



DEPARTMENT OF ANIMAL SCIENCES

NEWSLETTER

AUGUST 2024

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Alumni spotlight
Award winners
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We're hiring!

Extension Beef Cattle
Specialist, Assistant
Professor

[https://ndsu.ag/
extbeefcattle](https://ndsu.ag/extbeefcattle)

Animal Science Lecturer

<https://shorturl.at/keGaz>

In the near future:

Lecturer/Livestock Judging
Coach

Extension Veterinarian

Summer days stir action



Welcome to this month's edition of our department's newsletter, where we are excited to share updates, activities, and showcasing some of the great work we do. I hope that you are having a great summer, with plenty of

activities during these long days. As we dive into this issue, we will explore the transformative potential of externships in veterinary technology, the innovative approaches being implemented in our beef unit, and the groundbreaking applications of virtual fencing for grasslands and beef cattle management. Each of these topics represents a significant stride towards enhancing animal care and management practices, demonstrating the evolving landscape of animal sciences.

Externships have become an invaluable component of veterinary technology education, offering students hands-on experience in real-world settings. These immersive opportunities not only bridge the gap between classroom learning and practical application but also provide students with a unique perspective on the day-to-day operations of veterinary practices. In this issue, Stacey Ostby (program co-director) will delve into how externships are shaping the next generation of veterinary technology professionals, highlighting success stories and key takeaways from recent externships. Through these experiences, students gain crucial skills, refine their clinical techniques, and develop a deeper understanding of the diverse challenges faced in veterinary medicine.

Turning our focus to the beef unit, we are thrilled to showcase this unit due to the importance of beef cattle production in our state. It is an important resource for our undergraduate students

since they can do hands-on work in different courses both in our Animal Science and Vet Tech majors. Our beef unit buzzes with a lot of activities during the fall and spring semesters, while the herd spends its summers at the Ekre Grassland Preserve.

The integration of virtual fencing technology into grasslands and beef cattle management represents a remarkable leap forward. Virtual fencing systems offer a high-tech solution for managing grazing patterns, improving pasture utilization, and reducing the environmental footprint of cattle operations. By leveraging GPS and electronic collars, virtual fencing allows for dynamic and adjustable boundaries, offering greater flexibility and efficiency compared to traditional fencing methods. This month, Dr. Miranda Meehan will comment on pros and cons of using this technology.

Finally, we are excited to announce that Dr. Taw Scaff joined our faculty as our Swine Extension Specialist. The increasing interest in livestock agriculture in the state has swine production at the forefront, taking advantage of the new crushing plants that are coming online, as well as for the excellent production environment that we are creating in North Dakota.

Whether you are a livestock producer, private industry professional, a student, an alumnus, or someone passionate about advancements in animal care and management, we hope this newsletter serves as a source of inspiration and knowledge.

We are eager to share the stories and innovations that are shaping the future of animal sciences, and we look forward to your feedback and engagement.

Thank you for joining us on this journey. Enjoy this new issue and see you soon!

Best regards,
Guillermo

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www.ag.ndsu.edu/ansc

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Study abroad trip to England spotlights livestock industry

by **Tara Swanson**
Senior Lecturer

Ten NDSU students participated in a study abroad trip to England from May 13-27, organized by the Department of Animal Sciences. This program was designed to provide students with insights into the global animal industry while also offering an immersive cultural experience. During the trip, students delved into multiple facets of the livestock industry, gaining unique insights from industry professionals in each area. Some of the topics covered included diverse production and management systems, animal welfare and rehabili-



tation practices, native breeds, equine disciplines, and advanced reproductive and genetic techniques, among others.

Alongside farm tours, students also had the opportunity to gain behind-the-scenes perspectives at local attractions such as Chester Cathedral, Roman Tours, Tatton Park, Chester Zoo, Shropshire County Agricultural Show, and Bangor-on-Dee Racecourse.

The trip also featured a day excursion to North Wales, where the group visited the picturesque cities of Llandudno and Betws-y-Coed, explored Conwy Castle, hiked in Snowdonia National Park, and walked across the Pontcysyllte Aqueduct.

During their free time on the trip, the students explored the



The study abroad group shows off some of the alpacas at Cheshire Alpacas, which is a family run alpaca farm specializing in alpaca experiences. The group learned about alpaca care and management and then had the opportunity to do an alpaca walk.

vibrant cities of Liverpool and London. They immersed themselves in the culture by engaging in conversations with residents,

savoring a variety of cuisines and exploring the beautiful city of Chester, where the group was housed.

BBQ Boot Camp offers savory details about delicious meat



Ph.D. graduate student Kiersten Gundersen gives a BBQ Boot Camp demonstration about cut selection and explains how it plays a key role in one's overall eating experience.

Dr. Travis Hoffman, Extension Sheep Specialist, and Kiersten Gunderson, M.S., Meat Science Ph.D. graduate student, presented BBQ Boot Camp to an inquisitive audience on May 19 at the Fargo-Moorhead International Potluck.

They provided insight and discussion on barbecue/grilling methods, seasoning and preparation, and meat retail cut purchasing. The FM International Potluck exists to connect people through food and storytelling. It is a platform for people to share stories and learn, as food can serve as a bridge to bring people together from a diverse background of cultures and experiences. Summer is grilling season!

To learn more about NDSU Meat Science being in your community, contact Dr. Hoffman at 701-231-2222 or Travis.W.Hoffman@ndsu.edu.

— Dr. Travis Hoffman

Department comings and goings since April

Warm welcome to...

Mikayla Faust –
Ag Research Tech
Taw Scaff –
Extension Swine Specialist

Fond farewell to...

Blaine Novak –
Lecturer
Gregg Bauman –
Swine Unit Manager
Erin Beyer –
Assistant Professor
Gerald Stokka –
Extension Veterinarian

August 2024 graduates

Graduate students:

Natalie Acosta, Ph.D.
Kafi Mia, Ph.D.
Ben Menapace, M.S.

Undergraduate students:

Vet Tech:

Sara Abel
Emma Haberer
Paige Lemar
Mary Mbuthia
Alivia McCarthy
Breanna Metzenhuber
Hanna Myrin
Zachary Nicholson
Alisyn Rathcke
Angelina Ronning
Sydney Wiebusch
Katie Wieers
Brooklyn York
Megan Zins

Externships a bridge to careers

Vet Tech students use skills in professional facilities

by **Stacey Ostby**
Senior Lecturer

Robinson Hall, home of the Veterinary Technology Program, is quieter than normal during the summer. Only one course is in session this summer, and it brings our team extreme joy and helps us to take stock of our mission and work throughout the school year: the Veterinary Technology externship.

An externship is the capstone course students are required to



complete as they finish their educational journey within the Veterinary Technology Program at NDSU and is offered every semester.

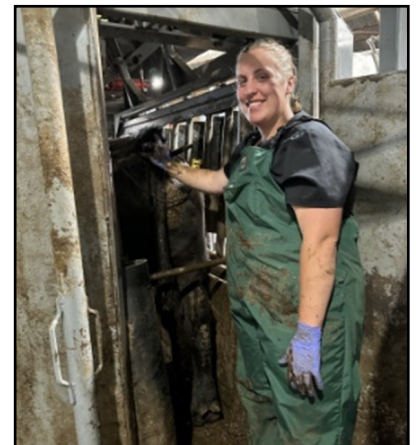
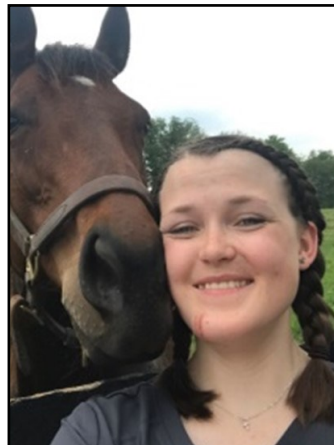
Each student must find a veterinary facility that employs at least one licensed veterinary technician and come to a mutual agreement that they can participate in 240 hours of working alongside their team to not only demonstrate the beginner level skills they have been trained to perform, but also continue on their learning journey within the facility.

During the 2024 summer ses-

sion, we followed 18 students as they completed their externship experience. Nineteen veterinary facilities hosted these students as some performed half of their experience at two facilities.

Summer 2024 states and number of students externing there: North Dakota 9, Minnesota 6, Kentucky 1, Oregon 1, Colorado 1, South Dakota 1.

All our students enjoyed many aspects of their externship experiences, and we would like to highlight a few experiences they were eager to share as their time in these wonderful environments comes to a close.



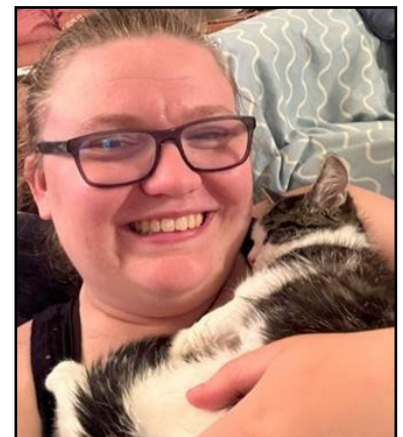
Top left: Utah native Hanna Myrin worked with multimillion-dollar horses at an amazing equine facility, **Hagyard Equine Medical Institute in Lexington, KY**. Top middle: Minnesota native Breanna Metzenhuber holds a 2-pound mini Shih Tzu puppy she wanted to put in her pocket and take home while working at **Arrowhead Animal Clinic in Grand Rapids, MN**. Top right: North Dakota native Brenna Boucher obtained hours of practice with large animals, but especially at bull semen testing, 504 bulls to be exact, as she used her family ranching background and newly learned veterinary technology skills at her large-animal based facility of choice, **Steele Veterinary Clinic in Steele, ND**. Right: Minnesota native Sara Abel holds and fostered a kitten named Squeaky – a surrender to the clinic due to needing a foreign body surgery. (The clinic staff removed a pet toy squeaker, thus the kitten's name became Squeaky.) Sara is caring for him until a home can be found. Her facility of choice: **Pet Central Animal Hospital in Minneapolis, MN**.

No matter where you are from, your experience with animals, or your age, the Veterinary Technology Program at NDSU can

assist you in meeting your animal care educational goals and help propel you to a job you not only love, but also where you

can make a difference in the lives of animals every day. We are excited for Robinson Hall to be busy again with students this fall!

If you or a veterinary facility near you would like to participate in our annual on-campus job and externship fair to ensure our students are aware of the opportunity to work with you, please e-mail Stacey.ostby@ndsu.edu or Lisa.christenson@ndsu.edu, program co-directors, to be added to our contact and planning list.



Kirsch wins Gunkelman Award



Longtime Animal Care and Use Coordinator Jim Kirsch was awarded the 2024 Gunkelman Award by NDSU President David Cook in May. He was one of 84 nominees across campus, including 10 in the Animal Sciences Department. This was his third time being nominated for the award, which recognizes the person who has made the most significant contribution to creating a happy environment for the enjoyment of the students on campus.

Governor's School an eye-opener for teens



Faculty, staff and students in the department showed off their specialties during NDSU Governor's School in June. The high school students in the program got a look at a number of animals, such as dairy calves, ponies and cannulated steer, plus the Hereford dystocia model. They also went to various stations to learn about topics ranging from genetics and microscopy to injections and needle safety. It was a collaborative effort led by the college's new recruitment coordinator, Blaine Novak.



Briefs

Greta Huber received the C. Boyd Ramsey RMC Scholar Undergraduate Award at the Reciprocal Meat Conference in Oklahoma in June. Greta graduated from NDSU in May, earning a bachelor's degree in animal science with an emphasis in meat science.



Cutter, one of the NDSU Bison Strides loaner horses, won the North Dakota Veterinary Medical Association Animal Hall of Fame Professional Award. The Professional Award is given to animals specially trained to assist humans (seeing eye dog, therapy, etc.). He was recognized Aug. 5 at the NDVMA's Annual Family Dinner. Cutter, a 15-year-old palomino quarter horse gelding, is owned by Keith Johnson and has been a part of Bison Strides since 2019. Dr. Erika Berg, the Bison Strides program director, says Cutter has built significant relationships with dozens of participants over the years. "Cutter is an extraordinarily intuitive, curious and kind-hearted creature."



Dr. Eric Berg was a guest on the Food Bullying Podcast recently. He talked about the importance of proteins as part of a nutritious "complete plate," and he extolled the benefits of animal-based proteins. The podcast, "Eat like a pig with high quality amino acids: Episode 133," can be found at causemat-ters.com.



Beef Barn breeds excellence

Unit plays vital role in the department's overall mission.

by **Darla White**
Administrative Secretary

One of the barns at NDSU is known by a variety of names: The Beef Teaching & Research Unit, the Beef Cattle Research and Teaching Center (not to be confused with the Beef Cattle Research Complex), or the NDSU Beef Cattle Barn. Manager Garrett Havelka, however, simply calls it the Beef Barn. It is home to about 250 cattle.

Historically the beef herd contained numerous registered breeds, but it's now been narrowed down to Angus and Simmental. These are two of the most common breeds of beef cattle in North Dakota. The barn is home to all the cattle during the winter, while most of the cows and calves spend the warmer months at the Ekre Grassland Preserve southwest of Kindred.

Like the rest of the NDSU barns, the Beef Unit assists in the teaching mission of the university. Students in classes including Introduction to Animal Sciences,



Beef Barn Manager Garrett Havelka and the bag of feed he is carrying quickly catch the attention of some of the cattle at the unit. Garrett has been the manager since December 2020.

Livestock Production, and Bovine Pregnancy Diagnosis and Ultrasonography come to the site to do such things as prac-

tice diagnoses or help with injections. Vet tech classes also visit the Beef Barn to get practice with animal handling.

Generally, 160 calves are born each spring. Of those, 120 will be sold at 14-18 months of age after
See **BEEF**, Page 6

Researchers evaluate virtual fence in grazing systems

These cattle have been outfitted with GPS collars that assist with tracking and moving them without the need for physical fences.



by **Dr. Miranda Meehan**
Associate Professor and Livestock
Environmental Stewardship Specialist

Virtual fence is a relatively new technology that has the potential to improve grazing management without physical fences. Livestock wear collars that communicate animal location in relationship to a virtual fence boundary via radio and/or cellular tower to a web- or phone-based application. The animal receives audio and electrical cues depending on their location in relationship to the virtual fence boundary.



See **FENCE**, Page 6

Beef Barn readies for fall calving

BEEF from Page 5

reaching a finishing weight in the Beef Unit's feedlot. The remaining 40 join the cow herd. The best cows stay in the herd for a while, with the oldest one now at 13 years old.

While most North Dakota beef producers go through one calving season in the spring, the NDSU Beef Barn makes sure to have a fall calving season as well. "We do 20 fall calves so we always have the different phases of cattle here for the classes," Garrett says. That helps students get equal opportunities whether they are in the fall or spring semester classes.

The Beef Barn doesn't just invite students to learn on site – it is happy to bring the cows to them.

Garrett takes finished cattle on the road for popular events such as Moos, Ewes and More, Little "I," Kiddie Days, and the Saddle & Sirloin Paddy Drop Fundraiser. Cattle also go to Sheperd Arena for livestock judging and meat grading.

Garrett is aided in his duties by about half a dozen student workers during the school year. In fact, he himself started as a student worker his first semester as an undergraduate in Fall 2017. He was hired as the manager in



NDSU's beef herd consists solely of Angus and Simmental cattle, which are two of the most common breeds in North Dakota.

December 2020. "I got a job here and never really left," he jokes. One little-known amenity at the Beef Barn is a basketball court located in the hay loft that can help students pass the time during calving season.

The Beef Barn has been involved in less research since the BCRC opened in 2011. It still

does some, however. For example, each spring it helps with a 10-day grazing study in a riparian area at the Ekre Grassland Preserve, and there are also some studies involving virtual fencing run by Associate Professor Miranda Meehan (see companion article).

The goal of the Beef Unit is to

always use best practices and keep improving the cow herd and the facility. "We are trying to be a good model for North Dakota producers," Garrett says. No matter what you call it, the Beef Barn will continue to play an important role in the mission of the university and Department of Animal Sciences.

Virtual fence found to be effective containing cattle

FENCE from Page 5

For the last year researchers at NDSU have been evaluating the use of virtual fence in grazing systems. We have been evaluating the use of this technology to manage livestock grazing both rangeland and cropland to enhance grazing efficiency and livestock production.

One of the greatest concerns from producers is the effectiveness of virtual fence in keeping animals in or out of a designated area. Across both studies we have observed 92% containment of

grazing animals to designated areas. This is consistent with research being conducted in other areas of the United States and Canada, which report 90% or greater containment.

The initial findings of our research indicate that virtual fence is effective in managing grazing animals, while providing increased flexibility in management. Virtual fences can quickly be moved or adjusted to better meet management goals of improving grazing distribution, increasing harvest efficiency and enhancing wildlife habitat. However, adapting this technology is not without challenges. The cost is likely to be a barrier to many producers. Additionally, there is the time to learn how to effectively use the technology.

It is important for producers to understand how this technology can be integrated into their production system to better enable them to meet their individual management goals.

New professor sees swine possibilities

by Dr. Taw Scaff
Assistant Professor and
Extension Swine Specialist

The NDSU swine program recently gained a new team member and is looking forward to continuing its dedication to the stakeholders, students, youth, producers and public. My name is Taw Scaff, and I have been welcomed to NDSU as the new Extension Swine Specialist. A little bit about me: I grew up in a small rural community in Oklahoma, where I was heavily involved in 4-H and FFA with projects focused on beef and swine. I attended Oklahoma State University for my bachelor's (animal science production) and master's degree (swine nutrition), and Purdue University for my Ph.D. (swine nutrition and reproduction). Throughout my time involved in swine research, I have focused

on applied areas of nutrition, reproduction and management in all ages of pigs.

As the Extension Swine Specialist, I am responsible for being a steward for the producers, youth, public and allied partners involved in the swine industry. I believe this can be accomplished by building relationships on the state and national level to provide meaningful Extension and research efforts focused on the needs of North Dakota swine production. Also, collaboration with 4-H programs and agriculture education in school systems can provide educational material, activities, and networking for youth interested in swine. Additionally, giving similar opportunities to producers while engaging and listening



to large and small operations will aid in solving on-farm problems that can occur when raising pigs in a production or show setting.

Interest in swine is growing in the state. The dedicated people not only here at NDSU but also across the state in our allied industries are excited about the possibilities of the swine industry. As we continue to develop the swine program, be on the lookout for more opportunities to get involved.

I am excited to start this journey and look forward to building relationships and assisting new and seasoned swine producers. Follow our NDSU Animal Science and NDSU Extension Livestock Facebook pages for updates and events. Reach out and feel free to contact me anytime (office: 701-231-4292, cell: 701-831-5674, or email: taw.scaff@ndsu.edu).

ALUMNI SPOTLIGHT: Logan Hulst

What was your field of study at NDSU?

My field of study was Animal Sciences Pre-Vet. NDSU is also a member school to the Midwest Poultry Consortium, and I attended their COE program in 2015 and 2016.



When did you attend/graduate?

I attended Fall of 2014 to Spring of 2016.

What are you doing nowadays?

I live near Des Moines, Iowa, with my wife, Jeanette, newborn son, George, and our dog, Luna. I first moved down here for a job in the poultry industry back in 2018, and I am currently working for Arm & Hammer's Specialty Products Division as their US Turkey Sales representative.

What is one of your favorite classroom/campus memories?

All of the opportunities to spend time around different varieties of livestock — sheep, cattle, horses or swine — was really a great experience. Some of my favorite memories were being able to spend time around them, and learning about them through multiple different options on campus like classes, volunteering at Moos, Ewes and More, or the livestock judging team.

What did you learn at NDSU that has helped you the most in your career/life?

I learned from the NDSU faculty just how many different routes in animal agriculture there really are out there. I grew up raising chickens for 4-H each summer but never understood what that industry contained for career opportunities. Without NDSU's help in connecting me with the Midwest Poultry Consortium, I am not sure what I would be doing for work today. Through that program I gained access to the poultry industry where I have spent my entire career.



If you would like to be featured in an upcoming Alumni Spotlight or know someone you'd like to nominate, please contact Darla White at 701-231-7401 or darla.white@ndsu.edu with the information.

Contingent attends meat conference

NDSU meat science faculty and students attended the Reciprocal Meat Conference of the American Meat Science Association in Oklahoma City, Okla., June 15-19.

Graduate students Kiersten Gundersen, Natalie Acosta Castellanos and Taylor Dieball presented research posters, and Greta Huber's undergraduate research was also presented. Amy Volk compet-

ed in the quiz bowl, while Dr. Erin Beyer presented a reciprocation session about how to coach/compete in meats judging.

During the conference, current and former NDSU faculty and students gathered for a picnic and attended the Awards Banquet. Emeritus Professor Paul Berg celebrated his 87th birthday during the gathering.



Clockwise from top: Current and former faculty and students wear their NDSU meat science T-shirts at the picnic. Emeritus Professor Paul Berg celebrates his 87th birthday at the welcome reception. Natalie Acosta, who graduates with a Ph.D. this month, presents her research poster, as does Ph.D. student Kiersten Gundersen.



From left, Talía McDaniel, Olivia Lebrun, Ellie Wengelski and Nick Cooper pause during their travels in South Africa with Loop Abroad study abroad organization.

S. Africa study abroad trip enriches pre-vet students

From May 25 to June 9, members of NDSU's Pre-Veterinary Medicine Club embarked on a trip to Oudtshoorn, South Africa, with the study abroad organization Loop Abroad. Participants included Nick Cooper, Talía McDaniel, Olivia Lebrun and Ellie Wengelski. The group learned about the conservation of big cats along with many other species housed at Cango Wildlife Ranch. During the time spent at the ranch the group worked alongside a conservation veterinarian to learn more about the veterinary care re-

quired for these animals, captive breeding, and the impact that dwindling numbers of native animals has on the environment. Activities on the trip included creating enrichment items, observing surgery and necropsy procedures, learning safe handling techniques, and going on a safari.

— Ellie Wengelski



NDSU students on the study abroad trip to South Africa spend time with some of the animals at the Cango Wildlife Ranch.

2024-2025 Scholarship Recipients

**Animal Sciences
Academic Quadrathlon Scholarship**

*Samantha Ellison
Christy Finck
Kamilla Knippling
Julia Marthaler*

Animal Sciences Scholarship
Shelby Skolness

Arthur and Elvera Moyer Family Scholarship
Carly Olson

**B.O. "Chub" and Mabel Orton
Animal Sciences Scholarship**
Kiley Kvamme

Bruce J. Beilke Memorial Scholarship
Ella Syring

**Dr. Larry Corah Outstanding
Animal Sciences Graduate Scholarship**
*Imtiaz Ali
Bethania Davila Ruiz*

**Eugene R. Hinsz Animal Husbandry
Scholarship Endowment**
*Savanna Bader
Daedre Dawson*

George Fisher Memorial Scholarship
Rachel Scott

Harold E. Vettel Memorial Scholarship
*Eryn Dick
Mason Jessen*

**Institute for Feed Education and Research
and Equipment Manufacture's Committee
Scholarship**
*Matia Anderson
Catherine Erickson
Hannah Strong
Ella Syring*

Jim and Judy Tilton Scholarship Endowment
*Emily Curren
Megan Larson*

John W. Murphy Scholarship
*Mia Grenz
Olivia Lebrun
Chance Mickelson
Allison Mouche
Hailey Smith
Angelica Warren*

**Kempton Cooperative Shipping Association
Scholarship**
Hannah Strong

**Kenneth and Rachel Kellogg Family
Scholarship Endowment**

*Noah Helgoe
Carli Merkel
Emma Pfaff
Chasity Semmons
Onnica Stansbury
Bridget Weatherly*

**Leland Red Angus Ranch
Scholarship Endowment**
*Kamilla Knippling
Julia Marthaler*

Leonard Wulf Memorial Scholarship
Rachel Larson

**Malina Ellingson-Larson
Memorial Scholarship**
Raeanne Frost

**Martin J. Marchello and
Barbara Handy-Marchello
Animal Sciences Scholarship**
*Matia Anderson
Rachel Scott*

Merle R. Light Memorial Scholarship
Abby Sigvaldsen

Michael Guenther Memorial Scholarship
*Code Enright
Kiersten Gundersen*

M.L. Buchanan Scholarship
Mariah Braasch

**North Dakota Livestock Endowment
Foundation Arlon G. Hazen
Memorial Scholarship**
Imtiaz Ali

**North Dakota Livestock Endowment
Foundation Undergraduate Scholarship**
*Madison Feiring
Ella Syring
Jocelyn Vachal*

**Orville and Nora Bergan
Livestock Evaluation Scholarship**
*Matia Anderson
Noah Helgoe
Windy Jacobson
Lucas Mason
Amy Volk*

Orville J. Stanley Memorial Scholarship
Amy Volk

Petcetera Veterinary Endowment
Emma Butler

Peter B. Molitor Scholarship
Shelby Skolness

Rase Family Scholarship
*Ty MacDonald
Lindsey Vachal*

**Rick and Janna Lutovsky Little
International Scholarship**
*Morgan Friede
Kylie Hildre
Kasi Holm*

**Roger and Ruth Ann Van Prooien –
Animal Science Scholarship**

*Alexis Bopp
Rachel Bosserman
Emma Gilles
Maddie Hamilton
Kadence Haug
Talia McDaniel
Carli Merkel
Karolyn Papon
Alyssa Schanus*

Russell and Helen Danielson Endowment
*Catherine Erickson
Reanna Schmidt*

**Thomas M. Cook
Animal Science Scholarship**
Morgan Jarandson

Truman Kingsley Family Scholarship
*Mariah Braasch
Ty MacDonald*

**Verlin and Eloise Johnson Animal Science
Livestock and Meats Judging
Freshman Scholarship**
*Forrest Sears
Rudi Wendel*

Verlin K. and Eloise E. Johnson Scholarship
*Kamilla Knippling
Madison Scott*

Spring 2024 Scholarship Recipients

**Palmer and Sheryl Holden Animal Science
Scholarship**
*Faye Stanton
Anastasia Wingebach*

Paul Berg Scholarship Endowment Fund
*Noah Helgoe
Greta Huber*



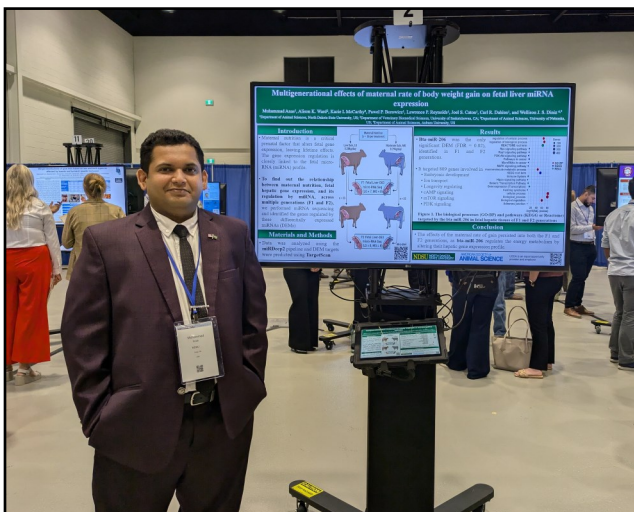
The ribbon is enthusiastically cut for the new Peltier Complex, which will bring together scientists, teachers, students, farmers and customers in North Dakota's food industries.

Peltier Complex open for innovation

The ribbon-cutting ceremony of the Peltier Complex took place with much fanfare on June 12. The state-of-the-art facility will be the new home of the NDSU Meat Lab and meat science

program, along with other food science programs at the university. The building is named after the Peltier family, who are longtime North Dakota agriculture supporters.

Participants at ASAS meeting shine



Muhammad Anas presents his research at the American Society of Animal Science annual meeting in Calgary.

NDSU graduate students Muhammad Anas, Jennifer Hurlbert and Kathlyn Hauxwell; postdoc fellows Pauliane Pucetti and Rebecca Swanson; and visiting scientists Ellem Matos, Matheus Carlis and German Zamudio participated in the ASAS-CSAS-WSASAS annual meeting in Calgary, Canada, in July. Jennifer presented her awardee talk, as she was chosen for the Western Section Ph.D. Young Scholar recognition.

Anas presented in the ASAS Graduate Student Poster Competition for Ph.D. This was his last time representing NDSU Animal Sciences as a graduate student, since he plans to defend this fall.

Student wins \$180,000 fellowship

Jennifer Hurlbert, a Ph.D. student working under the mentorship of Dr. Carl Dahlen, recently received a USDA-NIFA-AFRI Predoctoral Fellowship Award within the AFRI Education and Workforce Development Program. The award is for up to \$180,000 over three years, and it was given for her project titled "Protein/energy supplementation to beef heifers during mid-gestation: fetal programming and long-term outcomes on offspring muscle development." The goals of her proposal are to determine the fetal programming impacts of providing a protein/energy supplement to beef heifers during mid-gestation on offspring muscle fiber size and number, gene transcript abundance of muscle tissue, and growth performance of intact male offspring from birth through one year of age. The core mission of Jennifer's proposal is to enhance management strategies of pregnant beef cattle in order to contribute to positive developmental programming outcomes in beef calves, in addition to improving herd longevity, productivity and overall herd success. In addition to research dollars, Jennifer's fellowship includes funding for travel, trainings and several means of professional development.



Grad student receives three awards at ASN

Kazi Sarjana Safain presented two research projects at the annual conference of the American Society for Nutrition (ASN) in Chicago. Her projects were titled “Tissue-specific impact of one-carbon metabolite supplementation and nutrient restriction in gestating heifers on fetal mitochondrial-related gene profiles” and “One-carbon metabolite supplementation influence fetal liver metabolites and metabolic pathways in a diet-dependent manner during early pregnancy in heifers.” She received three awards at this meeting including first place in the Emerging Leaders in Experimental Animal Nutrition poster competition, second place in the Emerging Leaders in Energy and Macronutrient Metabolism poster competition, and third place in the Young Investigators Underrepresented in Nutrition oral competition.



Kazi Sarjana Safain shows off the awards she received at the ASN conference in Chicago this summer.



Above, Professor Carl Dahlen talks at the Central Grasslands REC field day on July 8 about projects in beef cattle focusing on sire nutrition prior to breeding. Below, Dr. Miranda Meehan shows a virtual fence collar at the Dickinson REC livestock tour on July 10.

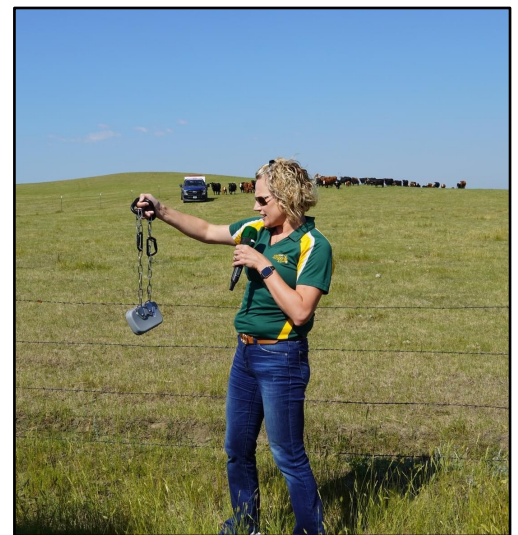
Annual field days inform

Professors, students update on research

by Dr. Miranda Meehan

Several faculty and students from the Department of Animal Sciences provided updates on their research at the NDSU Research Extension Centers’ annual field days in July. Many of the field days showcased precision agriculture technologies.

The Central Grasslands REC held a precision livestock tour on July 8 during which Dr. Miranda Meehan gave an update on the use of virtual fence in grazing systems. M.S. student Josh Wianecki presented on systems for monitoring livestock water levels, while Ph.D. student Jennifer Hurlbert talked about research using smart feeders to supplement cattle on range and scales to monitor cattle performance. Dr. Carl Dahlen provided an update on his bull development data. Undergraduate intern Heather Sutherland gave information on her internship project evaluating the relationship between Extension-provided water screenings and livestock water development projects funded by the



North Dakota Department of Water Resources during the 2021 drought.

Dr. Meehan also gave updates on virtual fence at the Dickinson and Carrington REC livestock tours, and Dr. Guillermo Scaglia provided an overview of precision livestock technologies during the Carrington REC livestock tour.