

# Blizzard Watch

## Message from the Department Head

Dr. Richard Horsley



This year’s Blizzard Watch is a bit later than usual because I wished to share with everyone an update on the funding for what many people call the “The Waldron Hall Replacement”. A more accurate name for the building is the new Agricultural Field Research Laboratory (AFRL). I am excited to say that funding for the AFRL of \$87 million was approved by the 2023 North Dakota Legislature. Additionally, we were given permission to raise \$10 million more through fund raising. The new AFRL will house the research activities currently in Waldron Hall, Wiidakas Laboratory, Van Es Hall, the Potato Research building, and the Horticultural Research areas in the Lord & Burnham south greenhouse. Each of these buildings was built between the 1940’s and 1960’s when agriculture in North Dakota was very different. Crop agriculture during this period centered around small grains and computer technology as we know it today was non-existent. Additionally, as we have expanded the breath of our research efforts to include more crops and cropping systems, we have run out of space for our scientists to do their work. The new AFRL will house research labs for scientists in the Department of Plant Sciences, Department of Plant Pathology, and the School of Natural Resource Sciences. The location of the new building is yet to be determined.

Another exciting ongoing building project for the department is the construction of the \$85 million Peltier Complex. This building will house the research and teaching activities currently done in Harris Hall, the Cereal and Food Science activities in the Quentin Burdick Building (QBB) and Loftsgard Hall, the Meat Lab in Shepperd Arena, the Northern Crops Institute, and the North Dakota Trade Office. The building can easily be seen from the 12th Avenue North viaduct if you are traveling east off of the viaduct or if you are traveling north

on 18th Street. In total, the building will be about 150,000 square feet in size. Construction began in spring 2022 and we should be able to move into the Peltier Complex in spring 2024. I can’t wait for all of you to see the building! Once the Peltier Complex and the AFRL are completed, we will be fortunate to have modern facilities for all four pillars of agricultural research. In addition to the Peltier Complex and the AFRL, we have state of the art greenhouse facilities in the Dalrymple Agricultural Research Complex and modern wet labs in Loftsgard Hall.

We have also begun work on updating the Plant Sciences Learning Center in the garden level of Loftsgard Hall. Phase One of this construction is nearly finished. We are just waiting for the installation of the cabinetry. Once we are finished with this phase, the project will be about 25% completed. Funding to support the updating of the Learning Center is being provided by your generous gifts to the department through the NDSU Foundation. The entire updating project is estimated to cost about \$250,000 and we are about one-third of the way in raising sufficient funds to complete the project. Donations to support the project can be made to the NDSU Foundation any time of the year. Additionally, the Foundation can work with donors to spread out the payments of larger gifts over a five-year period. Let’s work together to raise the funds to complete the much needed updating of the Plant Sciences Learning Center sooner rather than later.

As I look back at what I wrote the last three years for the Blizzard Watch, I started each year by describing what we were doing at NDSU to mitigate the risk of the spread of COVID-19. While there are still students and

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## Message from the Department Head (cont.)

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staff coming down with COVID, we likely are as close to the “new normal” following the pandemic as we will ever be. It is great to see the classrooms full of students again, though most faculty are still recording their lectures on Zoom or other video capture platforms for students that are unable to attend class. As we move more into online delivery of courses, the knowledge we gained in online teaching during the pandemic will be invaluable.

This year’s Blizzard Watch is one of the longest ever because of the long list of awards and accomplishments by our students, staff, and faculty. I am especially touched by the community outreach and service provided by our students, faculty and staff. Each year the Blizzard Watch provides stories on our new hires and those that have left. In December 2022, Karen Hertsgaard retired after 16 years of service. Karen worked closely with Kamie Beeson in collecting and writing content for the department’s social media platforms, website, monthly newsletters, and the annual Blizzard Watch. Kamie left Plant Sciences to take a position as the administrative assistant for our College. We are hoping to refill Kamie’s position in the near future, but we won’t be able to refill Karen’s position at this time. Jody VanderWal retired after working 41 years of service working for the dry bean breeding program as a research specialist. Dr. Xiwen Cai resigned as the wheat cytogeneticist to accept a position with the USDA-ARS in Lincoln, NE as a research geneticist. After consulting with faculty and stakeholders, we decided to redirect this position into one that focuses on multiomics of wheat and other crops. We expect the person hired to lead this program to begin shortly after July 1, 2023. In addition to this position, we were able to refill two other faculty positions in 2022. Dr. Shahidul Islam began in June as an assistant professor leading the spring wheat quality research program. This position was previously held by Dr. Senay Simsek. Dr. Zhou Jin joined the department in August as an assistant professor leading the barley and malt quality research program. This position was previously held by Dr. Paul Schwarz. In July, we had three faculty promotions. Drs. Bingcan Chen and Jijia Rao were promoted to associate professor with tenure and Dr. Anuradha Vegi was promoted to associate professor of practice. Dr. Tom Kalb, Extension Horticulturalist was promoted to Extension Specialist III in July.

Additional honors to note in 2022 include Dr. Marisol Berti being awarded the Jordan A. Engberg Presidential Professorship and Dr. Jijia Rao being awarded the Young Scientist Award by the American Oil Chemists Society. Dr. Ron Smith, Dr. Anuradha Vegi and Albert “Jody” Vander Wal were honored by the College for their contributions to students and research during an awards presentation at the annual NDSU Ag Week banquet in April 2022. Dr. Ken Grafton was honored at the Harvest Bowl in November 2022 as the recipient of the Agribusiness Award. The

College recognized Dr. Magan Lewis as the 2022 recipient of the Distinguished Alumnus Award. Magan graduated from NDSU in 2012 with her PhD in Plant Sciences. Magan is currently working at Bayer as their Equipment and Automated Sensing Lead. The Blizzard Watch contains additional news on the awards and recognition received by our faculty, staff, students in 2022.

The outputs from our department impact all four corners of the state. A very visible accomplishment each year is the release of new varieties and plant products from our breeding programs. The hard spring wheat program led by Dr. Andrew Green released the hard red spring wheat variety ‘ND Heron’ and the dry bean program led by Dr. Juan Osorno released ‘ND Polar’ navy bean. Additionally, the Woody Plant Improvement Program led by Dr. Todd West released ‘EmerDak’ (Emerald Flare®) Tianshan Birch. The descriptions of each of these releases are described in more detail later on in the Blizzard Watch.

Each year in the Blizzard Watch, I report on the fall semester student enrollment numbers in the department. There are 96 students in the department’s Crop and Weed Sciences (CWS) program, 44 students in the Horticulture program, and 18 students in the Food Science program. The number of CWS students remained steady, the number of Horticulture students decreased by nine, and Food Science students increased by three. In our graduate programs, there are 78 students (47 MS and 31 PhD) in the department’s Plant Sciences program, 10 MS students in the Horticulture program, and 24 students (nine MS and 15 PhD) in the Cereal Science program. The number of graduate students increased by three students in the Plant Sciences program, two students in the Horticulture program, and four students in the Cereal Sciences program. There is a concerted effort in the department to increase enrollment in all of our undergraduate and graduate programs.

While there is much more that could be said in the Blizzard Watch about the creative research and innovative developments taking place in Plant Sciences, it is important to leave ample space to highlight the many accomplishments of our talented students, staff, and faculty. To stay up to date with the latest news, photos, and profiles of our students and alumni, be sure to visit our website at <http://www.ag.ndsu.edu/plantsciences/>, follow us on Facebook at NDSU Plant Sciences, or check out our Twitter page at @NDSUPlantSci. And if you are an alumnus, we encourage you to visit our alumni page at [www.ag.ndsu.edu/plantsciences/alumni](http://www.ag.ndsu.edu/plantsciences/alumni) and share your experiences and current position with us, while letting us know how your experience at NDSU contributed to where you are today.

## Peltier Complex (May 2023)



The Peltier Complex will bring together researchers, scientists, students, grower groups and producers from NDSU, the Northern Crops Institute and industry to advance next generation products developed in North Dakota.

The new facility will house NDSU's food science, meat science and cereal science laboratories along with the NCI and the North Dakota Trade Office.

Construction began in spring 2022 and we should be able to move into the Peltier Complex in spring 2024.

Learn more at <https://ndsufoundation.com/news/2021/09/peltier-complex>.

*Photo courtesy of Darin Eisinger*

## Plant Sciences Learning Center



Funding to support the updating of the Learning Center is being provided by your generous gifts to the department through the NDSU Foundation.

The entire updating project is estimated to cost about \$250,000 and we are about one-third of the way in raising sufficient funds to complete the project.

Donations to support the project can be Made to the NDSU Foundation any time of the year at <https://ndsufoundation.com>.

# Faculty Updates

## New Hires

**Dr. Shahidul Islam** joined the Department of Plant Sciences in June 2022 as an assistant professor leading the spring wheat quality research program.



Dr. Islam completed his B.Sc. in Agriculture and M.Sc. in Horticulture at Bangladesh Agricultural University. He completed a Ph.D. in the School of Plant Biology at the University of Western Australia under an international fellowship.

Islam's research interests include cereal protein chemistry, wheat grain and end-product quality, plant nitrogen use efficiency, food analytical chemistry, genetic improvement for food functionality and improving bread quality by adding alternate plant proteins.

Islam and his family enjoy traveling and look forward to learning about the U.S. Midwest. He says he will miss the beaches of Australia but has heard there are beautiful lakes in North Dakota and Minnesota to explore.

**Dr. Zhao Jin** joined the Department of Plant Sciences in August 2022 as an assistant professor in the cereal and food science program. Her responsibilities will include leading the malt quality and food fermentation research program and teaching malting and brewing and cereal technology courses.



Jin completed a M.S. and a Ph.D. in fermentation engineering at Jiangnan University, China in 2014. She joined the NDSU malt quality research project as a visiting scientist and postdoctoral fellow, working with Dr. Paul Schwarz, in 2015. She worked as a principle investigator to lead the research on wheat malt in the Department of Food Sciences at Nantong College of Science and Technology before coming to NDSU.

Her research interests include seeking strategies to increase diversity in grains used for malting and brewing, incorporating malted grains into brewing and other beverages, expanding research on food fermentation, and improving food safety and quality.

*Welcome*

## Promotions

**Dr. Bingcan Chen** was promoted to associate professor with tenure. His research focuses on food and cereal chemistry, including lipid oxidation mechanisms and antioxidant strategies in food systems, novel antioxidant constituents and bioactive ingredients from cereals, and flavor formation in cereal products. His teaching responsibilities at NDSU will include food chemistry and food analysis. Chen earned his Ph.D. in food science at the University of Massachusetts Amherst and was hired at NDSU in 2015.



**Dr. Jiajia Rao** was promoted to associate professor with tenure. She earned her doctorate in food science at the University of Massachusetts, Amherst, where she was a postdoctoral associate following her degree completion. She leads the food biopolymer and ingredient research group, which works to identify the structure and functional properties of food biopolymers mainly from plant-based sources and their applications in food. The group integrates techniques from the fields of food science, cereal science, material science and nanotechnology to bring added value to plant-based ingredients. Rao teaches courses in food unit operations and food product development.



**Dr. Anuradha Vegi** was promoted to associate professor of practice. Vegi earned her Ph.D. in food safety from NDSU. She is involved in teaching various Food Science courses in the Cereal and Food Science Program, Department of Plant Sciences at NDSU. Apart from her focus on teaching Food Science courses, with collaboration, she has been involved in food science teaching related research, food fermentation, and cereal grain safety during storage and processing.



**Dr. Tom Kalb** was promoted to Extension Specialist III for his contributions to the outreach mission of NDSU. He earned his Ph.D. in horticulture from Virginia Tech. Tom Kalb is an Extension Horticulturist for NDSU. He conducts gardening workshops, writes articles and answers gardening questions. He coordinates the Spring Fever Garden Forums, the North Dakota Home Garden Variety Trials and the North Dakota Junior Master Gardener Program.



# Staff Updates

## New Staff and Updated Positions

New postdoctoral research fellows are **Krishna Acharya**, spring wheat breeding; **Elisandra Solange Bortolon**, forages; **Nusrat Khan**, dry bean breeding; **Anderson Melo**, extension potato production; **Katherine Running**, disease resistance in wheat, **Qijun Zhang**, durum wheat breeding.

New research specialists are **Tom Berg**, extension writing specialist; **Keith Biggers**, weed specialist; **Cameron Hoyt**, dry bean assistant breeder; **April Johnson**, extension pollinator technician; **Gustavo Kreutz**, assistant soybean breeder; **Gene Leach**, dry bean breeding; **Houston Lindell**, forages; **Seth Nelson**, oat breeding; **Delgersaikhan Shinezorigt**, food tech specialist.

New to the office staff is **Brenda Robinson**, accounting specialist.

## Resignations

Postdoctoral research fellows who resigned are **Sikiru Atanda** and **Md. Abdullah Bari**, pulse breeding; **Uyory Choe** and **Yang Lan**, food chemistry and ingredient technology, **Taiyoung Kang**, food chemistry; **Bikash Poudel**, cereal crops; **Dipayan Sarkar**, research scientist and **Kristin Simons**, dry bean breeding.

Research staff who resigned are **Samuel Bibby**, forages; **Ryan Borgen**, weed specialist; **Ashley Cooper**, **Brock Fagerstrom** and **Aaron Froemke**, soybean breeding; **Nathan Haugrud**, weeds; **Gene Leach**, dry bean breeding; **Vicki Magnusson**, soybean breeding; **Richard Nilles**, potato breeding; **Andrew Ross**, pulse crops; **Wei Zhang**, woody plant physiology and biotechnology.

Office staff who resigned are **Andrea Evert**, accounting technician and **Kamie Beeson**, Information Processing Specialist.

## Retirement

**Karen Hertsgaard**, information specialist, retired in December 2022 after 16 years of service. Karen worked closely with the Institute of Barley and Malt Sciences (IBMS) coordinating workshops and short-courses. In retirement she will have more time to hone her sewing skills and spend time with family.

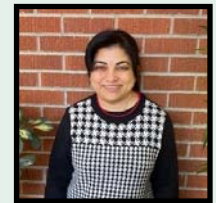
**Albert "Jody" Vander Wal**, dry bean research specialist, retired in April after 41 years as the one constant person in the dry edible bean project. Jody moved to Beulah, ND, where he will spend more time with family and his many hobbies, including hunting, fishing and taxidermy.



Acharya



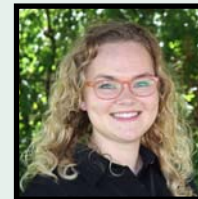
Bortolon



Khan



Melo



Running



Zhang



Berg



Biggers



Hoyt



Johnson



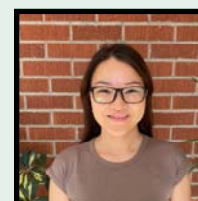
Kreutz



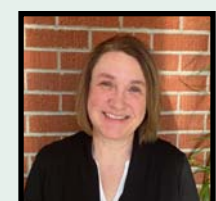
Lindell



Nelson



Shinezorigt



Robinson



Hertsgaard



Vander Wal



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NDSU Plant Sciences

## Faculty & Staff Awards & Honors

### Employees Honored at Ag Week Banquet

**Ronald Smith, Anuradha Vegi and Albert “Jody” Vander Wal** were honored by the NDSU Agriculture Collective for their contributions to students and research during an awards presentation at the annual NDSU Ag Week banquet on April 22, 2022.

**Smith** received the Owl Award, which is given to a faculty member whose classes are beneficial, challenging and fun. He is an emeritus professor in the Department of Plant Sciences, where he served as the Extension horticulturist for 27 years. He retired in 2012 and continues to teach the History and Evolution of Wine in America course (PLSC 307) every fall semester.



**Vegi** received the Herd Award, which is given to a faculty or staff member who demonstrates that students come first through academic or student organization advising. She is the Food Science undergraduate program coordinator and associate professor of practice in food science, a position she has held since 2016. She advises undergraduate students, teaches undergraduate food science courses and serves as advisor of the Food Science and Food Safety Club.

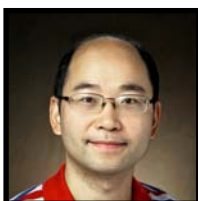


**Vander Wal** received the Golden Bison Award, which is given to a faculty or staff member who has made valuable contributions to agriculture and NDSU students throughout their career. He is a research specialist who has worked in the dry bean breeding program since it began in 1981 and was actively involved in the development of more than 12 well-known dry bean varieties and the development of improved germplasm with resistance to disease and other agronomic traits. He retired on April 30, 2022, after 41 years of service.



### Chen Receives IFT Outstanding Young Scientist Award

**Bingcan Chen** was awarded the Outstanding Young Scientist in honor of Samuel Cate Prescott from the Institute of Food Technologists. This award is one of the most prestigious IFT Research and Innovation Awards given annually for outstanding research in food science and technology that advances food science and the human condition. Chen’s research focuses on the understanding of structure and function relationships of food ingredients, particularly lipids, proteins, and phenolics, in relation to food quality and flavor.



### Auwarter Recognized by Staff Senate

The NDSU Staff Senate honored Plant Sciences research specialist **Collin Auwarter** with the Individual Staff Senate Award during the 2022 Staff Recognition Awards and Years of Service Celebration.



### McClellan’s work featured by Department of Energy

To celebrate their 25th anniversary, the United States Department of Energy (DOE) Joint Genome Institute (JGI) has featured work done by Plant Sciences professor of dry bean genomics and genetics, **Phil McClellan** and colleagues. The team completed the sequencing and analysis of the common bean genome which is significant because dry beans are an excellent source of protein and provide income potential for poverty alleviation worldwide.



### McDonalds approves Dakota Russet for French Fries

North Dakota State University potato variety ‘Dakota Russet’ has been approved for use by McDonalds for their world famous French fries. ‘Dakota Russet’ was developed by potato breeder, **Asunta Thompson** and her team and released in 2012 by the North Dakota Ag Experiment Station. ‘Dakota Russet’ has uniform, blocky tubers, creamy white flesh and golden russet skin that is well suited for fry applications. ‘Dakota Russet’ is one of eight varieties accepted in North America.



### Young Scientist Research Award for 2022

**Jiajia Rao**, Plant Sciences Associate Professor is the recipient of the AOCS, American Oil Chemists’ Society Young Scientist Research Award for 2022. The award sponsored by the International Food Science Centre A/S recognizes a young scientist who has made a significant research contribution in an AOCS Division topic.



### Bandillo awarded RCA Research Slam Award

**Nonoy Bandillo**, assistant professor of Plant Sciences was awarded the 2022 NDSU RCA Research Slam Award for New Faculty. Bandillo is the pulse crop breeder in the Department of Plant Sciences.



# Faculty & Staff Awards & Honors

## Berti Awarded Endowed Professorship

**Marisol Berti**, professor of Plant Sciences, received the Jordan A. Engberg Presidential Professorship. Endowed professorship awards are given to faculty member with an outstanding record in all areas of faculty work. The Engberg professorship is awarded to faculty at the rank of professor with at least eight years of



service to NDSU. Berti is widely recognized for her forage and biomass production research for feed and biofuels. She has been affiliated with 36 grants, totaling more than \$23 million. Berti has published 93 peer-reviewed articles, eight books, three book chapters and has given over 200 presentations.

## Staff & Extension Years of Service

### 45 Years



**Eileen Buringrud**  
Admin. Assistant

### 30 Years



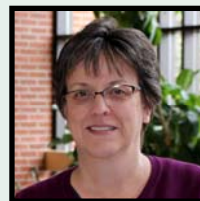
**James Gillespie**  
chemist

### 25 Years



**Karen Jevning**  
Admin. Secretary

### 20 Years



**Lisa Johnson**  
Admin. Secretary



**Vicki Magnusson**  
soybean

(Not pictured)  
**Sandra Mark**  
weeds

### 15 Years



**Karen Hertsgaard**  
Information Specialist

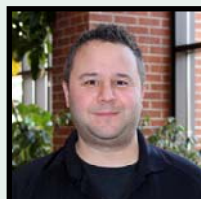


**Erik Brandvik**  
potatoes



**Lorin Miller**  
accounting

### 10 Years



**Jim Perleberg**  
chemist



**Andrew Ross**  
pulse crops



**Shannon Ueker**  
Admin. Secretary

### 5 Years



**Ashley Cooper**  
soybeans



**Darin Eisinger**  
corn - new crops



**Peter Ihry**  
potatoes



**Joseph Mettler**  
weeds



**Thor Selland**  
hard spring wheat



## 2022 Research Grants

Plant Sciences researchers actively pursue grants for research funding and support. Here is a snapshot of funds awarded in 2022.

Over **\$7.4 million** were awarded to Plant Sciences projects, 144 grants from \$500 to \$456,280 were awarded to 33 projects.

### The projects receiving the largest grants were:

**Zhao Jin**, *Deoxynivalenol (DON) in Wheat and Barley*, \$456,280, USDA/ARS - USWBSI

**Carrie Miranda**, *Breeding of Glyphosate-Resistant Soybean Cultivars*, \$232,812, ND Soybean Council

**Asunta Thompson**, *Refining Molecular Mechanisms that Control Potato Meristem*, \$232,500, USDA/ARS

**Carrie Miranda**, *Two Zurn Combines*, \$221,992, ND Soybean Council

**Marisol Berti**, *Establishing Alfalfa in Intercropping with Sunflower and Sorghum to Improve Alfalfa Yield and Profitability*, \$211,891, USDA/NIFA

**Kalidas Shetty**, *Identifying the Molecular Mechanisms Controlling Wound-Healing Processes to Improve Postharvest Quality of Potato*, \$211,625, USDA/ARS

**Richard Horsley**, *Developing Malting Barley with Reduced FHB and DON*, \$203,097, USDA/ARS – USWBSI

**Elias, Elias**, *Breeding Durum Wheat for Fusarium Head Blight Resistance*, \$188,120, USDA/ARS – USWBSI

**Juan Osorno**, *Genetic Improvement of Dry Beans for Bruchid Resistance in Southern Africa*, \$181,564, Michigan State/USAID

**Nonoy Bandillo**, *Pulse Crops Breeding and Genetics Research for North Dakota*, \$169,944, Northern Pulse Crops Association

### The agencies granting the most funds were:

- ◆ USDA/ARS: 17 grants, \$1,240,844
- ◆ USDA/ARS-USWBSI: 10 grants, \$1,128,452
- ◆ ND Soybean Council: 11 grants, \$845,921
- ◆ ND Wheat Commission: 17 grants, \$741,711
- ◆ USDA-NIFA: 8 grants, \$599,745
- ◆ USDA/AMS-ND Dept of Ag/ND Specialty Crop Block Grant: 9 grants, \$653,894



## Crop Variety Releases

The North Dakota Agricultural Experiment Station released two new crop varieties in 2022.

### ND Heron hard red spring wheat / Breeder: Andrew Green

**ND Heron** has a competitive yield package coupled with high test weight and protein. It has an excellent end-use quality that professors expect from an NDSU variety. ND Heron has good disease resistance to Fusarium head blight (FHB), bacterial blight, and common rust races. ND Heron is a wheat variety that is targeted for the western half of North Dakota and South Dakota and a large portion of Montana. ND Heron spring wheat would be a good fit for any spring wheat producer in that area.

### ND Polar navy bean / Breeder: Juan Osorno

**ND Polar** is a navy bean that combines high seed yield and good seed quality, upright plant architecture that facilitates direct harvest, and uniform drydown. ND Polar is resistant to bean common mosaic virus (BCMV), and has intermediate resistance to common bacterial blight (*Xanthomonas axonopodis* pv. *phaseoli*). Thanks to the pedigree of ND Polar, which includes some black bean cultivars and germplasm, it has shown to be very stable and resilient across years and locations.

With ~16% of the total dry bean production in the United States, navy bean is the third most important market class after pinto and black. North Dakota is the largest producer of dry bean in the United States, accounting for 35% of the total production. Among all market classes, navy bean production in the state is ~15% of the total.



ND Heron



ND Polar



ND Polar



## Woody Plant Improvement Program

The NDSU Woody Plant Improvement Program made the cover of American Society for Horticultural Science April 2022 edition.

The featured article is *Betula tianschanica* 'EmerDak' (Emerald Flare® Tianshan Birch) 'EmerDak' is an outstanding small to medium-size ornamental tree with pyramidal form. The attractive white exfoliating bark with gray and slight orange undertones adds significant multi-seasonal interest to the landscape. 'EmerDak' has medium emerald-green foliage throughout the growing season.

Recommended use is for limited-space landscapes for vertical accent elements or as a specimen tree. It is recommended that trees be mulched, and supplemental water supplied at stressful sites. Mulch will assist with winter protection in exposed locations or colder zones.

### Branch Out: The NDSU Arboretum Experience

This educational event was hosted at the Dale E. Herman Research Arboretum. The 35-acre arboretum is tucked into the countryside near Amenia, ND and contains the largest collection of trees and shrubs in the northern Great Plains with over 5,000 species, cultivars and selections.

New this year, the event featured four separate walking tours. **Dr. Todd West**, the leader of the NDSU Woody Plant Improvement Program and **Connor Hagemeyer**, research specialist, led the tours.

"The walking tours will be educational for homeowners that are new to landscaping as well as experienced individuals", states **Dr. Esther McGinnis**, NDSU Extension Horticulturist. "A special tree walk for new homeowners will focus on low maintenance trees that thrive in the region and address problematic trees that should be avoided."

In addition to walking tours, presentations included tree planting and after-care as well as how to attract pollinators. **Don Kinzler**, Cass County Extension Agent, was the keynote speaker. He presented frequently asked tree and shrub questions.

Special learning stations engaged participants on subjects such as ergonomic tools, pruning, NDSU woody plant research, and how to identify emerald ash borer.

While the arboretum is a beautiful and educational place to spend an afternoon, its primary purpose is to evaluate, select, and introduce new trees and shrubs for the harsh northern climate and the variable soils of the Midwest.



'EmerDak' (Emerald Flare® Tianshan Birch)

Dale E. Herman Research Arboretum



Dates to Remember

## 2023 Events Calendar

### Department Events

July 25	Plants, Local Foods & Outdoor Spaces, Horticulture Research & Demonstration Gardens, NDSU Campus, Fargo, ND
Aug. 24	Northern Plains Potato Growers Assoc. Field Day, Larimore, Inkster and Hoople, ND
Sept. 9	Branch Out: The NDSU Arboretum Experience NDSU Research Arboretum, Amenia, ND
TBD	Food and Edible Plants Field Day, Horticulture Research Farm, Amenia, ND
TBD	Weed Science Field Day, Prosper, ND and NW 22

*Note: Dates for all events are subject to change. Follow our website and social media for updates.*

[www.ag.ndsu.edu/plantsciences](http://www.ag.ndsu.edu/plantsciences)

### Research Extension Center Field Days

July 10	Central Grasslands Research Extension Center, Streeter
July 11	Hettinger Research Extension Center
July 12-13	Dickinson Research Extension Center
July 12	Williston Research Extension Center, dryland tour
July 13	Nesson Research & Development Farm, Williston, irrigated tour
July 17	Agronomy Seed Farm, Casselton
July 18	Carrington Research Extension Center
July 19	North Central Research Extension Center, Minot
July 20	Langdon Research Extension Center
August 3	Oakes Irrigation Research Site

[www.ag.ndsu.edu/research/field-days](http://www.ag.ndsu.edu/research/field-days)

## Graduate Studies

The Department of Plant Sciences offers graduate level academic and research training. Each specialized area of study is designed to provide students with an understanding of the discipline and of relevant regional and global issues.

### Degrees

Cereal Science - M.S. | Ph.D.  
Horticulture - M.S.  
Plant Sciences - M.S. | Ph.D.

### Disciplines

Biotechnology · Breeding · Cereal Science · Food Science · Genetics · Horticulture · Physiology · Production · Turfgrass · Weed Science

### Scholarships

In the 2022-23 academic year, 31 scholarships were awarded ranging from \$250 to \$2,100, and totaling over \$29,500.

Accepted students become paid research assistants and are eligible for tuition waivers. All graduate students are part of the **Plant Sciences Graduate Student Association** and are eligible to participate in the annual graduate symposium with Canadian universities.

[www.ag.ndsu.edu/plantsciences](http://www.ag.ndsu.edu/plantsciences)

## Undergraduate Majors

A Bachelor of Science degree in one of the Department of Plant Sciences majors provides a strong base for advanced degrees and preparation for a variety of careers. Students may pursue a general degree or specialize in curriculum options.

### Majors Leading to a B.S.

Crop & Weed Sciences  
Food Science  
Horticulture  
Biotechnology

### Scholarships

In the 2022-23 academic year, 65 scholarships were awarded ranging from \$150 to \$3,500, and totaling over \$58,000.

### Student Organizations

Agronomy Club  
Food Science/Food Safety Club  
Horticulture & Forestry Club

A low student-to-faculty ratio gives students numerous opportunities to work closely with faculty mentors, both in and outside the classroom, in relevant research activities that range from laboratory to greenhouse to field research.

## Graduate Student News

**Bhanu Dangi**, M.S. student, Plant Sciences, received first place for his poster, “Diversification of FHB Resistance QTL in Winter Wheat Germplasm” at the FHB Forum in Florida. His advisor is Dr. Francois Marais.



M.S. student **Bipin Neupane** took first place in the student poster competition at the 3rd Biennial Association of Nepalese Agricultural Professionals of Americans (NAPA) International Scientific Conference. He presented “Characterization of d-tritopyrum lines and derivatives to identify their Jd chromosomes”. His advisor is Dr. Francois Marais.



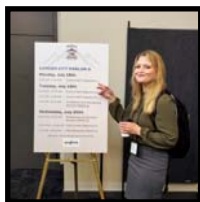
NDSU M.S. candidate **Lucas Alexandre Batista** received first place in the poster competition at the 2022 University of Illinois Urbana-Champaign (UIUC) Plant Science Symposium: Innovations Connecting Complex Biosystems. He was also awarded a travel scholarship to attend the symposium. Dr. Andrew Green is his advisor.



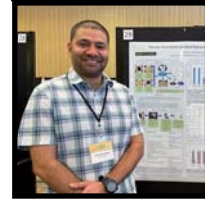
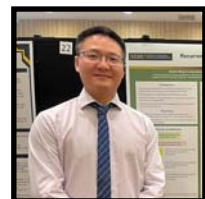
**Hashim Andidi** and **Oscar Rodriguez** were inducted into the Gamma Sigma Delta NDSU Chapter of the Honor Society of Agriculture.



**Tannis Anderson**, M.S. student in Plant Sciences, took fifth place out of 26 students for her presentation, “Establishing an Efficient and Economic Diploid Potato Production Scheme”, in the Potato Association of America graduate student research presentation competition, her advisor is Dr. Susie Thompson. Tannis was also inducted into the Gamma Sigma Delta NDSU Chapter of the Honor Society of Agriculture



**Runhao Wang**, **Mikayla Tabert** and **Ashish Christopher** won awards for their poster presentations in the Gamma Sigma Delta NDSU Chapter poster session, **Wang** won first place and **Tabert** won second place. In the NDSU Graduate Student Council poster session, **Wang** placed third and **Christopher** placed fifth. Wang is a Ph.D. student from Tai’an, Shandong Province of China, and is advised by Dr. Xuehui Li. Tabert is a M.S. student from Red Lake Falls, MN, and is advised by Dr. Marisol Berti. Christopher is a Ph.D. student from Bengaluru, India, and is advised by Dr. Kalidas Shetty.



**Venkateswara Rao Kadium** and **Ramesh Pilli** were awarded scholarships by the American Society for Enology and Viticulture. They are advised by Dr. Harlene Hatterman-Valenti.



**Anastasia Kurth** has been awarded the Dr. Jack F. and Imogene Carter Endowed Plant Sciences Graduate Fellowship. She is pursuing a Plant Sciences M.S. degree, advised by Dr. Marisol Berti. The Endowed Fellowship is named for Jack and Imogene Carter in recognition of dedication to North Dakota agriculture and interest in creating a premier agronomy department for the education of generations of students.



**Samuel Bibby** took third place with his presentation, “Corn-alfalfa intercropping with different row spacings”, in the Agronomy and Cropping Systems category of the 37th Plant Science Graduate Student Symposium hosted virtually by the University of Manitoba. Sam is advised by Dr. Marisol Berti.



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## Graduate Student News

**Nathan Haugrud**, PhD student in Plant Sciences was awarded the Outstanding Graduate Student award at the North Central Weed Science Society annual meeting in St. Louis. This award recognizes one outstanding graduate student who is a NCWSS student member, actively involved in the Society as well as a contributor to the field of weed science through extension, research and teaching. Haugrud also won first place in the Agro-nomic Crops-Corn section of the poster contest. His advisor is Dr. Joe Ikley.



Congratulations to North Dakota State University Ph.D. candidate **Ana M. Magallanes López** for receiving a top cited article award in the Cereal Chemistry journal published by John Wiley and Sons. Titled "Pathogens control on wheat and wheat flour: A review" it was published in September of 2020. Co-author is Dr. Senay Simsek.



**T.M. Shaikh** received 6th place in the oral graduate student contest and the Barbara Ann Earwicker Award for Excellence in Research and Scientific Communication at the North Dakota Academy of Science 113th Annual Conference. His advisor is Dr. Mukhlesur Rahman



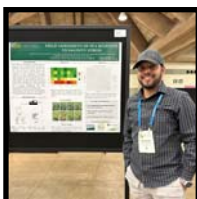
**Anto Charles** received a Graduate Scholarship Award and a Travel Scholarship Award. **Liuyi Chang** received a Travel Scholarship Award from the IFT—Institute of Food Technologists in April 2022. Charles and Chang are both Cereal Science Ph.D. candidates advised by Dr. Jiajia Rao.



**Mala Ganiger** was featured by the American Society of Agronomy during Asian American and Pacific Islander Heritage Month for being a 2021 leadership award recipient.



**Shailesh Acharya** placed third in the 2022 Crop Science Society of America poster competition. Titled "Field Assessment f Pea Response to Salinity Stress". Dr. Nonoy Bandillo, advisor.



## 2022 Ph.D. and M.S. Graduates

### Ph.D.

Shatha Alaoufi (*SAFE, Simsek*)  
Sergio Cabello Leiva (*Plant Sciences, Berti*)  
Ashish Christopher (*SAFE, Shetty*)  
Ahasanul Hoque (*Plant Sciences, Rahman*)  
Seyedali Hosseinirad (*Plant Sciences, Elias*)  
Haiyang Jiang (*Cereal Science, Rao*)  
Jayani Maddakandage Dona (*Cereal Science, Simsek*)  
Ana Magallanes Lopez (*Cereal Science, Simsek*)  
Katherine Running (*Genomics, Faris/McClean*)  
Runhao Wang (*Plant Sciences, Li*)



### M.S.

Sagar Adhikari (*Plant Sciences, Marais*)  
Samuel Bibby (*Plant Sciences, Berti*)  
James Bjerke (*Plant Sciences, Thompson*)  
Sarah Bogenrief (*Plant Sciences, Hatterman-Valenti*)  
Katie Fiskness (*Horticulture, Hatterman-Valenti*)  
Shakil Hosain (*Plant Sciences, Rahman*)  
Venkateswara Kadium (*Plant Sciences, Hatterman-Valenti*)  
Ashok Mandal (*Plant Sciences, Rahman*)  
Kenneth Mozea (*Plant Sciences, Berti*)  
Zachary Pull (*Plant Sciences, Gramig*)  
Kevin Rue (*Plant Sciences, Zhang*)  
Brian Smart (*Plant Sciences, Hulke*)  
Jeffery Stith (*Plant Sciences, Ikley*)  
Haley Visto (*Plant Sciences, Green*)

# Undergraduate Student News

## Scholarship Recipients

Horticulture student, **Quinn Nowacki**, received the 2021-2022 Robin D. Linder Memorial Scholarship sponsored by the Minnesota Nursery and Landscape Association Foundation. Quinn also shared her passion for horticulture in the Summer 2022 NDSU Foundation Magazine. She is advised by Dr. Todd West.



**Mindee Boyce** was selected as a recipient of the 2022 Young Leader Scholarship Program by the Mid America CropLife Association. She is a senior majoring in crop and weed sciences with an agribusiness minor and is advised by Dr. Juan Osorno. After graduation she plans to seek a crop consultant or sales agronomist position in western North Dakota.



NDSU Crop and Weed Sciences student and recipient of the Wold Study Abroad scholarship, **Katlyn Balstad**, spent the month of June studying in Angers, France with a sustainable agriculture program. Balstad is a Fosston, MN native. She is advised by Dr. Catherine Kingsley-Westerman, Department of Communication and Dr. Rebekah Oliver, Department of Plant Sciences.



**Hallie Counts**, North Dakota resident and Horticulture student in turf management, won a \$1000 scholarship from North Central Turfgrass Association (NCTGA). She will be recognized during the annual conference, February 2023. She is advised by Dr. Alan Zuk

## NDSU Scholarships

In the 2022-2023 academic year, Department of Plant Sciences graduate and undergraduate students received 65 NDSU scholarship awards totaling over \$58,000. They were honored at the NDSU College of Agriculture, Food Systems and Natural Resources Recognition Luncheon in November.

CONGRATULATIONS

## Award Recipients

**Adam Aberle** was a top performer in the North Central Weed Science Society Collegiate Weed Science Contest. Aberle was the second place individual overall at the undergraduate level and won first place in the undergraduate weed identification contest. Aberle is a crop and weed sciences major from Bismarck, ND.



NDSU Plant Sciences student **Christopher Longtin** has received the 2022 Midwest Outstanding Intern Award from Helena Agri-Enterprises, LLC. The award recognizes creativity, innovation and hard work and includes a scholarship to help the student intern with college expenses.



**Elizabeth Krause** has completed the Russell and Anna Duncan Undergraduate Research Scholars "Duncan Scholars" program. She worked with associate professor and potato breeding project leader, Dr. Asunta "Susie" Thompson, to quantify the reduction of Potato Virus Y (PVY) through the use of crop oils and timely vinekill and presented her research during the National Council on Undergraduate research.



Crop and Weed Sciences undergraduate **Emma Mitchell** won first place in the undergraduate student poster contest in the Wood Biology, Ecology and Management section at the 76th North Central Weed Science Society meeting in Grand Rapids, Michigan.



Plant Sciences Food Science major **Anna Mahoney**, from Appleton, Minnesota, was named one of the College of Agriculture, Food Systems and Natural Resources top seniors at the 2022 NDSU Ag Week Banquet. During her time at NDSU Anna received several scholarships and awards. She also participated in the Food Science and Food Safety Club as president and programming council representative, the CAFSNR Honor Commission as chair and vice chair and the Gold Star Marching Band.



## Undergraduate Student News

### NDSU Horticulture and Forestry Club

The **NDSU Horticulture and Forestry Club** was selected as the Organization of the Year and club co-adviser, **Dr. Todd West**, was selected as the Adviser of the Year at the Bison Leader Awards ceremony hosted by the Congress of Student Organizations.



The National Association of Landscape Professionals 46th National Collegiate Landscape Competition took place at North Carolina State University. Team members **Maren Donovan**, **Sarah Linderwell**, **Jamie Miller**, **Taylor Pulver** and **Clarissa Satrom** won the roll call chant contest. The group was spotted in the April 2022 Landscape Management magazine!

**Maren Donovan** and **Clarissa Satrom** took 3rd place in the Arboriculture Techniques contest. They are advised by Dr. Harlene Hatterman-Valenti and Dr. Todd West, respectively.



### NDSU Food Science and Food Safety Club

The **NDSU Food Science and Food Safety Club** participated in the 2022 North Central Institute of Food Technologists Student Association Area Food Science College Bowl and placed third in the contest. Students answered questions on food science and technology, the history of foods and food processing, food law and IFT/food-related trivia.

The NDSU team included undergraduates **Renae Brunner**, **Kaden Kerzman**, **Anna Mahoney**, **Allison Stoner**, **Abrielle Schnurr** and **Jacob Thomsen**; and graduate students **Anto Charles**, **Aishwarya Suresh** and **Nirmala Subedi**. They are advised by Dr. Anuradha Vegi.



## Summer Interns

### Plant Sciences Undergraduate Summer Research Fellowship Program interns



**Mason Hill**, from Brainerd, MN, is a food science major at NDSU. His advisor is Dr. Anuradha Vegi. Mason's project was "Health attributes of food", led by Dr. Kalidas Shetty and Dr. Harlene Hatterman-Valenti.

**Brock Schulz**, a Roscoe, IL native, is a Horticulture science major at NDSU. His advisor is Dr. Todd West. Brock's project is "Industrial hemp production", led by Dr. Burton Johnson and Dr. Harlene Hatterman-Valenti.

## Alumni News

NDSU Plant Sciences 2021 Ph.D. graduate, **Andrej Svyantek**, was hired as an assistant professor of horticulture at Montana State University's Western Agricultural Research Center.



Emeritus Professors, **Richard Zollinger** and **Rodney Lym** were recognized for their contributions to Western Society of Weed Science. Zollinger was honored as a WSWS Fellow. Lym received special recognition for his collaborative work to update the history of the Society over the past three decades.

**Magan Lewis** graduated from NDSU with a Ph.D. in Plant Sciences in 2012. She has been named Des Moines Business Record's Forty under 40 and most recently recognized as one of the Top 10 Next Generation Leaders in the 2022 Seed World Magazine. Magan presented a seminar on leadership and innovation in agriculture October 2022.



## Memorials

**Ian Edwards** passed away on November 5, 2022 at his home in Perth, Western Australia. He obtained his PhD in genetics and plant breeding from NDSU in 1973, with a double minor in cereal chemistry and plant physiology. In 1998 he established Grain BioTech Australia after 22 years with Pioneer Hi-Bred International Inc., where he was Worldwide Director of Field Crops Research. In October 2000 he received the Alumni Achievement Award from NDSU. In 2003 he received an honorary Doctorate from NDSU for his contributions to wheat genetic research.

**Leonard R. Joppa** passed away November 16, 2022. He was a research geneticist with USDA-ARS and adjunct professor of crop science at NDSU. Leonard was a major advisor to many PhD and Masters degree students. Leonard received the Sigma Xi Outstanding Research Award in 1985, USDA Certificate of Merit in 1992 and Outstanding Scientists Award from the Fargo-Moorhead Federal Executive Association in 1992. In 2013 the NDSU Research Foundation named their new durum variety 'Joppa' in honor of his many contributions to the field of durum wheat genetics.

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## Plant Sciences Faculty

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Richard D. Horsley	Department Head; Professor (6-rowed and 2-rowed barley breeding, genetics)
Nonoy Bandillo	Assistant Professor (pulse breeding, genetics)
Marisol Berti	Professor (forages and biomass crop production)
Bingcan Chen	Associate Professor (food and cereal chemistry)
Michael J. Christoffers	Associate Professor (weed science, genetics teaching)
Wenhao (David) Dai	Professor (woody plant physiology, biotechnology)
Edward L. Deckard	Plant Sciences and Horticulture Graduate Programs Coordinator; Professor (crop physiology)
Elias M. Elias	University Distinguished Professor, J.F. Carter Durum Wheat Breeding/Genetics Endowed Professor (durum wheat breeding)
Greta Gramig	Associate Professor (weed science)
Andrew Green	Assistant Professor (hard spring wheat breeding)
Harlene Hatterman-Valenti	Assistant Dept. Head; Professor (high value crop production)
Kirk A. Howatt	Crop and Weed Sciences Undergraduate Program Coordinator; Associate Professor (weed science-annual weeds)
Joseph Ikley	Assistant Professor (Extension weed control)
Shahidul Islam	Assistant Professor (spring wheat quality)
Zhao Jin	Assistant Professor (malt quality and food fermentation)
Burton L. Johnson	Professor (sunflower, minor and new crop production)
Thomas Kalb, II	Extension Horticulture Specialist (western ND)
Hans Kandel	Professor and Extension Agronomist (broadleaf crop production)
Clair Keene	Assistant Professor and Extension Agronomist (cereal crops and field corn)
Quincy Law	Assistant Professor (invasive and noxious weed control)
Chiwon W. Lee	Professor (greenhouse production, vegetable culture and breeding)
Deying Li	Professor (sports turf management)
Xuehui Li	Associate Professor (statistical genomics)
Frank A. Manthey	Cereal Science Graduate Program Coordinator; Professor (durum and pasta quality)
G. Francois Marais	Professor (hard red winter wheat breeding, genetics)
Phillip E. McClean	Dr. Charles J. Mode Endowed Professor of Phenomics Research; Director, Genomics & Bioinformatics Program; Professor (dry bean genetics, biotechnology)
Esther McGinnis	Associate Professor and Extension Horticulturist
Michael S. McMullen	Professor (oat breeding, genetics)
Carrie Miranda	Assistant Professor (soybean breeding, genetics)
Rebekah Oliver	Associate Professor of Practice (genetics)
Juan M. Osorno	Professor (dry edible bean breeding)
Thomas Peters	Associate Professor and Extension Agronomist (sugarbeet production/weed science)
Mukhlesur Rahman	Associate Professor (oilseed breeding, genetics)
Jijia Rao	Associate Professor (food chemistry and ingredient technology)
Andrew Robinson	Associate Professor and Extension Agronomist (potato production)
Kalidas Shetty	Associate VP for International Partnerships and Collaborations; Professor (plant metabolism, food security)
Asunta (Susie) L. Thompson	Associate Professor (potato breeding)
Anuradha Vegi	Food Science Undergraduate Program Coordinator; Associate Professor of Practice (food safety, processing, microbiology)
Todd West	Horticulture Undergraduate Coordinator; Professor (woody plants improvement)
Minwei Xu	Assistant Professor (food processing)
Qi (Chee) Zhang	Associate Professor (turfgrass stress physiology)



## Emeritus Faculty

---

Duane R. Berglund	Richard C. Frohberg	H. Roald Lund	Paul B. Schwarz
Harold Z. Cross	Kenneth F. Grafton	Rodney G. Lym	Ronald C. Smith
Bert D'Appolonia	Dennis Gordon	Calvin G. Messersmith	LeRoy A. Spilde
Alan G. Dexter	Ted C. Helms	Dwain W. Meyer	Dean A. Whited
Murray E. Duysen	Dale E. Herman	Donald C. Nelson	Vernon Youngs
Jerry D. Franckowiak	Khalil Khan	Joel K. Ransom	Richard K. Zollinger

## Adjunct & Affiliate Faculty (\*USDA)

---

James V. Anderson* (plant biochemistry)	Blaine E. Johnson (range management)
James S. Beaver (dry bean genetics)	Clair Keene (agronomy)
Craig Carlson* (plant breeding, genetics)	Edward C. Lulai* (potato physiology)
Patrick M. Carr (sustainable agriculture)	Kevin McPhee (plant science)
Wun S. Chao* (perennial weeds)	Grant Mehring (cereal crops)
Chenggen Chu* (sugarbeet and potato research)	Mohamed Mergoum (plant breeding, genetics)
Munever Dogramaci* (sugarbeet and potato research)	Raja Sekhar Nandety* (plant sciences)
Linda Dykes* (food science and technology)	Jae-Bom Ohm* (grain science)
Justin D. Faris* (cereal crops)	Michael H. Ostlie (crop production)
Jason Fiedler* (chemical biology)	Timothy G. Porch (dry bean breeding, genetics)
Shana M. Forster (cereal crops)	Gautam Pradhan (crop physiology)
Jose G. Franco, Jr.* (agroecology, sustainable food systems)	Lili Qi* (molecular genetics)
Karen L. Fugate* (sugarbeet physiology)	James Rogers (agronomy)
Russell W. Gesch (oilseed crops)	Gerald J. Seiler* (sunflower and sugarbeet germplasm)
Salvador Alejandro Gezan (statistics and quantitative genetics)	Senay Simsek (food science)
Michael Grusak* (nutrition of crop plants)	Brent Trela (biotechnology)
Yong Q. Gu* (wheat genetics)	Calvin Trostle (soil chemistry)
Rajeev Gupta* (plant molecular biology)	Anuradha Vegi (food safety, processing and microbiology)
Darrin M. Haagensohn* (crop physiology and ecology)	Jochum J. Wiersma (small grains)
David P. Horvath (perennial weed physiology)	Steven S. Xu* (hard red spring wheat development)
Brent S. Hulke* (sunflower)	Shengming Yang* (cereal crops)
Brian M. Jenks (weed science)	

## Postdoctoral Research Fellows/Research Scientists\*

---

Krishna Acharya (hard spring wheat breeding)	Sepehr Naraghi* (oat breeding)
Naa Korkoi Ardayfio (oat breeding)	Bikash Poudel (cereal crops research)
Sikiru Adeniyi Atanda (pulse crops breeding)	Jayanta Roy (dry bean genetics and genomics)
Elisandra Solange Bortolon (forage research)	Katherine Running (disease resistance in wheat)
Mohammad Erfatpour (dry bean breeding)	Dipayan Sarkar* (plant metabolism and food security)
Jawahar Jyoti (barley genetics)	Sudeshi Seneviratne (wheat molecular genetics)
Jeonghwa Kim (pulse crops breeding)	Muhammad Tehseen (statistical genomics)
Hui Li (food and cereal chemistry)	Zhang, Qijun (durum wheat breeding)
Anderson Melo (Extension potato production)	

## Research and Support Staff

---

Collin Auwarter (high value crop production)	Alexa Lystad (Extension sugarbeet weed control)
Jason Axtman (durum breeding)	Makenson Maisonneuve (dry bean breeding)
John Barr (barley quality)	Sally Mann (durum wheat breeding)
Tom Berg (Extension writing associate)	Sandra Mark (weed science)
Keith Biggers (weed science)	Kelly McMonagle (wheat quality)
Brad Bisek (hard red winter wheat breeding)	Joseph Mettler (annual weeds)
Eric Brandvik (Extension potato production)	André Miranda (hard spring wheat breeding)
Brian Cattnach (barley breeding)	Seth Nelson (oat breeding)
Kathy Christianson (wheat quality)	Richard Nilles (potato breeding)
Ashley Cooper (soybean breeding)	DeLane Olsen (wheat quality)
Brenda Deckard (Director, Plant Sciences Student Services)	Allen Peckrul (food and cereal chemistry)
Chad Deplazes (Extension crop production)	Kelly Peppel (potato breeding)
Stephanie DeSimini (weed science)	James Perleberg (durum and pasta quality)
Darin Eisinger (minor and new crops, Extension crop production)	Lisa Piche (pulse crops breeding)
Andrew Fuchs (oilseed breeding)	Kevin Rue (turfgrass)
James Gillespie (malting barley quality)	Robert Sabba (weed science)
John Grieger (barley breeding)	Evan Salsman (durum breeding)
Connor Hagemeyer (woody plant improvement)	Thor Selland (hard spring wheat breeding)
Nathan Haugrud (Extension weed control)	Dege Shinezorigt (food technology)
Cameron Hoyt (dry bean breeding)	Brian Smart (sunflower research)
Justin Hegstad (statistical genomics)	Tom Studzinski (malting barley quality)
Peter Ihry (Extension potato production)	Gwen Thomas (wheat quality)
April Johnson (Extension pollinator technician)	Jesse Underdahl (hard spring wheat breeding)
Kreg Kercher (oilseed breeding)	Amber Walter (wheat quality)
Gustavo Kreutz (soybean breeding)	Adam Walz (hard spring wheat breeding)
Barb Laschkewitsch (vegetables and perennials)	
Rian Lee (dry bean genetics)	
Houston Lindell (forages and biomass crop production)	

## Office Staff

---

### Accounting

Krista Caldwell, Senior Accounting Specialist  
Cora Crane, Grants Coordinator  
Brenda Robinson, Accounting Technician  
Lorin Miller, Accountant

### Academic Program Assistance

Eileen Buringrud, Administrative Assistant  
Karen Jevning, Administrative Secretary  
Lisa Johnson, Administrative Secretary  
Shannon Ueker, Administrative Secretary

## North Dakota Foundation Seedstocks

---

Steve Sebesta, Director  
Joyana Baumann, Assistant Director  
Toni Muffenbier, Accounting Specialist

CS = Cereal Science

HORT = Horticulture PLSC = Plant Sciences

GPB = Genomics, Phenomics, Bioinformatics

## Graduate Students

<u>Name</u>	<u>Prog.</u>	<u>Deg.</u>	<u>Advisor</u>
Adam Aberle	PLSC	MS	Peters
Namrata Acharya	PLSC	MS	X. Li
Shailesh Raj Acharya	GPB	PhD	Bandillo
Sagar Adhikari	PLSC	MS	Marais
Shahab Ahmad	PLSC	PhD	Rahman
Waqas Ahmad	PLSC	PhD	Gramig
Oluwatayo Ajayi-Moses	GPB	MS	Nandety
Abdulrahman Alahmed	CS	PhD	Simsek
Md Zahangir Alam	PLSC	PhD	Rahman
Mohammad Alam	CS	PhD	Islam
Lucas Alexandre Batista	PLSC	MS	Green
Aizaz Ali	PLSC	PhD	Osorno
Tannis Anderson	PLSC	MS	Thompson
Hashim Andidi	PLSC	MS	Thompson
Jason Axtman	PLSC	MS	Elias
Ashley Barstow	PLSC	MS	Hulke
Peter Beerbower	GPB	PhD	Christoffers
Rajasekharreddy Bhoomireddy	PLSC	MS	Hatterman-Valenti
Apurva Bhopal	HORT	MS	H-Valenti/Shetty
David Boehm	CS	PhD	Chen
Emmanuella Bredu	HORT	MS	Zhang
Ryan Buetow	PLSC	PhD	Ransom
Emma Burt	PLSC	MS	Peters
Melissa Carlson	PLSC	PhD	Ransom
Liuyi Chang	CS	PhD	Rao
Anto Pradeep Charles	CS	PhD	Rao
Bhanu Dangi	PLSC	MS	Marais
Maria De Oliveira	PLSC	PhD	Osorno
Hava Delavar	PLSC	PhD	Hatterman-Valenti
Pritika Devkota	CS	MS	Manthey
Ajay Dhukuchhu	PLSC	PhD	Hatterman-Valenti
Tyler Edvall	HORT	MS	West
Baochen Fang	CS	PhD	Rao
Jose Figueroa Cerna	PLSC	MS	Osorno
Mala Ganiger	PLSC	PhD	Horsley
Kun Gao	CS	PhD	Chen
Bijaya Ghimire	PLSC	MS	Hatterman-Valenti
Ivymary Goodspeed	PLSC	MS	Hatterman-Valenti
Andre Gossweiler	PLSC	MS	Hulke
Matteo Grossi	CS	PhD	Chen
Jed Grow	PLSC	MS	Robinson
Zixuan Gu	CS	PhD	Chen
Md Mehedi Hafiz	PLSC	PhD	Rahman
Connor Hagemeyer	HORT	MS	West
David Halvax	PLSC	MS	West
Forrest Hanson	PLSC	MS	Miranda
Md Fahad Hasan	PLSC	MS	Rahman
Nathan Haugrud	PLSC	PhD	Ikley
Amber Hermanson	HORT	MS	Dai
Aaron Hoppe	PLSC	PhD	Peters
Md Najmol Hoque	CS	PhD	Islam
Md Ahmadul Islam	CS	PhD	Islam
Shazzadul Islam	PLSC	MS	Berti
Justin Jacobs	PLSC	MS	Johnson
Josephine Johnson	GPB	PhD	Bandillo
Mohammad Jony	PLSC	PhD	Rahman
Ela Jusino Montalvo	PLSC	MS	Horsley
Heymant Kaur	CS	MS	Vegi
Amin Khan	PLSC	PhD	Hatterman-Valenti
Hayat Khan	PLSC	MS	X. Li

<u>Name</u>	<u>Prog.</u>	<u>Deg.</u>	<u>Advisor</u>
Brady Koehler	PLSC	MS	Hulke
Saurabha Koirala	PLSC	MS	Rahman
Pooja Kumari	GPB	PhD	Green/Faris
Anil Kunapareddy	CS	PhD	Rao
Anastasia Kurth	PLSC	MS	Berti
Marcus Mack	PLSC	MS	Ransom
Makenson Maisonneuve	PLSC	MS	Horsley
Phabian Makokha	PLSC	PhD	Robinson
Amanda Malik	CS	PhD	Xu
Ashok Mandal	PLSC	MS	Rahman
Cameron Matthews	PLSC	PhD	Horsley
Maria Mazala	PLSC	MS	Osorno
Eduardo Melgar	PLSC	MS	Osorno
Stephen Mensah	HORT	MS	Hatterman-Valenti
Maram Milad	HORT	MS	West
Vimukthi Molligoda	CS	MS	Manthey
Jose Montoro Bais	PLSC	MS	Kandel
Yejune Moon	PLSC	MS	Jin
Mario Morales	GPB	PhD	Bandillo
Presley Mosher	PLSC	MS	Hatterman-Valenti
Haley Mosqueda	ECS	PhD	Berti
Clara Mvuta	PLSC	MS	Miranda
Mika Zumara	HORT	MS	Hatterman-Valenti
Harry Navasca	PLSC	MS	Bandillo
McKayla Neubauer	PLSC	MS	Berti
Bipin Neupane	PLSC	MS	Marais
David Ngure	PLSC	PhD	Thompson
Neil Olson	PLSC	MS	Hulke
Franklin Omeje	PLSC	MS	Berti
Caroline Osborne	GPB	MS	McClean
Ramesh Pilli	PLSC	MS	X. Li
Harika Pothula	PLSC	MS	X. Li
Afrina Rahman	PLSC	PhD	Rahman
Arunika Rajapaksha	CS	PhD	Rao
Md Golam Robbani	PLSC	PhD	X. Li
Oscar Rodriguez	PLSC	PhD	Osorno
Mory Rugg	PLSC	PhD	Green
Sidra Saleem	PLSC	PhD	Hatterman-Valenti
Evan Salsman	PLSC	PhD	X. Li
Rica Saldares	PLSC	PhD	Bandillo
Brock Schulz	PLSC	MS	Hatterman-Valenti
TM Shaikh	PLSC	MS	Rahman
Sifat Sharmin	CS	MS	Manthey
Avery Shikanai	PLSC	PhD	Hatterman-Valenti
Gurminder Singh	GPB	PhD	Faris
Jenna Steffes	PLSC	MS	Bandillo
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Aishwarya Suresh	CS	PhD	Manthey
Mikayla Tabert	PLSC	MS	Berti
John Teixeira	PLSC	MS	Bandillo
Jacob Thomsen	CS	AMS	Chen
Andres Torres	PLSC	MS	Gramig
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Diego Vargas Yana	CS	MS	Shetty
Adam Walz	PLSC	MS	Green
Cerly Rini Yeruva	PLSC	MS	McMullen
Muxin Zhao	CS	PhD	Chen
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