

# For the Land and Its People

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## NDAWN Provides Valuable Information for Ag Producers

NDSU Research Leads to Crop Protection Product Development



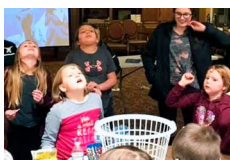
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### January–February 2021

It has been one year since the inaugural issue of the For the Land and Its People newsletter. 2020 was a year we certainly didn't expect, but I believe we used it as a springboard to innovative teaching methods, more collaborative research, more opportunities for learning and meaningful connections. In 2021, our goal is to continue to highlight the impact of the College of Agriculture, Food Systems, and Natural Resources (CAFSNR); North Dakota Agricultural Experiment Station (NDAES); and NDSU Extension by telling our stories. Keep reading to learn more about the work we've done in 2020 and our next steps in 2021.

Enjoy.

**Greg Lardy**

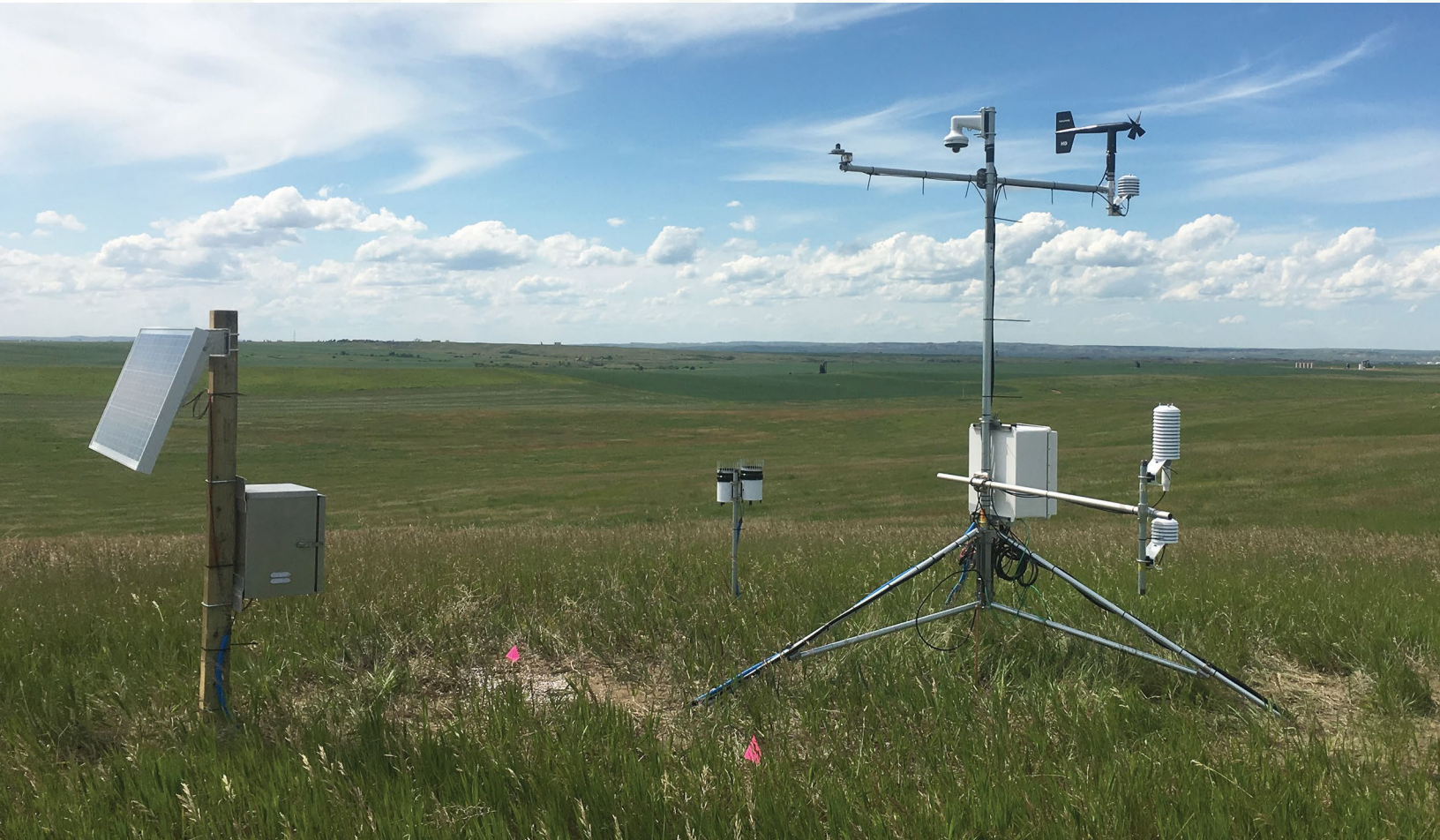
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**NDSU** NORTH DAKOTA  
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# NDAWN



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# NDAWN Provides Valuable Information for Ag Producers

**C**urrent and historical weather information, soil temperature data, growing degree day models, disease and insect forecasting models, soil moisture data and a whole host of other agricultural applications are just a small part of what is known as the North Dakota Agricultural Weather Network, or NDAWN.

This network of 161 stations distributed across North Dakota and border regions of surrounding states is part of NDSU's North Dakota Agricultural Experiment Station.

The stations monitor and record local weather conditions throughout the state, and disseminate timely, detailed, accurate information through an array of summaries and innovative displays on the NDAWN website.

"NDAWN was designed to provide weather data for the development of agricultural models," says Daryl Ritchison, NDAWN director. "Producers can make management decisions using models that predict future crop and pest development based on recent weather conditions."

The models can warn of impending disease or insect infestations so producers can apply pesticides at the optimum time for maximum efficacy to improve crop yields and profits.

"We use the NDAWN stations almost every day throughout the growing season for many reasons," says Brandon Roller, an agricultural producer from Hope, N.D.

"During planting season, we use the soil temperature data to help decide if we should be planting yet or not," Roller continues. "During spraying, we are using it for wind direction, wind speed and also air temperature inversion warnings. Then in the fall, we watch the soil temperatures again to see when we can start applying ammonia. We also use them to monitor the rainfall amounts."

In the fall of 2020, the U.S. Army Corps of Engineers awarded NDAWN a \$6.4 million five-year grant to upgrade and build new stations across North Dakota.

"The one climate element that we have the least amount of data on is the moisture content in snow," says Ritchison. "It's not the depth of snow that matters, it's the moisture content in the snow. Measuring winter moisture content is a critical predictor of spring flooding and drought conditions."

A large portion of the grant will be dedicated to measuring moisture content in areas where such data was unavailable.

## **FOR MORE INFORMATION:**

<https://ndawn.ndsu.nodak.edu/>

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# NDSU Research Leads to Crop Protection Product Development

Research at NDSU's North Central Research Extension Center near Minot is leading to the development of crop protection products for minor crops.

"Crop protection manufacturers typically focus their resources on developing products for the major crops such as corn, soybeans and wheat," says Brian Jenks, weed scientist at the center. "Far fewer resources are devoted to small-acreage crops."

To fill this void and expand the registration of crop protection products for minor crops, the center became involved in IR-4, a federal program with the goal of registering new products for farmers and ensuring that chemical residues are below established safety standards.

Since 1998, center scientists have conducted 78 trials that included 32 active ingredients and 14 commodities: lentils, confection and oil sunflowers, millet, wheat, barley, canola, dry peas, sugarbeets, dry beans, sorghum, oats, safflowers and flax. These trials have led to the registration of 20 active ingredients for 10 commodities, and more are being prepared for submission.

The center conducts an average of three to four of these studies each year.

Each study requires scientists to complete a field data book. The book must contain information such as the study protocol, personnel training records, site maps and field history, chemical storage dates and temperatures, equipment maintenance and calibration records, application records, weather data and sampling data. By the time the books are completed, they contain more than 100 pages of study data. The study director uses the books to write a final report, which is submitted to the Environmental Protection Agency (EPA).

The process takes approximately three to four years to go from study initiation to the IR-4 report submitted to EPA to the registration of a product that farmers can use in their fields.

"This benefits farmers by giving them more crop protection products to control pests such as weeds, diseases and insects," Jenks says.

## **FOR MORE INFORMATION:**

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## NDSU Saddle and Sirloin Club Creates Future Leaders



Julie  
Ellingson

Organized on March 15, 1918, North Dakota State University's Saddle and Sirloin Club was created by J.H. Shepperd and the livestock judging team that represented NDSU at that year's International Judging Contest in Chicago. These creative students saw a need for an organization that would develop a greater interest in animal husbandry at NDSU.

One hundred three years later, with more than 300 members, the NDSU Saddle and Sirloin Club is the largest student organization on campus.

"While the club's purpose is still rooted in promoting the agricultural industry and animal welfare, participating in the Saddle and Sirloin Club is actually a springboard for leadership development," says Eric Berg, NDSU Department of Animal Sciences professor and Saddle and Sirloin Club adviser. "Beyond the club's traditional officer positions, there are upwards of 20 different events and committees that offer leadership opportunities as well."

Many of the club's past members have used the skills they cultivated during their time in the Saddle and Sirloin Club to be successful in their adult endeavors.

Julie Ellingson of Saint Anthony, N.D., who recently was named the club's 95th Agriculturist of the Year, says the connections and friendships she made during her time as an NDSU Saddle and Sirloin Club member helped set the stage for her future career.

"I never had the opportunity to compete in the Little I showmanship contest because my family's cattle production sale was the same weekend," says Ellingson, executive director of the North Dakota Stockmen's Association. "I relished being involved in other ways: hanging streamers, serving on several committees, helping with Kiddie Days and livestock judging contests, and feeling the satisfaction of seeing all the club's hard work come together. I will forever be grateful for those experiences."

In addition to leadership opportunities on the local level, the NDSU Saddle and Sirloin Club is an affiliate of the National Block and Bridle Club, which offers national officer positions and a convention for its members, as well as professional development and networking experiences.

Students from all majors and all experience levels are welcome to join the NDSU Saddle and Sirloin Club.

### FOR MORE INFORMATION:

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# Extension Provides Gardening Expertise

Like many gardeners, Grand Forks County resident Terrie Mann is anxious to get back in the garden.

NDSU Extension provides people like her with expertise on a variety of gardening topics through annual events such as Gardening Saturday, which includes educational programs, opportunities to talk with gardening vendors and lots of gardening camaraderie.

"Gardening Saturday has always been a great inspiration and a fun way to get ready for the gardening season," Mann says. "It's packed with great speakers and topics to keep you up to date on the latest gardening practices and also the tried and true ones."

Mann is among hundreds of gardening enthusiasts who have attended Gardening Saturdays and other Extension programs such as Spring Fever Garden Forums. More than 850 gardeners attended the forums in 2020.

The Master Gardener (MG) program is another way NDSU Extension helps North Dakotans hone their gardening skills. To become Master Gardeners, participants take 40 hours of training, then volunteer 48 hours on horticultural projects. Master Gardeners help beautify communities, educate the public about gardening and encourage conservation of natural resources.

"The program was all that I expected it to be and so very much more," says Joan Zettel of Breckenridge, Minn.

The Junior Master Gardener program provides funds for gardening projects, such as establishing school gardens, beautifying parks, growing food for the needy and constructing raised beds for senior citizens. More than 3,300 youth participated in projects in 2020.

Gardeners also help evaluate promising vegetable, herb and flower varieties through NDSU Extension's home gardening variety trials program. Their research leads to the development of a list of recommended varieties for the state.

NDSU Extension also offers many gardening resources, including a website, two newsletters, numerous publications and an ask-an-expert option.

"Extension provides the reliable, research-based information you need to identify and solve problems with your lawns, gardens and trees," says Esther McGinnis, NDSU Extension horticulturist.

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Photo courtesy of Joan Zettel  
Breckenridge, Minn.

**More than 3,300  
youth participated  
in Junior Master  
Garden projects  
in 2020.**





## 4-H's Honored for Learning, Practicing Healthful Habits



Every year, 4-H clubs across North Dakota are recognized for demonstrating their commitment to learning about and practicing healthful habits by being designated as a Healthy North Dakota 4-H Club.

To earn that honor, they incorporate nutrition, fitness and health activities into their club meetings during the year.

For instance, the Missouri Valley Bunch 4-H Club in Morton County plants flowers around the county courthouse and takes care of them all summer. The 4-H's also have worked with residents of Edgewood in Mandan to create raised gardens.

In addition, the club holds an annual family picnic with an outdoor activity such as archery, hiking, outdoor cooking, Dutch oven cooking or volleyball. At club meetings, the 4-H's have learned to cook and bake, and members have taught the club how to swing dance. They've also gone bowling, kayaking, ice skating and swimming.

This program has been very beneficial, according to Vanessa Hoines, club leader and an NDSU Extension agent for Morton County.

"It keeps us thinking of new ways to stay active and make healthy choices," she says.

The Clover Friends 4-H Club in Cass County has healthful snacks and answers health-related roll call questions at meetings. The youth also have had water fights; gone swimming and camping; and played lawn games, miniature golf, baseball and kickball.

"We think it is very important to encourage youth and families to adapt healthy habits to incorporate as part of their daily routine," club co-leader Kristina Metcalfe says.

Clubs can earn extra recognition for completing the Family Mealtime Challenge, which encourages families to set a goal for weekly family meals.

"The fourth 'H' in 4-H stands for 'health,' and these recognized clubs are making healthful habits part of the culture of their clubs," says Julie Garden-Robinson, NDSU Extension food and nutrition specialist and Healthy North Dakota 4-H Clubs program coordinator.

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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.

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

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## NDSU Extension Develops Resources for Parenting in a Pandemic

Parents are juggling a lot now as they navigate the competing demands of work, parenting and schooling during COVID-19. While each family faces a unique set of challenges, all parents need additional support as they work to stay connected to their kids and navigate the unique stressors of this moment.

That context led North Dakota State University Extension to develop multiple resources to help families cope with the stress of these unprecedented times. The resources are designed to help strengthen family connections and explore practical stress recovery and resilience strategies for kids and adults alike.

"When parents and other adults don't have ready and satisfying answers for children and youth, the lack of information can create uncertainty, fear and insecurity in children," says Sean Brotherson, NDSU Extension family science specialist. "Pandemics can be similar to other disasters or traumatic events in their effects on children. Such disasters tend to be events that are quite sudden, very disruptive, lasting in their effects and public in their impact."

Children look to parents or other adults for insight into how to respond to difficult circumstances or events. Staying calm and setting a supportive example for children is important.

"The resources we developed offer practical things for adults to both say and do with children of all ages to help them feel less stressed," says Brotherson.

Extension resources with tips for recognizing and dealing with stress include multiple publications and local Extension workshops.

An upcoming statewide webinar series, Parenting in a Pandemic, will offer four separate sessions on how parents and children can stay productive despite changing routines, how to navigate screen time with children, how to negotiate conflict and boundaries, and how to support and connect with teens.

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