

NDSU

AGRICULTURE

For the Land and Its People

Fall 2026

In this fall edition of For the Land and Its People, we examine how NDSU Agriculture is creating leaders. From helping students reach their highest potential to building state-of-the-art research infrastructure right here on campus, NDSU is investing in the future. These stories show how our Extension, research and education initiatives influence the future agricultural innovators in our state and beyond.

Enjoy.

Greg Lardy

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NDSU NORTH DAKOTA
STATE UNIVERSITY

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

COMMUNITY DRIVEN ♦ STUDENT FOCUSED ♦ STAKEHOLDER CONNECTED
INTEGRITY ♦ IMPACT ♦ INNOVATION

New Bolley Ag Lab strengthens NDSU's position as a leader in agricultural research

The Bolley Agricultural Laboratory is a 170,000-square-foot facility, but its impact on NDSU's research capabilities will extend far beyond its doors across the state of North Dakota.

The state-of-the-art facility held its grand opening in August, further solidifying NDSU's standing as a premier land-grant research university in the United States.

"Bolley is the largest investment in agricultural research infrastructure in NDSU's history, and it puts our field-oriented research programs in a facility that matches the quality of the people working in it," says Frank Casey, associate director of the North Dakota Agricultural Experiment Station. "Land-grant peers across the country compete for the same faculty, graduate students, and federal and industry dollars we do. A building like this tells them North Dakota is serious about agricultural research that is producer-focused, and it helps us recruit and keep the scientists who will solve the next generation of problems they face."

The building is named after Henry L. Bolley, the first plant pathologist at NDSU. He also served as the state's seed commissioner from 1909 to 1929 and was the founder and coach of the university's football team.

The Bolley Agricultural Laboratory brings many of NDSU's research programs under one roof – including plant pathology, plant breeding, weed science, agronomy, soil science and horticulture – and right next to the research plots.

"That proximity matters as it fosters collaborations, bringing interdisciplinary approaches to solve producer challenges," says Casey. "A breeder, a pathologist and

a soil scientist can now share equipment, data and ideas. That kind of collaboration is how we move from individual projects to integrated solutions for North Dakota's land and commodities."

"For many programs, the ability to operate in the same facility as breeding, agronomy, soil science, etc., increases collaboration and transdisciplinary research to better serve North Dakota growers," says Julie Pasche, professor and the Neil C. Gudmestad Endowed Chair of Potato Pathology.

Among the new additions are modern specialized labs and almost 30,000 square feet of greenhouse space with much-improved environmental control. Also included are dedicated seed-drying and processing areas, as well as cooler and storage areas.

"The new building puts us in a better position to make advancements faster, especially when it comes to modernization, because we have so much easy access to new growth chambers and new greenhouses," says Carrie Dottey, NDSU assistant professor and lead soybean breeder.

Many of those breeding and pathology programs were scattered in different buildings across campus.

"Those support spaces are the backbone of our research, ensuring we have a one-foot-in-the-field approach to our science," says Casey. "They let us handle more lines, more samples and more seasons of material with better quality control."

They also set up shared equipment and a recharge model so that high-end instrumentation is available across programs.

Pasche, who oversees the potato pathology program at NDSU, says the Bolley Lab will help the team conduct research that simulates the real-world situations growers face.

"The new facility modernizes our research efforts, specifically with postharvest operations of grading and storage," says Pasche.

"Most notably, it allows us to conduct potato storage research using modern facilities equivalent to those used by growers," adds Pasche. "We can mimic real-world scenarios, making our results relevant to growers."

For Dottey's soybean breeding program, the new facility will improve logistical efficiency. Her team handles thousands of individual seed lots, plants and harvests thousands of research lots, processes seed and collects data.

"There are a lot of steps where organization, space and the ability to move efficiently from one part of the process to another really matter," says Dottey.

"Having a facility designed around those workflows will make us much more efficient. Instead of constantly adapting our research to the limitations of the space we have, we'll create a space designed to support the research. It is extremely efficient to have our large working space and greenhouse/growth chambers, cold room and regular storage, plus all the additional rooms we need, all within one building."

The NDSU research programs will utilize the modern amenities and tools of the Bolley Agricultural Laboratory, but the results of that work will impact the whole state.

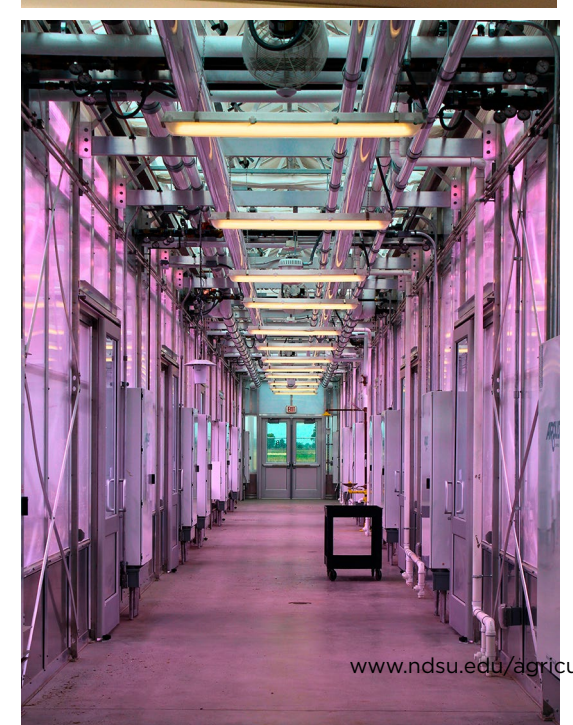
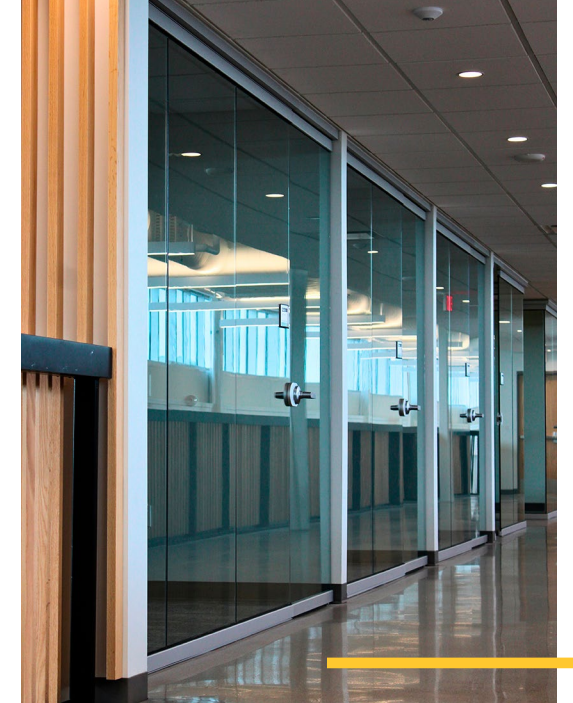
"This facility belongs to the whole Agricultural Experiment Station," says Casey. "The discoveries made in Bolley will be tested across the state and delivered to farmers. It is a Fargo building with a statewide mission."

The Bolley Agricultural Laboratory was made possible by a transformative \$87 million investment from the North Dakota Legislature in 2023, complemented by additional philanthropic support.

FOR MORE INFORMATION:

https://www.ndsu.edu/vpag/bolley_agricultural_laboratory

The discoveries made in Bolley will be tested across the state and delivered to farmers.



First cohort of NDSU Honors College learns to

collaborate and lead with an abundance mindset



ANDREW MOLINE

The next leaders in agriculture will need a foundation of curiosity, collaboration and humility. North Dakota State University is taking the first steps in laying that groundwork.

In May, NDSU announced the first cohort of the NDSU Honors College, created with the goal of preparing the next generation of leaders through a collaborative, interdisciplinary approach. Students examine how new technologies are built, governed and experienced.

With the first semester almost halfway done, students and faculty reflect on the first-of-its-kind academic experience at NDSU.

Andrew Moline is a first-year student from Blaine, Minnesota, studying microbiology and biotechnology. He says the Honors College sets itself apart with an “abundance mindset.”

“We’re learning that by working together, we can create diverse teams with different specialties and increase human flourishing around the world,” says Moline.

The concept is new to him, but he describes it as a mindset of optimism about what the world can accomplish together with existing resources, rejecting the idea that competition is at odds with collaboration.

NDSU Honors College students enroll in a curriculum blending classroom learning with hands-on research, mentorship and real-world problem-solving.

The Innovation and Imagination Challenge Studio course has a syllabus designed by the students. Moline describes it as a creative exploration-type studio course.

“The overall idea is that it’s not about learning content and being tested on it – it’s about us 30 students working together, being supported by the faculty to examine the world’s biggest problems,” says Moline.

The Honors College draws on a wide range of disciplines, from architecture to finance.

Learning from a variety of NDSU faculty as well as national and global thought leaders, students are challenged to think critically about the frameworks guiding technological progress.

“I think the Honors College ties back to NDSU’s land-grant mission about introducing everyone to university resources and spreading that knowledge across the state and elsewhere,” says Moline.

James Brown, founding executive director of the NDSU Honors College, says the students have been enthusiastic and engaged.

“These students don’t want to work on problems or develop solutions just for their own achievement,” says Brown. “They want to know what impact they will have, what unintended consequences occur, who benefits and who is potentially hurt or pays for a solution.

“The only way they can do this is by reaching outside their area of study and learning about other fields and other perspectives,” continues Brown.

Yuri Orth is a first-year student from Moorhead studying natural resource management and biology. She’s looking to study conservation, explore some field work and conduct research.

“It has immediately felt so natural to be with a group with such different backgrounds but the same drive to achieve and connect and make a difference,” says Orth.

She’s not yet sure exactly what she wants to pursue after graduating, but she has her heart set on bettering the environment and environmental policy. That’s why, she says, this cross-disciplinary approach of working with different majors gives her the freedom to find solutions to problems from different angles.

“The faculty and everyone we’ve met so far have been the most supportive and influential on our learning,” says Orth.

Orth says that, to her, the Honors College indicates that NDSU has the energy and vision to connect more with the community and “support the students who are really reaching for the stars.”

Brown points to agriculture as the quintessential cross-disciplinary field for feeding the world.

“From robots for precision agriculture, biology for increased yields, engineering for better sensors, nutrition for higher-quality food, politics for ensuring food gets to people, psychology for how people think about and approach food and nutrition – it all comes together in agriculture,” says Brown.

In addition to academic opportunities, students selected for the Honors College receive a scholarship that, for most students, covers the full cost of attendance. The scholarship removes financial barriers, allowing them to focus fully on their studies and research.

FOR MORE INFORMATION:
<https://www.ndsu.edu/honors-college>



YURI ORTH

The next leaders
in agriculture will
need a foundation
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North Dakota youth are finding their ‘Next Chapter’ at NDSU



Today’s youth are learning to forge their own paths, and North Dakota 4-H is guiding them.

A 4-H initiative to educate North Dakota high schoolers has now spent a year in their classrooms, and initial reactions indicate that not only are youth receiving valuable guidance about their career aspirations, but a good number of them will choose to attend North Dakota State University to make their passions a reality.

The Next Chapter at NDSU initiative is a response to a national survey of high schoolers indicating that they do not feel prepared for a job after graduation and want an educational pathway that is shorter, more affordable and connected to a career. The program also helps connect youth and professionals to foster networking and mentorship.

In January 2025, NDSU Extension 4-H Youth Development announced that the Next Chapter at NDSU initiative was selected to receive a \$250,000 grant from the CHS Foundation.

Now, the program is seeing some of the first responses to this college- and career-readiness curriculum from instructors, as well as from the NDSU Office of Admission.

The curriculum features 17 adaptable lesson plans on topics such as time management, resume writing and financial management. Delivered in the classroom, after school and in 4-H club settings, the program aims to prepare youth to succeed in their future careers — to be “Beyond ready,” an initiative by the National 4-H Council to prepare youth to be healthy, productive and engaged.

Margo Bowerman, NDSU Extension 4-H Youth Development

STEM specialist, says feedback from instructors has been very positive.

“Family and consumer science teachers, particularly, are finding a lot of value in the skill-building lessons,” says Bowerman. “Independent living skills are what seem to be desired most.”

A feature of Next Chapter at NDSU is the Careers in a Box resource. Designed to expand program reach and enhance youth development, Careers in a Box introduces participants to career-focused activities that provide real-world experiences.

CHS Foundation funding supported the purchase of materials and assembly of 271 agricultural Careers in a Box kits. Agricultural career pathways represented in the CHS-funded kits include food safety officer, sensory meat scientist, livestock nutritionist, agricultural broadcaster, livestock breeder, soil conservationist and hydroponics technician.

“Of course, we’ve heard these Careers in a Box are especially appreciated by ag teachers,” says Bowerman. “We’ll continue to work with NDSU faculty to educate high-schoolers on how these careers are attached to an education, including what NDSU can offer.”

Bowerman recalls feedback from after a lesson on financial literacy was taught to youth.

“The instructors are letting us know that these lessons are getting through to youth in ways that they weren’t before,” says Bowerman.

Estimating 15 students use a Careers in a Box resource, the kits could potentially provide agricultural career exploration experiences to over 4,000 youth. Because these classroom-ready resources are designed for repeated

use, their long-term impact is expected to extend well beyond the initial grant period.

According to the NDSU Office of Admission, students have been more likely to attend NDSU after participating in Next Chapter, as it builds connections between youth and NDSU support and admissions resources.

Leigh Ann Skurupey, assistant director of 4-H Youth Development, says she was excited to hear just how effective Next Chapter is proving to be.

“It has been incredible working with NDSU Admissions,” says Skurupey. “They have provided a lot of support for this project, and we are already seeing the impact: 59% of our participating 2026 graduates applied to NDSU. This is a true recruitment opportunity.

“We couldn’t have done this without the generous support from CHS,” adds Skurupey.

The program’s next steps are to further bridge the skill-building curriculum to the Careers in a Box, providing students with clearer guidance to achieve their professional goals.

North Dakota 4-H is continuing to explore developing additional Career in a Box opportunities, such as soil science, to expand opportunities for youth to connect with additional agricultural career pathways and NDSU expertise.

FOR MORE INFORMATION:

<https://www.ndsu.edu/admission/nextchapter>
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NDSU Office of Admission, ndsu.admission@ndsu.edu, 701-231-8643

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www.ndsu.edu/vpag

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 – October 27

What is NDSU Giving Day?

NDSU Giving Day is an online fundraising event that brings together NDSU alumni, students and many other supporters of the University. It is an 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 NDSU
OCT. 27, 2026

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
NDSUGivingDay.com

