents to help administer the seed increase program," says Forster. "Through an application process, farmers become qualified contract seed growers who produce certified seed. This allows for rapid increase and significant market penetration of improved varieties for North Dakota farmers."

"When it comes to variety development, we are always trying to stay ahead, even if it is an 8 to 10 year process," says Green. "Bacterial leaf streak disease, the wheat stem sawfly, yield potential when grown in acidic soils and improving straw strength are just a few of our focuses as we continue to develop new wheat varieties."

FOR MORE INFORMATION:

NDSU Variety Trial Selection Tool - <https://vt.ag.ndsu.edu/>
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It is not just the time it takes that makes a new variety successful, it's the hundreds of steps it takes and the collaboration among plant breeders, scientists, agronomists, NDSU Research Extension Centers, county agents, seed distributors and farmers.



Masters of Natural Resource Management Professional Degree Offers Flexibility

For many students, the path to an advanced degree such as a master's or doctoral degree can be hard to obtain if they are already working in their chosen field or don't live close to a university. For students wanting to pursue a master's degree in natural resource management, the NDSU College of Agriculture, Food Systems, and Natural Resources has made it much more convenient.

The online Masters of Natural Resource Management (MNRM) in the School of Natural Resource Sciences is a course-based master's degree that allows students to further their post-bachelor's education in disciplines related to natural resources. It is a 30-credit, interdisciplinary degree which focuses on many different areas, including range, entomology, soil science and other natural resource topics.

The program maximizes flexibility in the courses students take, experiences they have and the timeline they pursue. The MNRM is offered fully online, fully in person, or any combination. As a course-based degree, students have the option to take part in research. However, it does not require performing research or writing a thesis.

"This allows our students to take control of what works best for them in their unique situation," says Karensa Short, MNRM program coordinator. "We have students from all over the U.S. utilizing the online course work to obtain their master's degree."

Natural resource management is a growing field. Graduates of this program will find themselves qualified for a variety of roles, such as a botanist, natural resources conservation agent, parks manager, land management agent, fish and wildlife specialist, urban ecosystem planner, watershed coordinator and many more.

"The flexibility of the online MNRM program has allowed me to earn my master's degree while also working full-time," says Aubrey Sondrol, pesticide outreach specialist for the North Dakota Department of Agriculture. "This has been invaluable to me."

"We believe everyone should have the opportunity to further their education no matter where you are in life," says Short. "Whether you are a parent, a full-time employee, or working on the other side of the country, we can create a graduate program that works for you."

FOR MORE INFORMATION:

MNRM Video - <https://youtu.be/bACbapFO6ss>

MNRM Website - https://www.ndsu.edu/snrs/degrees/graduate_degrees/mnrn/online/

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The Science of Youth Development Fuels 4-H Programs

The work of NDSU Extension specialists, agents and adult volunteers in North Dakota's 4-H programs is driven by science-based practices for helping youth achieve positive developmental outcomes.

Research has shown that youth who participate in 4-H are more likely than their peers to make healthy choices, be civically engaged and contribute to their communities. Meagan Hoffman, 4-H youth development specialist, explains that those positive outcomes stem from the strong developmental context 4-H programs provide.

"Providing a nurturing environment that supports youth development is key to helping youth thrive and develop the skills necessary for them to achieve desired outcomes in adolescence and beyond," says Hoffman. "This happens primarily by providing high quality programs with a focus on youth belonging."

Caroline Homan, NDSU doctoral graduate assistant for the Center for 4-H Youth Development, describes how the science of learning and development is built into the fiber of 4-H.

"Research shows that in order for humans to thrive, we need strong relationships, and youth learn best through relationships with supportive adults," says Homan. "We train our Extension agents and adult volunteers on the factors science says are needed for positive youth outcomes."

Engagement is another piece of the development equation. By engaging youth through hands-on, project-based learning, 4-H helps youth tap into their passion and learn how to contribute to their families, schools and communities.

"When young people can find their spark—the thing that gives them hopeful purpose—they are less likely to engage in risky behavior, experience mental health struggles or have suicidal ideation," adds Homan. "Through 4-H we can help ignite that spark and get youth excited about their futures."

With research at its foundation, 4-H provides the context in which youth can develop the skills they need to develop personal responsibility, succeed in academics, enter the workforce, engage in their communities and possibly start healthy families of their own.

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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Giving Hearts Day

<https://givingheartsday.org/home/>

Giving Hearts Day is February 9.

The following NDSU Agricultural Affairs programs are participating in this year's fundraising event.



4-H Foundation of North Dakota

<https://app.givingheartsday.org/#/charity/27>

Learn more about **North Dakota 4-H Youth Development** here and the **North Dakota 4-H Foundation** here.



NDSU Bison Strides Equine Assisted Activities and Therapies Program

<https://app.givingheartsday.org/#/charity/981>

Learn more about **Bison Strides** here.

