

DEPARTMENT OF ANIMAL SCIENCE



Institute of Agriculture and Natural Resources

For alumni and friends of the University of Nebraska–Lincoln Department of Animal Science

> Clint Krehbiel Chief Editor

Peta-Gaye Clachar Designer, Editor, Photographer, and Writer

Co-editors:Sherri Pitchie, Kim Clark,
Jennifer Dush, Brad Bennett, and Alli Raymond

Contributing Writers:
Jim MacDonald, Kathleen Anderson,
Galen Erickson, Terry Klopfenstein,
Shelby Garland, Paul Kononoff,
Kim Clark, Erica Courtney, Erin Blucher,
Alli Raymond, IANR, Brad Bennett, Erica Courtney,
Jessica Lancaster, University Communication,
Shelby Cammack, Bryan Reiling, Chris Calkins,

LI-COR, and Gilbert Seck

Contributed Photographs by:

Kavla Gadeken, Anna Kobza, Alison Bartenslager,

Kim Clark, Sherri Pitchie,
Alli Raymond, Bryan Reiling,
University Communication, Craig Chandler,
Chris Calkins, Galen Erickson, Rafael Cardenas,
Ron Kohlmeier, Kayla Gadenken, Anna Kobza,
Jessica Lancaster, Brad Bennett, Greg Nathan, Erin Blucher,
Hanna Rogers, Shelby Garland, Aliesha Dethlefs,
Kristen Hassebrook, IANR, L1-COR, and Nebraska Athletics

Story ideas, activities, and achievements can be submitted by sending an email to pclachar2@unl.edu. Receipt does not guarantee publication and the editor reserves the right to edit for space, clarity, grammar, and style.

Editorial Correspondence Email: pclachar2@unl.edu or write: Peta-Gaye Clachar University of Nebraska-Lincoln C204D Animal Science Complex P.O. Box 830908 Lincoln, NE 68583-0908 Phone: 402-472-6077

Support the Department

If you would like more information about specific needs of the department, such as graduate and undergraduate fellowships/scholarships, award lectureships, or research instrumentation, please contact: University of Nebraska-Lincoln NU Foundation at https://go.unl.edu/2b60 or contact us at:



Department of Animal Science P.O. Box 830908 Lincoln, NE 68583-0908

University of Nebraska does not discriminate based upon any protected status. Please see go.unl.edu/nondiscrimination. ©2018, The Board of Regents of the University of Nebraska. All rights reserved.

Inside This Issue

| 1. A Message From the Department Head | Page # · 1 |
|--|--|
| FEATURE STORIES 2. 2017 Beef Industry Summit Team | . 4 . 6 . 8 . 14 . 16 . 18 . 19 |
| FACULTY PUBLICATIONS | 21-25 |
| NEW HIRE 11. Travis Mulliniks FACULTY NEWS 12. When a Department Has an International Reputation Global Connections Occur | 28-31 28 30 |
| STUDENT NEWS 15. Alison Bartenslager | 36 37 38 39 40 42 44 45 45 50 52 52 54 56 |
| ANIMAL SCIENCE EVENTS 32. Holiday Potluck | 62-63 |
| ALUMNI NEWS 33. Joy Kovar, Principal Scientist, Biology Research & Development | 64-65 64 · 65 · 65 |
| 38. 2018 Animal Science Alumni Weekend | |

A message from the DEPARTMENT HEAD



Dear Animal Science Alumni and Friends,

Welcome to the second edition of our departmental newsletter, the "Animal Science Nsider". As I begin my second year in the Department of Animal Science at the University of Nebraska, I continue to be amazed at the talent and commitment to excellence of our faculty, staff, and students. We are pleased to share a few of the stories from the many wonderful activities and achievements which have occurred throughout the fall 2017 semester. We also want to make you aware of some upcoming events in the Department of Animal Science and hope that you will be able to participate. Our department has a strong and proud history of excellence in Teaching, Research, and Extension, and we are striving to become even better in the future. We look forward to engaging you and sharing our vision as we continue to build on our culture of achieving excellence and advancing our animal and allied industries.

Our featured stories include highlights from several summits and symposia that our faculty and students organized during the fall semester. For example, the Beef Industry Scholars Summit was organized and led by our student beef industry scholars. These students invited highly respected leaders from the across the beef cattle industry to speak at the well-attended event. We are proud of these students! Other symposia, including the Beef Leadership Symposium and the Beef Nutrition Conference are featured in this edition. We are pleased to introduce to you Dr. Travis Mulliniks, who joined us in September as a Beef Nutritionist–Range Production Systems Specialist at the West Central Research and Extension Center in North Platte. Travis came to us from the University of Tennessee and is already having a positive impact on our Beef Cattle Extension and Research programs.

This edition also features a research project aimed at improving land-use efficiency as an opportunity to increase beef cattle production in Nebraska. This project is led by Dr. James MacDonald and is funded in part by a grant from the Foundation for Food and Agriculture Research. Dr. Chris Calkins continues to make global connections that are having a major impact on faculty, students, and the Nebraska meat industry. We also have many faculty, staff, and student successes to celebrate with you. Our peer-reviewed publications are listed beginning on page 21. If you have questions or would like a reprint, please let us know and we will provide you with a copy.

Finally, please plan to join us, April 13 and 14, 2018, for our Animal Science Alumni Weekend. We will host our first annual Animal Science Alumni Celebration Weekend here in Lincoln. Registration materials are included on page 67 in this Spring 2018 edition. Registration materials can also be found on our website at https://animalscience.unl.edu/alumni-reunion. I hope to see you in April!

We hope you enjoy our second edition of the Animal Science Nsider!

Sincerely,

Clinton R. Krehbiel, Ph.D., PAS Marvel L. Baker Head and Professor of Animal Science

2017 BEEF INDUSTRY SUMMIT

From l-r: Michelle Henry, Wes Anderjaska, Kyle Regan, Jim MacDonald, Ethan Johnson, Brandon Nichols, Brigitte Rathey, David Schuler, Liza Christensen, Shelby Cammack, and Ethan Wilke

TEAM:

Nov. 16, 2017, the senior class for the Nebraska Beef Industry Scholars minor hosted the 11th Annual Beef Summit. Students develop the summit as a part of their fall class responsibilities to identify pressing issues in the beef industry and to host experts on those issues to present in front of an audience of 130 students, faculty, and producers. The event highlighted discussions on employee development and labor training, state taxation reform, and discussing modern agricultural practices with consumers. Speakers also provided NCBA policy updates, a CattleFax market outlook, and a trade update from the US Meat Export Federation.

Written by: Dr. Jim MacDonald



80

2017 Nebraska Beef Industry Scholars Summit

Duane Lenz, CattleFax market analyst (left), tells summit attendees that the beef industry is experiencing one of the most rapid expansions in history.

FEATURE STORIES

From l-r: Sen. Curt Friesen, 34th Legislative District; Merlyn Nielsen, Fair Nebraska; Sen. Steve Erdman, 47th Legislative District; and Laura Field, Nebraska Cattlemen

Photos by: Peta-Gaye Clachar



Beef's Rapid Expansion

By: Shelby Cammack, Senior, Animal Science and Beef Scholar. Published in *Nebraska Cattlemen*, January 2018, Volume 74, Issue 1.

Total cattle inventory numbers, as well as the beef industry as a whole, are in a different kind of expansion phase, a beef market analyst told attendees at the 2017 Nebraska Beef Industry Scholars Summit.

"We are going through one of, if not the, most rapid expansions the beef industry has seen," said Duane Lenz, a market analyst with CattleFax.

Lenz provided a market outlook to the participants of the 2017 Nebraska Beef Industry Summit at the University of Nebraska-Lincoln's (UNL) Animal Science Complex Nov. 16. The event was hosted by the senior class of the Nebraska Beef Industry Scholars, a minor program within the UNL Animal Science Department that gives students a learning experience that combines beef science and industry leadership.

According to Lenz, as a whole, the beef industry is becoming increasingly responsive to consumer needs. Retailers are listening to consumers, and they respond by communicating with the packers and feedlots who, in turn, communicate with the cow-calf sector.

In the big-picture view, it's not just about beef; it's about all proteins. Pork and poultry are seeing record

production, and consumers will have a lot of choices in the market in the next few years. Given all of this, beef demand is much better than most in the industry dreamed.

"Lower-priced proteins are tempting, but consumers like beef and they like what we're doing. During times of recession, consumers cut back spending on a lot of things, but beef isn't one of them," Lenz said.

Looking at exports, this is a good time to be involved in agriculture and more specifically, cattle. The beef industry can see profit from targeting areas of rapid population growth. People around the world are coming into more money, which translates into spending more on protein. According to Lenz, the more money a person has, the more meat consumption goes up.

Retail spending is also up, according to Lenz, but restaurant spending is dropping off. Restaurants have seen a drop-off in customer traffic and per person spending. Generally speaking, the beef industry likes seeing people in restaurants because of the number of steaks and burgers sold. Half of the meat sold goes to restaurants and other service providers.

In the last few years, retailers have been running great deals to bring people into their stores. There is a growing trend with consumers taking advantage of the retail discounts and cooking at home.

Discount supermarket chains like Aldi and Lidl have seen aggressive growth over the last few years. These stores are looking to sway price-conscious shoppers from major retailers like Walmart, Kroger and Costco. Lenz expects retail price wars in the next few years. Stores like Aldi and Lidl are all about discounting and getting people in the store to spend money. Lidl offers a big meat case that's reasonably priced, Lenz shared.

Looking at the beef industry in general, the number of cattle operations since 1986 has seen a 25 percent decrease across the United States. The number of small cow-calf operations has been the most rapidly shrinking group.

According to the most recent census data, the number of small operations with 1 to 99 head has been declining. However, growth is occurring in the number of 500-plus-head operations across the United States.

Lenz said the rate of decline in the number of operations is predicted to be slow, but he does not believe an increase in the number of operations will occur.

Lenz explained that the 2014 beef cow inventory number dipped down to 29 million head from as high as 39 million head in the 1980s; however, given the cyclical nature of the markets, the numbers have been on an upturn since 2015.

"When you lose all these cows from the market, you get something pretty dynamic going on. We get a market that just takes off and runs, something we had never seen before in the industry," Lenz said.

He added that the growth of cattle production in states like Nebraska and the Dakotas has occurred in part due to the availability of pasture ground and feed.

"In the United States overall, we expect growth in 2018. However, we won't see our biggest cow-calf numbers until probably 2020, still a few more years of growth," he said, referencing the 1.05 million increase seen in the 2017 beef cow inventory.

"We have more cows out there producing calves, resulting in more slaughter, and we're going to see further increases in the upcoming years. Slaughter will peak in 2022 following cattle number peak." This year, the beef industry is up 1.1 billion pounds of beef and 2018 will see another billion pounds of increase. Lenz expects that this next year will be one of the top five years in beef history from a production standpoint.

The feedlot side of the industry is following the pattern seen with cow- calf. The number of feedlots with 1,000 to 16,000 head capacities is shrinking, while the number of 16,000-plus head operations is growing. Lenz predicts this trend will continue in the next few years as well.

Feeding cattle is a risky business, and CattleFax is seeing more and more people working on risk management. Feeding cattle is an up-and-down business, depending on the market cycles.

"There is a lot of volatility in this market. Don't try to outsmart the market; manage your risks and find ways to capture profits," Lenz said.

ANIMAL SCIENCE NSIDER 5



Dr. James MacDonald, Associate Professor Ruminant Nutrition, will lead the team in its investigation of various outputs including yields, soil health and greenhouse gas emissions, as well as the economic feasibility of adopting these new practices.

Photo by: Craig Chandler-University Communication

Nebraska project aims to improve land use efficiency

Published: Oct. 3, 2017, UNL Today

A University of Nebraska-Lincoln research team will investigate how to improve land use efficiency through the integration of livestock and crop production systems.

The project is funded by a \$1 million grant from the Foundation for Food and Agriculture Research. The team, which includes members of a new Nebraska Beef Systems Research Initiative, expects an integrated system, which overlays cattle grazing with existing crop production systems, to increase output per acre

and reduce greenhouse gas emissions associated with production. The team will also examine if the benefits of using cover crops are retained when they are used for livestock forage.

James C. MacDonald, associate professor of animal science and ruminant nutrition at Nebraska, will lead the team in its investigation of various outputs including yields, soil health and greenhouse gas emissions, as well as the economic feasibility of adopting these new practices.

"It's very difficult for new or young farmers to get started," MacDonald said. "You may not own the land or need to work with a family member's existing system to start your own enterprise. Integrating cattle without disturbing crop production with minimal investment can help young producers get started and stay in agriculture."

The availability of perennial forage for livestock production has decreased as farms move to less diversified systems to grow individual crops. Highly specialized systems, such as monoculture, may be less sustainable than diversified approaches in terms of resource efficiency and long-term profitability.

"Cover crops are a long-term investment to improve soil health and reduce erosion, but they can be difficult for producers to pay for," MacDonald said.

"If producers can graze cattle on cover crops, they could increase land efficiency and mitigate costs." U.S. Rep. Don Bacon, who represents Nebraska's 2nd District, said: "As a member of the House Agriculture Committee, I know how important it is for producers to maximize livestock production and increase overall productivity. Nebraska is the number one state for beef and veal exports and for commercial red meat production. This grant will allow the University of Nebraska-Lincoln to contribute to the state's cattle production and research effective land use practices to help new farmers."

The project is supported by FFAR through its Seeding Solutions grant program, which calls for research proposals in the foundation's seven challenge areas. The grant is part of the Protein Challenge, which aims to enhance and improve the environmental, economic

FEATURE STORIES

and social sustainability production of diverse proteins for a growing global population.

The Institute of Agriculture and Natural Resources and the Office of Research and Economic Development at Nebraska matched FFAR's support, resulting in \$2.4 million dedicated to this research. The Platte River High-Plains Aquifer Long-term Agroecosystems Research Network is also a partner. Other team members include Tala Awanda from Nebraska's Agricultural Research Division; Simanti Banerjee and Jay Parsons from the Department of Agricultural Economics; Humberto Blanco and Daren Redfearn from the Department of Agronomy and Horticulture; Mary Drewnoski and Galen Erickson from the Department of Animal Science; Jane Okalebo and Andy Suyker from the School of Natural Resources; and George Burba from LI-COR Biosciences.

Article courtesy of University Communication.



Beautiful tree outside Animal Science Complex Photo by: Sherri Pitchie

6 SPRING 2018

NYBLS Malina Lindstrom prepares a product with her group. Photos by: Peta-Gaye Clachar 8 SPRING 2018

14th Annual Nebraska Youth Beef Leadership Symposium

For the weekend of Nov. 17-19, 2017, 32 high-school aged youth from across Nebraska, and five others from Kentucky, immersed themselves in the 14th Annual Nebraska Youth Beef Leadership Symposium (NYBLS) hosted by the Department of Animal Science. This successful, ongoing symposium is designed to introduce youth to career opportunities and current issues in the beef industry, to teach youth about the product they produce, and to further enhance their leadership and communication skills.

This year, two different programs were offered to youth, as part of NYBLS – "E-communicating" and the product-based "Culinary Challenge". For both programs, building trust with consumers is of paramount importance. If we develop and wish to sell a product, consumers must trust what we say. If we wish to tell the story of beef production, consumers must trust what we say. Anne Burkholder, from Cozad, Nebraska, provided the keynote address on "Building Trust". Per Anne's website, she is a "native of urban Palm Beach County, Florida and an Ivy League educated athlete who was fueled by beef for many years before she understood where her beef came from." Upon moving to Nebraska, she learned to operate a feedlot and is now a consultant in the beef industry. As part of her keynote, she discussed the importance of trust and transparency within the beef industry. She highlighted her usage of social media, including her Feedyard Foodie Blog as a site where people can read about the real story of beef.



Animal Science graduate student Megan Neilson shows participants how to ultrasound a beef reproductive tract.

Dr. Galen Erickson initiated the "E-communicating" group with an overview of the beef industry. Then, youth gained hands-on experience with ultrasound technology in association with reproductive physiology, learned about behavioral concepts relative to proper animal handling, and they learned why animal welfare is important to the beef

industry. After gaining some basic information, it was project time. Working in small groups, these youth were asked to identify a needed point of clarification or education for consumers; then, they would develop a visually appealing, factual based infographic to concisely convey key knowledge to consumers.

CONTINUED ON PAGE 12



CONTINUED FROM PAGE 9

Ms. Haley Apel, Media Specialist at Institute of Agriculture and Natural Resources, discussed various techniques and strategies to accomplish this goal. Youth groups tackled the subjects of origination of our food from "Farm to Table", sustainability, and the environmental impact of beef production. A secondary project for the "E-communicating" group was to conduct a Facebook Live interview. To prepare, Mr. Jon Vanderford, who hosts and is executive producer of "Pure Nebraska", provided interactive discussion and practice regarding live interview techniques. E-communicating youth developed questions and conducted their own Facebook Live interview of NYBLS participants involved with the Culinary Challenge.

Those involved with the traditional "Culinary Challenge" of NYBLS gained in-depth knowledge of the product side of the beef industry, meat science, and marketing as they were challenged to develop and market a new beef product for consumers. The final, cooked product of each group was presented to a panel of judges for evaluation of product taste and consumer appeal. However, taste alone would not win over these judges. Each group had to provide a detailed economic and marketing plan. Considering that one judge was a food product development specialist and the other an economics specialist, the developmental and marketing details were of critical importance. In preparation for such a daunting task, the "Culinary Challenge" youth learned of the origination of retail cuts within the carcass as Dr. Dennis Burson provided 12 SPRING 2018



NYBLS group leader Shelby Cammack (left) brainstorms with her group members Anna Ready (center), Skylar Sterns (2nd right), Lauren Trauernicht (right), and Heath Keiser to come up with a visually appealing, fact-based infographic.

a beef carcass fabrication demonstration. Then, Dr. Ty Schmidt demonstrated, through sensory analyses, how origination and function of the muscle associated with those retail cuts affect palatability. For this year's culinary challenge, youth had to work with ground beef, the heart clod, or flat-iron steak; all products that originate from the chuck. As students brainstormed ideas on how to develop an innovative retail product, Dr. Gary Sullivan and Chef Jon Kennedy provided support; detailing culinary concepts and demonstrating how flavor profiles can be developed through proper seasoning and cooking. Final products included "Beef Tenders" and "Cowboy Pizza". There were BBQ, Mexican, and Italian lettuce wraps and "Pepper Poppers", filled with beef, of course. For the more serious palate, one group presented the "All Business Burger" – stuffed with stuff! Judges were impressed with the creativity, communication

skills, and business savvy of youth involved with this program. Increasingly, industry employers emphasize the importance of soft skills - leadership, communication, networking, and time management, to name a few. Skills that cannot be taught or learned overnight, but which must be developed and incorporated into our daily lives as habits. This year, throughout NYBLS, the "7 Habits of Highly Effective Teens" leadership program was intermixed. Incorporating a fun and engaging platform, NYBLS youth learned the importance of being proactive, to begin with the end in mind, to put first things first (Big Rocks), to think win/win for all involved, to first truly listen and understand, to synergize and work with others, and finally to stay mentally and physically sharp.

At the NYBLS awards reception and dinner, attended by many parents, participants received certificates for participation in

FEATURE STORIES



development of future leaders of

Sponsors of the 2017 NYBLS

include the Nebraska Cattlemen

Foundation, the Nebraska Beef

the beef cattle industry."

Dr. Dennis Burson (center) explains beef carcass fabrication.

NYBLS and completion of the "7 Habits of Highly Effective Teens" program. In addition, six \$500 CASNR scholarships were awarded to Wyatt Banks, Cynthiana, KY; Jacy Hafer, Dunning, Neb.; TaraLee Hudson, Belvidere, Neb.; Malina Lindstrom, Elm Creek, Neb.; Amanda Most, Ogallala, Neb.; and Kelsay Schlichtman, Beatrice, Neb. for their sustained active and professional leadership and participation throughout the symposium. Then, Dr. Mike Boehm, Harlan Vice-Chancellor IANR, who was also in attendance, proceeded to double those scholarship offers to \$1,000 each! Thank you.

Alli Raymond, Animal Science
Admissions Coordinator, said
"It was a privilege to meet the
outstanding young people from
across Nebraska and Kentucky who
participated in the symposium.
Nebraska is the Beef State, and
we are pleased to partner with all
our sponsors to participate in the

and Cargill Corn Milling. Thank you.

Planning members for the 2017 NYBLS included Mr. Brad Bennett, Dr. Dennis Brink, Ms. Kinsev Freeman, Mr. Cole Meador, Ms. Alli Raymond, Dr. Bryan Reiling, and Dr. Gary Sullivan. Already, plans are underway for 2018, and if you know of youth who are interested in participating, please contact Alli Raymond at araymond2@unl.edu. NYBLS is scheduled for Nov. 2-4, 2018. The Nebraska Youth Beef Leadership Symposium is a truly unique opportunity for young people interested in the beef industry, and the Department of Animal Science is committed to helping develop the human capital needed to make Nebraska the epicenter of our beef industry.

Written by: Dr. Bryan Reiling



2017 NYBLS Scholarship Recipients: From l-r: Malina Lindstrom, Kelsay Schlichtman, Amanda Most, Jacy Hafer, Wyatt Banks, and TaraLee Hudson

Photo by: Dr. Bryan Reiling



The Department of Animal Science hosted its annual Open House to highlight potential careers, academic programs and other opportunities to youth interested in animals. Fiftyfive guests participated at the event, October 23, at the Animal Science Complex. Faculty and students presented a combination of hands-on stations including demonstrations from meat science, ruminant nutrition, stress physiology, and reproductive physiology. Additionally, various student organizations and teams such as the Husker Equestrian team, Judging teams, Pre-Vet club, Students for the Education of Exotic and Companion Animals, Block and Bridle Club, Rodeo Club, and Wildlife Club also had an opportunity to visit with the youth. Attendees traveled through the Animal Science building on a scavenger hunt to seek out facts related to classes and majors. This event provided youth a chance to explore animal-related academic programs and learn about opportunities for courses and extracurricular activities in a relaxed atmosphere.

> Article and photos by: Alli Raymond





FEATURE STORIES

17 annual beef nutrition conferences, and counting

We host a nutrition meeting each fall on a Friday in early November that provides continuing education targeted at feedyard nutrition consultants and allied industry. This meeting started in 2001 as a replacement for an interdisciplinary nutrition meeting hosted by UNL and industry. Attendance was dwindling back then and topics were general in nature. As a result, the group said either we discontinue or need to make a change. I started in June of 2001 and was disheartened to learn that the group wanted to disband. After discussions with numerous industry nutritionists like Bill Dicke, Mike Prokop, and UNL personnel, we made the decision to start a beef feedyard focused meeting, which is what lead to the Husker Beef Nutrition Conference.

The annual meeting is on a Friday before a home football game in early November and has been hosted at the Eastern Nebraska Research and Extension Center near Mead, Neb. at least the past eight years or so. The reason for that venue is that many of the consultants are traveling in from the region and prefer to not travel into Lincoln. Many attendees are alumni with advanced degrees from the University of Nebraska-Lincoln, so they may have done much of their research at ENREC. Lastly, the facility is excellent for hosting extension events like this. Our goal is to release the annual Nebraska Beef Report at this meeting as the first public release prior to mailings and promotion. Much of the research on feedyard cattle is utilized by consultants to improve nutrition and management programs for their clients in the region and nationally. Our goal is to affect positive change and impact their recommendations.

In Extension, we always strive to have a positive impact and base recommendations on science-based results. We also strive to measure impact programs, which is quite challenging. Between 75 and 125 consultants, allied industry, and graduate students attend each year. Consultants are from Nebraska and surrounding states. Topics vary based on timeliness and speakers consist of UNL faculty, faculty from other universities, and industry experts. The meeting is self-funded from meeting dues and annual

sponsorship from the Plains Nutrition Council based in Texas. They have graciously helped sponsor this meeting for regional consultants that cannot attend or in addition to attending an annual meeting in San Antonio each April. Their support has been superb and an asset to continuing the meeting.

Based on meeting attendees, the number of cattle impacted by consultants attending annually varies from four to eight million head of cattle on feed (of the total of 11 to 12 million in large U.S. feedyards). Depending the topics, 50 to 75% of consultants will make changes to their practices and over 95% gain knowledge. Topics are chosen based on feedback and input from consultants to ensure we meet our targeted goal of education.

It is fun to organize and interact with many alumni and friends in the feedyard industry at this event. As always, we are open to input on how to continue to improve our delivery and topics and meet the needs for our state and region. As always, feel free to contact me at 402 472-6402 or at gerickson4@unl.edu with any feedyard related questions that I can help with.

Written by: Dr. Galen Erickson



Participants listen attentively at the Husker Beef Nutrition Conference, Nov. 3, 2017, at the UNL Eastern Nebraska Research and Extension Center, Mead, Neb.



Students evaluate livestock at the AKSARBEN Livestock Judging Contest with UNL Animal Science department, Oct. 1, 2017, in the Thompson Arena, at the Nebraska State Fairgrounds, Grand Island, Neb.

Photo by: Dr. Bryan Reiling

AKSARBEN's livestock judging event draws 530 participants

Written By: Austin Koeller Published: Oct. 2, 2017, *The Grand Island Independent*

Hundreds of college students and 4-H'ers packed into Thompson Arena at the Nebraska State Fairgrounds on Sunday. They were ready to concentrate.

Before them were a variety of livestock including lambs, goats, hogs, steers and heifers. Their task was to examine the physical attributes of each animal and judge them as part of the AKSARBEN livestock judging contest Sunday.

Bryan Reiling of Lincoln, who served as co-superintendent of the contest, said about 530 people competed at the contest, including 15 senior college teams, 27 junior college teams and 27 4-H teams. He added that teams traveled from as far away as Kentucky and Virginia.

As part of Sunday's contest, held for the 10th year and for the first time in Grand Island, Reiling said each

contestant judged 12 classes of livestock and ranked them from best to worst against an official committee. After that, they proceeded to Barr Middle School, where they had a chance to explain their reasoning behind their rankings to the officials.

"They have two minutes to explain to an official why they placed the class the way they did," Reiling said. "They don't have to agree with the official, they just have to provide a justification for why they placed it the way they did and get scored accordingly."

He said each place against the officials was worth 50 points. If a contestant matched the official ranking exactly, they scored 50 points.

"If, by chance, you switch the top pair — you switch the first- and second-place animals — there will be a slight deduction on that depending upon how tough the official thought it was. Those are called cuts," Reiling said. The reasons are worth 50 points, too." One team that competed at Sunday's AKSARBEN livestock judging contest was from Oklahoma State University in Stillwater, Okla.

Oklahoma State Senior Layna Bond, of Galatia, Ill., said the team had a busy weekend. It competed at Flint Hills in Kansas on Friday and at AKSARBEN on Sunday. She said the ultimate goal is to get better to compete at the national livestock judging contest in Louisville, Ky., in November.

Dr. Blake Bloomberg, who coaches the team, said the livestock judging team of 19 students competes at 13 contests nationally every spring and fall. This is the fourth year he has brought a team to compete at AKSARBEN. He added the contest offers the students on the team a unique opportunity to show off their skill sets.

"Really, what we are doing is we are teaching them how to be affective leaders," Bloomberg said. "Their communication skills are sharpened, their critical thinking is boosted and they learn to work as a team. Even though they judge individually, it is still a team sport. They also learn how to travel with people and how to deal with people because there are a lot of different personalities that make up a judging team." Oklahoma State Senior Faith Onstot, of Austin, Texas, agreed with Bloomberg.

"You learn how to stay disciplined. You learn how to follow what your coach says to do, follow what you know is right and stop second guessing yourself," she said. "That goes a long way in life. You learn how to make your decisions, be definitive about them and be able to talk to people about them."

In terms of the AKSARBEN, Bloomberg, Bond and Onstot said they were impressed with the facilities and the way the livestock judging contest was coordinated. Bloomberg said the facilities at the Nebraska State Fairgrounds are top-notch and "one of the nicest facilities we have in the United States for livestock exhibition."

Bond said the livestock judging was a high-quality contest featuring great livestock from first through fourth place.

"Everybody who put the contest on was super nice and awesome," Onstot said. "I liked how it was run. It was very organized."

FEATURE STORIES



UNL Dairy Stor

Dairy Store begins selling meat products

Published: Dec. 12, 2017- *UNL Today*Article and photo courtesy of University Communication.

Lincoln, Neb. — The University of Nebraska-Lincoln's Dairy Store has offered premium handmade dairy products since 1917. Now it has added meat to its product offerings.

The East Campus store began selling ribeye, T-bone, porterhouse, sirloin and tenderloin cuts in November. The meat comes from the Loeffel Meat Laboratory and is processed by students in the university's animal science department.

"While expanding our product selection is always great, this is really about supporting the university community," said Leroy Braden, Dairy Store manager.

"The locally sourced meat is processed entirely by students."

A partnership with the animal science department has been in the works for some time, Braden said. Since the Dairy Store is open daily and sees a consistent amount of traffic, the idea was tossed around to sell meat in addition to ice cream and cheeses. The idea has proven popular.

"We went through the first set of products they brought over pretty quickly," Braden said.

The Loeffel Meat Laboratory will continue to sell meat from its location in the Animal Science Complex on East Campus from 1 to 5:30 p.m. Tuesdays and 11:30 a.m. to 5:30 p.m. Fridays.

The addition of meat sales ties in to the Dairy Store's mission of providing hands-on experience for students in food production and sales.

Dairy Extension partners with Midwest Dairy Association to offer ambassador program

By Kim Clark, Dairy Extension Educator and Dr. Paul Kononoff, Dairy Extension Specialist

Two years ago when Nebraska Dairy Extension was building their dairy program, they knew there was a missing link: college students. The Dairy Extension program provides science-based information to Nebraska's dairy producers, but students with a dairy background and interest have no way to remain involved in the dairy industry until now.

Nebraska Dairy Extension began partnering with the Midwest Dairy Association to offer a Dairy Ambassador program to Nebraska's college students. The Midwest Dairy Association offers each ambassador the opportunity to earn up to a \$1,000 scholarship based on the level of involvement and the number of completed activities.

In January, the program entered its third year of working with college students that have an interest or background in the dairy industry. The year-long program is designed to give ambassadors a better understanding of the dairy industry from the farm to the processing. Additionally, ambassadors visit dairy farms, participate in communications training, job shadow, and promote the dairy industry at events such as Ag Literacy Festivals, farmers markets, Moo at the Zoo, the Nebraska State Fair and more throughout the year. In previous years ambassadors have been students at UNL, Nebraska College of Technical Agriculture in Curtis (NCTA), and Southeast Community College (SCC) in Beatrice.

Ambassadors traveled to North Bend Elementary School, October 31, to teach students how to milk a cow and how to make butter.

Photo courtesy of Kim Clark.



Dawn Klabenes, UNL Animal Science major (left), and Maranda Kegley, UNL Ag Education major, are two of the 2017 Dairy Ambassadors. There were fun activities for all ages at various events throughout the year.

Photo courtesy of Kristen Hassebrook.



FACULTY PUBLICATIONS

Splan, R., M. Spindler, **K. Anderson**, C. Skelly, M. Westendorf, C. Williams, L. Kenny, and R.C. Bott-Knutson. Opportunities for equine science student development through the transdisciplinary and global challenges of climate change NACTA J. Accepted, May 2017.

Anderson, K.P., K. Pulec, C.D, Skelly, A. D. Wright, E.A. 2017. Greene. Reach vs impact: examining the value of online learning lessons compared to webinars for educational outcomes for the equine community. J. Equine Vet. Sci. 52:119.

Anderson, K.P., L. Luck., L. Karr. 2017. Companion Animal and Equine open house provides interactive recruiting opportunity. J. Equine Vet. Sci. 52:123–124.

Schweer, W., K. Schwartz, J. F. Patience, L. Karriker, C. Sparks, M. Weaver, M. Fitzsimmons, **T.E. Burkey** and N.K. Gabler. 2017. Porcine Reproductive and Respiratory Syndrome virus reduces feed efficiency, digestibility, and lean tissue accretion in grow-finish pigs. Transl. Anim. Sci. 1: doi:10.2527/tas2017.0054.

Chao, M. D., Domenech-Pérez, K. I., Senaratne-Legagala, L. S., **Calkins, C.** (2017). Feeding wet distillers grains plus solubles contributes to sarcoplasmic reticulum membrane instability. Livestock Production Science.

Chao, M. D., Domenech-Pérez, K. I., **Calkins, C.** (2017). Feeding vitamin E may reverse sarcoplasmic reticulum membrane instability caused by feeding wet distillers grains plus solubles to cattle. The Professional Animal Scientist, 33, 12-23 (corrigendum 780-781).

Chao, M. D., Domenech-Pérez, K. I., Voegele, H. R., Kunze, E. K., **Calkins, C.** (2017). Effects of dietary antioxidant supplementation of steers finished with 30% wet distillers grains plus solubles on fatty acid profiles and display life of strip loins. Livestock Production Science.

Domenech-Pérez, K. I., Calkins, C., Chao, M. D., Semler, M. E., Varnold, K. A., **Erickson, G.** (2017). Impact of feeding de-oiled wet distillers grains plus solubles on beef shelf life. Journal of Animal Science, 95, 709-717.

Herrera, N., Chao, M., Wilkerson, E., **Calkins, C.** (2017). Relationship of Superoxide Dismutase Activity to Tenderness of Prime and Select-grade Beef. National Provisioner. https://www.provisioneronline.com/articles/104900-superoxide-dismutase-activity-and-beef-tenderness

Ribeiro, F. A., Domenech-Pérez, K. I., Wilkerson, E. K., Voegele, H., Herrera, N. J., Hart, K. B., **Calkins, C.** (2017). Relationship Between Dietary Fat Source and Beef Display Life. In 63rd International Congress of Meat Science and Technology: Nurturing Locally, Growing Globally., Declan Troy, Ciara McDonnell, Laura Hinds, Joseph Kerry (Ed.), (pp. 109-110). Wageningen: International Congress of Meat Science and Technology. Wageningen Academic Publishers.

Ribeiro, F. A., Kunze, E. K., Domenech-Pérez, K., Herrera, N., Voegele, H., Hart, K., **Calkins, C.** (2017). Effects of Dietary Fat Source and Modified Distillers Grains on Beef Quality. (Supp. 2 ed., vol. 95, pp. 59-60). Journal of Animal Science.

Herrera, N. J., Kunze, E. K., Domenech-Pérez, K., Ribeiro, F. A., Chao, M. D., **Calkins, C.** (2017). Relationship of Proteolysis and Superoxide Dismutase Activity to Tenderness of Prime and Select Grade Beef. (Supp. 2 ed., vol. 95, pp. 185). Journal of Animal Science.

Walker LR, Tosky ER, Sutton KM, Griess R, Abebe MD, Barnes SY, Cunnigham T, Kachman SD, Nielsen MK, **Ciobanu DC.,** A 16.7 kb deletion in Sipa1l3 is associated with juvenile cataract in mice. Mamm Genome. 2017 Dec;28(11-12):515-519. doi: 10.1007/s00335-017-9720-9. Epub 2017 Sep 26.

Cox-O'Neill, J. L., K. M. Ulmer, M. Rakkar, L. Franzen-Castle, H. Blanco-Canqui, M. E. Drewnoski, J. C.

FACULTY PUBLICATIONS

MacDonald, and **R. J. Rasby**. 2017. Perceptions of crop consultants and crop producers on grazing corn residue in Nebraska. Journal of Extension 55(5):5RIB2.

Rakkar, M. K., H. Blanco-Canqui, R. A. Drijber, **M. E. Drewnoski, J. C. MacDonald**, and T. Klopfenstein. Impacts of cattle grazing of corn residues on soil properties after 16 years. Soil Sci. Soc. Am. J. 81:414–424. doi:10.2136/sssaj2016.07.0227.

Drewnoski, M. E., J. C. MacDonald, G. E. Erickson, K. J. Hanford, and T. J. Klopfenstein. 2017. Long-term corn residue grazing improves subsequent soybean yields in a corn-soybean rotation. Crops Soils 50:36-41. doi:10.2134/cs2017.50.0206.

Burken, D. B., B. L. Nuttelman, J. L. Harding, A. L. McGee, K. M. Sudbeck, S. E. Gardine, T. C. Hoegemeyer, T. J. Klopfenstein, and **G. E. Erickson**. 2017. Effects of agronomic factors on yield and quality of whole corn plants and the impact of feeding high concentrations of corn silage in diets containing distillers grains to finishing cattle. Transl. Anim. Sci. 1:367-381 doi:10.2527/tas.2017.0045.

Dierks, N. T., B. D. Cleveland, K. A. Varnold, **G. E. Erickson**, and **G. A. Sullivan**. 2017. Effects of feeding wet distillers grains to cattle during different phases of production on lipid oxidation of cooked ground beef patties during storage. Prof. Anim. Scient. 33:54-62. doi:10.15232/pas.2016-01533.

Schneider, C. J., B. L. Nuttelman, A. L. Shreck, D. B. Burken, W. A. Griffin, J. L. Gramkow, R. A. Stock, T. J. Klopfenstein, and **G. E. Erickson**. 2017. Use of a complete starter feed in grain adaptation programs for feedlot cattle. J. Anim. Sci. 95:3639-3653 doi:10.2527/jas.2016-1115.

Warner, J. M., A. J. Doerr, **G. E. Erickson**, J. A. Guretsky, **R. J. Rasby**, **A. K. Watson**, and T. J. Klopfenstein. 2017. Case study: Supplementation of cow-calf pairs grazing smooth bromegrass pastures with ethanol by-products and low-quality forages. Prof. Anim. Scient. 33:764-770 doi:10.15232/pas.2017-01612.

Duar, R.M., S.A. Frese, **S.C. Fernando, T.E. Burkey**, G. Tasseva, D.A. Peterson, J. Blom, C.Q. Wenzel, C.M. Szymanski, and J. Walter. 2017. Experimental evaluation of host adaptation of Lactobacillus reuteri to different vertebrate species. Appl. Environ. Microbiol. 31;83(12). pii: e00132-17. doi: 10.1128/AEM.00132-17.

Buntyn, J. O., D. Steffen, N. C. Burdick Sanchez, S. E. Sieren, **S. J. Jones, G. E. Erickson**, J. A. Carroll, and T. B. Schmidt. 2017. Serum blood metabolite response and evaluation of select organ weight, histology and cardiac morphology of beef heifers exposed to a dual corticotropin-releasing hormone and vasopressin challenge following supplementation with zilpaterol hydrochloride. J. Anim. Sci. 95:5327-5338. doi:10.2527/jas.2017.1913.

Artegoitia, V. M., A. P. Foote, **R. M. Lewis**, and H. C. Freetly. 2017. Rumen fluid metabolomics analysis associated with feed efficiency in crossbred steers. Nature Sci. Rep. 7: 2864. doi:10.1038/s41598-017-02856-0.

Ochsner, K.P., M.D. MacNeil, **R.M. Lewis**, and **M.L. Spangler**. 2017. Economic selection index development for Beefmaster cattle I: Terminal breeding objective. J. Anim. Sci. 95:1063-1070.

Ochsner, K.P., M.D. MacNeil, **R.M. Lewi**s, and **M.L. Spangler**. 2017. Economic selection index development for Beefmaster cattle II: General-purpose breeding objective. J. Anim. Sci. 95:1913-1920.

Thompson CJ, **Luck LM**, Keshwani J, Pitla SK, **Karr LK** Location on the body of a wearable accelerometer affects accuracy of data for identifying equine gaits, Journal of Equine Veterinary Science (2018), doi: 10.1016/j. jevs.2017.12.002.

King, T. M., R. G. Bondurant, M. L. Jolly-Breithaupt, J. L. Gramkow, T. J. Klopfenstein, and **J. C. MacDonald**. 2017. Effect of corn residue harvest method with ruminally undegradable protein supplementation on

FACULTY PUBLICATIONS

performance of growing calves and fiber digestibility. J. Anim. Sci. 95:5290-5300. Doi:10.2527/jas2017.1926.

Cleveland, B. D., J. O. Buntyn, A. L. Gronli, J. C. MacDonald, and G. A. Sullivan. 2017. Effect of feeding distillers grains during different phases of production and addition of postmortem antioxidants on shelf life of ground beef. Prof. Anim. Sci. 33:555-566. doi: 10.15232/pas.2016-0160.

Burken, D. B., B. L. Nuttelman, M. J. Jolly-Breithaupt, J. L. Gramkow, S. E. Gardine, T. J. Klopfenstein, J. C. MacDonald, and G. E. Erickson. 2017. Digestibility and performance of steers fed varying inclusions of corn silage and modified distillers grains with solubles to partially replace corn in finishing diets. Transl. Anim. Sci. doi:10.2527/tas2017.0046.

Bittner C. J., M. A. Greenquist, D. B. Burken, A. L. Shreck, **J. C. MacDonald**, T. J. Klopfenstein, W. J. Platter, M. T. Van Koevering, N. A. Pyatt, and **G. E. Erickson**. 2017. Evaluation of ractopamine hydrochloride (Optaflexx) on growth performance and carcass characteristics of finishing steers across different feeding durations. J. Anim. Sci. 95:485-498. doi:10.2527/jas2016.0806.

Cleveland, B.D., Buntyn, J.O., Redfield, A.L., **MacDonald, J.C, Sullivan**, G.A. 2017. Effect of feeding distillers grains during different phases of production and addition of postmortem antioxidants on shelf life of ground beef. The Professional Animal Scientist. 33:555-566.

Wijesena, H., C.A. Lents, Jean-Jack Riethoven, M. Trenhaile-Grannemann, J. Thorson, B. Keel, **P. Miller, M.L. Spangler,** S.D. Kachman, and D. Ciobanu. 2017. GENOMICS SYMPOSIUM: Using Genomic Approaches to Uncover Sources of Variation in Age at Puberty and Reproductive Longevity in Sows. J. Anim. Sci.

Morota G. ShinyGPAS: Interactive genomic prediction accuracy simulator based on deterministic formulas. 2017. Genetics Selection Evolution. 49:91. doi:10.1186/s12711-017-0368-4.

Abdollahi-Arpanahi R, **Morota G**, and Penagaricano F. Predicting bull fertility using genomic data and biological information. 2017. Journal of Dairy Science. 100:9656-9666. doi:10.3168/jds.2017-13288.

Beissinger TM and **Morota G.** Medical subject heading (MeSH) annotations illuminate maize genetics and evolution. 2017. Plant Methods.13:8. doi:10.1186/s13007-017-0159-5.

He, Jun, Jiaqi Xu, Xiao-Lin Wu, Stewart Bauck, Jungjae Lee, **Gota Morota**, Stephen D. Kachman, and **Matthew L. Spangler**. 2017. Comparing strategies for selection of low-density SNPs for imputation-mediated genomic prediction in U. S. Holsteins. Genetica.

Bellone RR, Liu J, **Petersen JL**, Mack M, Singer-Berk M, Drögemüller C, Malvick J, Wallner B, Brem G, Penedo MCT, Lassaline M. 2017. A missense mutation in damage specific DNA binding protein 2 is a genetic risk factor for limbal squamous cell carcinoma in horses. International Journal of Cancer. 141:342-353.

Martin, K.M, N Vargas-Juardo, **S.E. Purdum**, 2017. Prediction model for manure zinc excretion in laying hens. Poultry Sci., pex295. Poultry Science, pex295, Published: 25 October 2017.

- J.E. Gilley, S.L. Bartelt-Hunt, L.M. Durso, K.M. Eskridge, X. Li, **A.M. Schmidt** and D.D. Snow. 2017. Setback distance requirements for removal of swine slurry constituents in runoff. Transactions of the American Society of Agricultural and Biological Engineers 60(6): 1885-1894.
- S.J. Vitosh-Sillman, J.D. Loy, B. Brodersen, C. Kelling, K. Eskridge and **A.M. Schmidt**. 2017. Effectiveness of composting as a biosecure mortality disposal method for porcine epidemic diarrhea virus (PEDV)-infected pig carcasses. Porcine Health Management 3:22.

FACULTY PUBLICATIONS

Schuster, N.R., S.L. Bartelt-Hunt, L.M. Durso, J.E. Gilley, X. Li, D.B. Marx, **A.M. Schmidt**, and D.D. Snow. 2017. Runoff water quality characteristics following swine slurry application under broadcast and injected conditions. Transactions of the American Society of Agricultural and Biological Engineers 60(1): 53 – 56.

L. Durso and **A.M. Schmidt**. 2017. Antimicrobial resistance related to agricultural waste water and biosolid sources. In Antimicrobial Resistance in Wastewater Treatment Processes. Edited by Patricia L. Keen and Raphaèl Fugère. Wiley-Blackwell, 1st Edition. ISBN: 978-1-119-19243-5. 392 pp.

Mittek, M., E. T. Psota; L. C. Pérez; **T. Schmidt; B. Mote**. "Tracking of Group-Housed Pigs using Multi-Ellipsoid Expectation Maximization," to appear in IET Computer Vision Special Issue: Computer Vision for Animal Biometrics, Nov. 2017.

Seabury, C.M., D.L. Oldeschulte, M. Saatchi, J.E. Beever, J.E. Decker, Y.A. Halley, E.K. Bhattarai, M. Molaei, H.C. Freetly, S.L. Hansen, H. Yampara-Iquise, K.A. Johnson, M. S. Kerley, J. Kim, D.D. Loy, E. Marques, H.L. Neibergs, R. D. Schnabel, D.W. Shike, M.L. Spangler, R.L. Weaber, D.J. Garrick, and J.F. Taylor. 2017. Genome-Wide Association Study For Feed Efficiency and Growth Traits in U.S. Beef Cattle. BMC Genomics 18:386.

Lee, J., S. D. Kachman, and **M. L. Spangler**. 2017. The impact of training strategies on the accuracy of genomic predictors in U.S. Red Angus cattle. J. Anim. Sci. 95:3406-3414.

Yu, Haipeng, **Matthew L. Spangler, Ronald M. Lewis,** and **Gota Morota**. 2017. Genomic relatedness strengthens genetic connectedness across management units. G3.

Sun, S., **Sullivan, G.**, Stratton, J. Bower, C., Cavender, G. 2017. Effect of HPP treatment on the safety and quality of beef steak intended for sous vide cooking. LWT – Food Science and Technology. 86:185-192.

Stanley, R.E., Bower, C.G., **Sullivan, G.A.** 2017. Influence of salt reduction and replacement with potassium chloride based salts on the quality, sensory characteristics, and shelf life of pork sausage. Meat Science. 133:36-42.

Pattnaik A, Palermo N, Sahoo BR, Yuan Z, Hu D, Annamalai AS, **Vu HLX**, Correas I, Prathipati PK, Destache CJ, Li Q, Osorio FA, Pattnaik AK, Xiang SH. Discovery of a non-nucleoside RNA polymerase inhibitor for blocking Zika virus replication through in silico screening. Antiviral Res. 2017 Dec 21. pii: S0166-3542(17)30676-9. doi: 10.1016/j.antiviral.2017.12.016. PubMed PMID: 29274845.

Annamalai AS, Pattnaik A, Sahoo BR, Muthukrishnan E, Natarajan SK, Steffen D, **Vu HLX**, Delhon G, Osorio FA, Petro TM, Xiang SH, Pattnaik AK. Zika Virus Encoding Non-Glycosylated Envelope Protein is Attenuated and Defective in Neuroinvasion. J Virol. 2017 Sep 20. pii: JVI.01348-17. PubMed PMID: 28931684.

Kimpston-Burkgren K, Correas I, Osorio FA, Steffen D, Pattnaik AK, Fang Y, **Vu HLX**. Relative contribution of porcine reproductive and respiratory syndrome virus open reading frames 2-4 to the induction of protective immunity. Vaccine. 2017 Aug 3;35(34):4408-4413. doi: 10.1016/j.vaccine.2017.06.061. PubMed PMID: 28689650.

Vu HLX, Pattnaik AK, Osorio FA. Strategies to broaden the cross-protective efficacy of vaccines against porcine reproductive and respiratory syndrome virus. Vet Microbiol. 2017 Jul; 206:29-34. PubMed PMID: 27692670.

Correas I, Osorio FA, Steffen D, Pattnaik AK, **Vu HLX**. Cross reactivity of immune responses to porcine reproductive and respiratory syndrome virus infection. Vaccine. 2017 Feb 1;35(5):782-788. PubMed PMID: 28062126.

A.K. Watson, T.J. Klopfenstein, **G.E. Erickson**, **J.C. MacDonald**, V.A. Wilkerson. 2017. Impact of microbial efficiency to predict MP supply when estimating protein requirements of growing beef cattle from performance.

FACULTY PUBLICATIONS

J. Anim. Sci. 95:3184-3191.

Desaulniers, A.T., R.A. Cederberg, G.A. Mills, C.A. Lents and **B.R. White**. 2017. Production of a gonadotropin-releasing hormone 2 receptor knockdown (GnRHR2 KD) swine line. Transgenic Research 26:567-575.

Lents, C.A., J.F. Thorson, A.T. Desaulniers and **B.R. White**. 2017. RFamide-related peptide 3 and gonadotropin-releasing hormone-II are autocrine-paracrine regulators of testicular function in the boar. Molecular Reproduction and Development 84:994-1003.

Desaulniers, A.T., R.A. Cederberg, C.A. Lents and **B.R. White**. 2017. Expression and role of gonadotropin-releasing hormone 2 and its receptor in mammals. Frontiers in Endocrinology 8:269.

Romereim SM, Summers AF, Pohlmeier WE, Zhang P, Hou X, Talbott HA, Cushman RA, **Wood JR**, Davis JS, and **Cupp AS** (2017) Gene expression profiling of bovine ovarian follicular and luteal cells provides insight into cellular identities and functions, Mol Cell Endocrinol 439:379-394 PMID: 27693538.

Romereim SM, Summers AF, Pohlmeier WE, Zhang P, Hou X, Talbott HA, Cushman RA, **Wood JR**, Davis JS, and **Cupp AS** (2017) Transcriptomes of bovine ovarian follicular and luteal cells, Data in Brief 10:335-339 PMID: 28004024.

McNeel AK, Vallet JL, Snelling WM, Wright EC, Larimore EL, Amundson OL, Miles JR, Chase Jr CC, Lents CA, Sonstegard TE, Schroeder SG, **Wood JR, Cupp AS**, Perry GA, and Cushman RA (2017) Beef heifers with diminished numbers of antral follicles have decreased uterine protein concentrations, Anim Reprod Sci 179:1-9 PMID: 28215453.

Talbott H, Hou X, Qiu F, Guda C, Yu F, Cushman RA, **Wood JR**, Wang C, **Cupp AS**, and Davis JS (2017) Early transcriptome responses of the bovine mid-cycle corpus luteum to prostaglandin F2 alpha includes cytokine signaling, Mol Cell Endocrinology 452: 93-109, PMID: 28549990.

Talbott H, Hou X, Qiu F, Zhang P, Guda C, Yu F, Cushman RA, **Wood JR**, Wang C, **Cupp AS**, and Davis JS (2017) Transcriptomic and bioinformatics analysis of the early time-course of the response to prostaglandin F2 alpha in the bovine corpus luteum, Data in Brief 14:695-706, PMID: 28932774.

Cadaret CN, Beede KA, Riley HE, **Yates DT**. 2017. Acute exposure of primary rat soleus muscle to zilpaterol HCl (β 2 adrenergic agonist), TNF α , or IL-6 in culture increases glucose oxidation rates independent of the impact on insulin signaling or glucose uptake. Cytokine 96:107-113.

Posont RJ, Cadaret CN, Barnes TL, Yates DT. 2017. A potential role for mTORC1/2 in $\beta 2$ adrenergic regulation of skeletal muscle glucose oxidation in models of intrauterine growth restriction. Diabesity. 3:9-12.

*Faculty names are in bold.

Dr. Travis Mulliniks relocates to Nebraska from Tennessee to accept an Assistant Professor position in the Department of Animal Science. tos by: Peta-Gaye Clachar Mulliniks

Mulliniks

The Department of Animal Science is pleased to have on board Dr. Travis Mulliniks, Assistant Professor—Extension Specialist—Beef Nutritionist and Range Production Systems Specialist.

Mulliniks began working in the department, Sept. 11, 2017, and assists Extension educators with research at the West Central Research and Extension Center in North Platte, Neb. and the Gudmundsen Sandhills Lab, in Whitman, Neb.

Born and raised in Preston, Okla., Mulliniks grew up on a cow-calf operation raising cattle and training horses, which later inspired his research. His interest in animal nutrition landed him into the world of Animal Science to pursue a bachelor of science degree at Oklahoma State University. After this, Mulliniks pursued a master's degree in Animal Nutrition at New Mexico State University. His research focused primarily on nutrition and reproduction interaction in young range cows and how to nutritionally increase reproduction in two- and three-year-old cows.

Mulliniks continued on and pursued a Ph.D. in Animal Science. He got the opportunity to work at the USDA Fort Keogh Livestock and Range Research Laboratory, Miles City, Mont., where he researched how insulin resistance, measured by blood ketone concentration, influenced conception date in young cows

After earning a Ph.D., in 2012, Mulliniks was on faculty for five years at the University of Tennessee as Assistant Professor Beef Cattle Nutrition. While there, Mulliniks' research focused on the management practices to increase profitability and cow/calf efficiency. Even in high feed

NEW HIRE

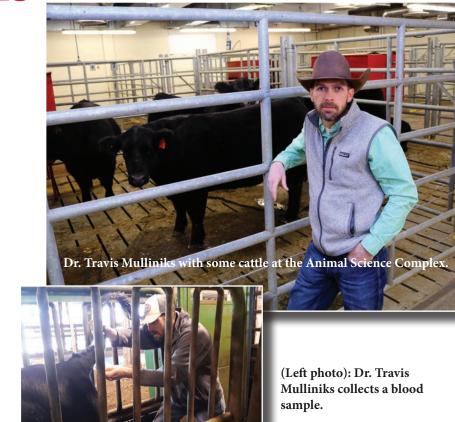


Photo by: Rafael Cardenas

resource environment as Tennessee, Mulliniks' research illustrated that increased milk production decreased pregnancy rates in mature cows and decreased feed efficiency in post-weaning calves. In addition, the metabolite ketone, measured with a ketone meter at the chute, was a good predictor of probability of timing of conception in beef cows.

Today, Mulliniks incorporates this and prior years of research on insulin resistance and metabolic efficiency in cows into his research at UNL. His focus is increasing energy utilization and metabolic efficiency in range beef cows.

Mulliniks has authored or co-authored over 35 peer-reviewed journal articles. He has published his research in more than 14 journals. Some of these include:

- Journal of Animal Science
- Professional Animal Scientist
- Rangeland Ecology and Management
- Agronomy Journal
- Metabolomics
- Agricultural Systems

Written by: Peta-Gaye Clachar Communication Specialist

FACULTY NEWS

When a department has an international reputation, global connections occur.

In October, Dr. Chris Calkins hosted the most famous meat scientist in all of Europe—Dr. Eero Puolanne, from the University of Helsinki in Finland, as well as four of his graduate students.

Dr. Puolanne is the recognized leader of the International Congress of Meat Science and Technology, an annual gathering of meat scientists from around the world. The group toured Hi-Gain Feedyard in Cozad with Jeff Rudolph. They also enjoyed a visit to Shannon and Paul Peterson's cow/calf operation in the sandhills. The group then went to Greater Omaha Packing Co. and the Smithfield dry sausage plant in Omaha. The three-day visit ended with a seminar and scientific exchange.

Written by: Dr. Chris Calkins



From l-r: Nea Tukia, Sini Möttönen, Anu Kuosmanen, Paula Salo, Dr. Eero Puolanne, and Shannon Peterson.



Krehbiel selected for Big Ten leadership programs

Published: Oct. 9, 2017, *UNL Today* — 10 faculty selected for Big Ten leadership programs

The Office of the Executive Vice Chancellor is sponsoring the participation of 10 University of Nebraska–Lincoln faculty members in the Big Ten Academic Alliance Leadership Development program for the 2017-18 academic year.

Husker faculty will participate in two of the leadership development areas — academic leadership and department executive officers.

Fellows in the Academic Leadership Program are: Shannon Bartelt-Hunt, professor of civil engineering and Robert B. Daugherty water for food fellow; Sonia Feigenbaum, associate vice chancellor for international engagement and global strategies and senior international officer; Deb Hamernik, associate dean of agricultural research division and professor of animal science; Matthew Jockers, associate dean for research and partnerships and Susan J. Rosowski associate professor of English; and Sherri Jones, department chair and director of Barkley Memorial Center and professor of special education and communication disorders.

Nebraska's Department Executive Officer fellows are: Marco Abel, department chair and professor of English; Richard DeFusco, department chair and professor of finance; Clinton Krehbiel, department head and professor of animal science; Tom Marley, department chair and professor of mathematics; and Harris Smith, director and associate professor of the Johnny Carson School of Theatre and Film.

The Academic Leadership Program is one of the most successful leadership initiatives of the Big Ten Academic Alliance. Established in 1989, the program develops the academic leadership and managerial skills of nominated faculty who have demonstrated exceptional ability and academic promise. The program addresses the challenges of academic administration at major research universities, while helping faculty members prepare to meet those challenges.

The Academic Leadership Program fellows will attend their first seminar in mid-October at the University of Iowa, followed by

one in February at the University of Michigan. In April, Nebraska will host the third and final seminar of the program.

Learn more about Nebraska's Academic Leadership Program

FACULTY NEWS

fellows and view past participants.

The Department Executive Officer fellows program was started in 1997 as an annual program of leadership opportunities for university department heads and chairs. Each year, approximately 75 department heads and chairs from Big Ten universities come together for this unique leadership development seminar. Topics at the three-day event range from conflict resolution and time management to faculty development, performance reviews and group problem solving. This year's seminar will be Nov. 9-11 at the Big Ten Center in Chicago.

Learn more about Nebraska's Department Executive Officers fellows and view past participants.

For more information about the Big Ten Academic Alliance Leadership Development Programs, contact Judy Walker, associate vice chancellor for faculty and academic affairs, at judy.walker@unl.edu or 402-472-3751.

http://news.unl.edu/newsrooms/today/article/10-faculty-selected-for-big-ten-leadership-programs/

Article courtesy of University Communication.

Photo by: Peta-Gaye Clachar

Jeffrey Perkins honored at IANR awards luncheon



ENREC Swine Unit Manager Jeffrey Perkins (center) receives the 2017 Omtvedt Servant Leader Award from IANR Associate Vice Chancellor Ron Yoder (left) and IANR Harlan Vice Chancellor Mike Boehm at a luncheon in the Nebraska East Union, Dec. 1, 2017.

Photo by: Craig Chandler - University Communication

OMTVEDT SERVANT LEADER AWARD: The Omtvedt Servant Leader Award recognizes outstanding managerial/professional and office/service employees. This award is made possible through the generosity of Lee Harlan and her late husband, Neal, in honor of Irv Omtvedt and his distinguished career at the university. Jeffrey Perkins received \$1,000 and a plaque. Published: Dec. 5, 2017: https://ianrnews.unl.edu/ianr-faculty-staff-honored-awards-luncheon-1



Alison Bartenslager

Who is the professor you are working with on this project?

Dr. Samodha Fernando

What is the title of your project or what are you hoping to determine from your research?

"Alternative Antibiotics"; we are hoping to isolate a natural probiotic from the rumen that is antibiotic resistant yet will kill bacteria that causes acidosis and liver abscesses (Strep. Bovis & Fusobacterium Necrophorum) in cattle. We have made great strides and hope to sell the product to be used as a feed additive.

How did you get involved with the UCARE program?

To be completely honest, I have always been behind in trying to figure out what I want to do in life. When I transferred to UNL all I wanted was to go home and work with my father in the family cattle operation. However, once I got to Lincoln, I had a change of heart and thought I had found a passion in microbiology. I landed a job in the Microbial Ruminant Nutrition Lab (Fernando Lab). Within a few weeks, I was infatuated by the work that was being done in Fernando's lab. Dr. Fernando suggested that I should apply for both the UCARE and ARD undergraduate research



Bartenslager loads an agarose gel to evaluate polymerase chain reaction (PCR) products.



IANR SPOTLIGHT

Published by: Institute of Agriculture and Natural Resources

What is your story?

I found my passion for agriculture and the beef industry towards the end of my high school years, and since then it has taken me so many places. I have no background in the cow/calf industry, or in any part of the beef industry for that matter, but it's time I made myself part of the industry that I love. It is my plan to start a herd of 2-4 bred Angus heifers within these next couple of years on my family's acreage outside of my hometown. I hope to grow this herd into a successful cow/calf operation that I can pass down for generations.

What is your business?

I plan to start my own cow/calf herd of angus heifers from the ground up on my family's acreage. I plan to start this herd with a few head of bred heifers this coming year and grow them into a larger herd in the near future so I may provide quality genetics for other producers.

Who is your entrepreneurial inspiration OR biggest hero?

My biggest inspiration and influence in my life has been a family friend, a brother, and a mentor to me. I have known Daryl Crook since I was three years old and he has only continued to teach me and influence me since then. He is where my passion for beef began and has grown. Without

ANNA KOBZA



Hometown: David City, Neb. Major: Animal Science

Minor: Engler Entrepreneurship, Beef Industry Scholar

Graduation Date: May 2020

Photo courtesy of Anna Kobza.

him, I doubt I would be involved in to stop her. this program and working towards a career in the beef industry. What advic

If your story were made into a movie, what actor/actress would portray you and why?

Lucille Ball definitely comes to mind. I adore her wit and wonderful sense of humor that she uses to get through from day to day and she can often be seen doing something she was told she couldn't do, despite anyone's efforts

What advice would you give to a student starting their entrepreneurial journey?

Don't do something you're not fully passionate about, or you might as well not do it at all. Find what you're passionate about and with grit and courage take a step to begin fulfilling your passion and idea.

https://engler.unl.edu/anna-kobz

IANR SPOTLIGHT

Published by: Institute of Agriculture and Natural Resources

Why did you decide to come to the University of Nebraska-Lincoln?

I decided to come to UNL because of the academic and athletic resources, and the opportunities available to me. Nebraska stood out to me as a college because of the welcoming environment and the diversity on campus.

What is your favorite class you have taken so far and why?

My favorite class that I have taken so far is English 150 with Scott Guild. The professor made learning fun and interactive. He was a very personable professor and was genuinely interested in how you were doing in class and outside of class.

What are your plans post-graduation?

My plan post-graduation is to work in a zoo as a zoo keeper or in a wildlife sanctuary. I want to work with carnivores or African animals. I am hoping to obtain an international job working in wildlife conservation or at a rehabilitation facility.

What's life like outside school?

Life outside of school is filled with homework, athletics and having fun with friends. I love being in the outdoors, so oftentimes you will find me studying outside or going on a hike somewhere.

KAYLA GADEKEN



Hometown: Seward, Neb.
Major: Animal science with equine science option, and fisheries and wildlife with an emphasis in zoo animal care
Graduation Date: May 2020

Photo courtesy of Kayla Gadenken.

https://ianrnews.unl.edu/student-spotlight-kayla-gadeken

Rwandan student succeeds at UNL animal science program

Written By: Erica Courtney
Published: Oct. 31, 2017, *The Daily*Nebraskan

For University of Nebraska-Lincoln sophomore animal science major Esdras Tuyishimire, leaving his family and home to attend school far away is no big deal. He's done it all his life.

Prior to attending UNL,
Tuyishimire grew up in Eastern
Province, Rwanda, and spent most
of his teenage years in boarding
school. He said it was a decision
he did not have much say in. Most
students attend boarding schools
across the country after finishing
elementary school.

"Being away from my family was no problem," Tuyishimire said. "The whole country goes to boarding school."

Though boarding school may sound like a great opportunity to gain some independence at a young age, Tuyishimire said this was not always the case.

"[For the] first three years I was in [Catholic school]. We didn't have [a lot of] independence," Tuyishimire said, "Even though we were not with our parents, those priests were parents."



Esdras Tuyisimire stands outside the Nebraska Union in Lincoln, Neb., Oct. 26, 2017. Esdras is a UNL student studying animal science and is from Rwanda. Photo by: Hannah Rogers

While his school may have been strict, requiring students to follow all of the rules and regulations, and to attend mass every morning, Tuyishimire and his friends still had the time to go out and act like teenagers. For the most part, Tuyishimire and his friends behaved while at school, but sometimes when they didn't receive permission to go out they would sneak out instead.

"But on the other side, we tried to be good in boarding school because we would spend time with those friends, they can help you with your studies," Tuyishimire said.

While attending boarding school, Tuyishimire befriended people

who grew up in different areas of Rwanda. At school he spent so much time with his friends that it began to influence the way he behaved at home.

"I took some of their behaviors, we spent a lot of time together so that means I might do something that I can't do when I was with my family," Tuyishimire said.

Not only did Tuyishimire catch onto the behavior of his boarding school friends, but, according to UNL freshman pre-health major Kaylee Rhoades, a chemistry classmate of Tuyishimire, says his time at boarding school seemed to make him more outgoing as an individual.

STUDENT NEWS

"He's always the first to come up and say 'Hello," Rhoades said, "He never seems scared to approach you first."

After graduating from high school when he was 19, Tuyishimire went to dental school after deciding being a physician was not the career he wanted.

"When I was a kid, my dad used to tell [me] that you need to be a medical doctor," Tuyishimire said. "I grew up kind of thinking [that]." Tuyishimire later decided he did not want to be a dentist, so he switched his major to animal science. After switching his major, Tuyishimire applied for UNL's CASNR undergraduate program

which helps students pursue a bachelor degree in integrated science.

After being accepted into the program Tuyishimire moved to Nebraska to gain more academic and work opportunities. "I was interested in [agriculture], especially animal science,"

Tuyishmire said. "Then through the partnership of my government and UNL, I got a scholarship." Studying animal science was a practical decision for Tuyishimire because he wants to own and raise his own cows like his family.

"My dad owned cows, so I decided

I had to be an animal science [major] so then I can own my own cows and take care of them," Tuyishimire said, "So [I decided] being animal science would be better than being dentistry."

Even though Tuyishimire is only in his second year at UNL, he said his decision to move to Nebraska was the right one.

"Nebraska is one of the states with highly advanced agricultural technology," Tuyishimire said. "I hope to gain more knowledge from here"

Graduate student earns first of two Meat Science Ph.D. degrees



Felipe Azevedo Ribeiro (2nd right), a doctoral student of Dr. Chris Calkins (2nd left), earned a Ph.D. from the University of Sao Paulo in December. Felipe participated in a sandwich program to conduct the research for his Brazilian degree here in Animal Science at University of Nebraska-Lincoln. He will continue to conduct additional research and take classes in pursuit of his Ph.D. in Meat Science and Muscle Biology from our department. Congratulations Felipe! From left to right is Dr. Pedro Eduardo De Felicio, Dr. Chris Calkins, Dr. Carmen Josefina Contreras Castillo, Dr. Felipe Ribeiro, and Dr. Sérgio Bertelli Planzer Júnior.

Photo courtesy of Dr. Chris Calkins.

STUDENT NEWS

Feedyard Management Internship

In the late 1960s, feedyards were becoming larger and more complex. To give our undergrads experience in feedyards, we initiated a summer internship program where students spent the summer in a feedyard and then wrote a summary in the fall to complete their credit. During the next 20 years, more than 50 students participated in the summer internships. Two names familiar in the Nebraska Cattle Feeding Industry are Craig Uden and Jeff Rudolph. They completed the summer internship in the early '80s. Craig went on to manage Darr Feedyard during its growth from hundreds to 50,000 today. He is now president of NČBA. Jeff manages Hi Gain Feedyard with 30,000 hd capacity at two locations.

In the mid '80s, we believed that the summer internship could be expanded in order to give students more depth in feedyard management. The expanded program involves six weeks of class, three hours per day, during the period from Memorial Day to July 4. Topics are Nutrition and Management, Health, Economics and Personnel Management. The students are in feedyards from then to Thanksgiving, when they return to campus for two weeks to "report."

The current internship program was initiated in 1988 with three interns. One hundred fifty seven students have now completed the program. About half are UNL graduates, the others are from other states. Following are the names of former interns that are directly involved in the Nebraska Cattle Industry:

- Ron Koranda-Manager of Winner Circle Feedyard, Minatare, Neb.
- Terry Heinle-General Manager of Winner Circle Feedyards in Nebraska, South Dakota and Kansas
- Ryan Schultis-Feeding, farming and cow operation, Tryon, Neb.
- Alan and Robert Cumming-Father and son completed the internship and feed cattle, Moorhead, Iowa
- Jeff Underwood-Feedyard, Exeter, Neb.
- Jake Nekl-Feedyard, Shelby, Neb.
- Ritch Blythe-Feedyard, Overton, Neb.
- Mark Blackford-Manager of Craig Cattle Co., Craig, Neb.
- Doug Setlik-Feedyard, Ord, Neb.
- David Wilke-Feedyard, Columbus, Neb.
- Erick Burken-Manager of feedyard in
- Cory Schlueter-Feedyard, Scribner,
- Doug Anderson-Buying cattle, Kearney, Neb.
- Mike Cherry-Livestock Employment Consultant
- Jarrod Knorr-Manager of Raikes Feedvard, Ashland, Neb.
- Greg Heiting-Feedyard, Hay Springs, Neb.
- Cody Weitzenkamp-Feedyard, Hooper, Neb.



2017 Feedlot Management Internship participants Front row l-r: Kerbie Large and Kimberly Johnson; middle row l-r: Emily Fox and Holly Heil; back row l-r: Joseph Kvidera and Jiehua Xiong

Photos courtesy of Shelby Garland.

STUDENT NEWS

Ryan Danehey-Cattle procurement for Innovative Livestock Services with nine yards in Nebraska and

• Andrew Sunderman-Feedyard, Norfolk, Neb.

- Troy Eberle-Cattle Operations Manager, Adams Land and Cattle, Broken Bow, Neb.
- Brandon Sorenson-Roberts Feedyard, Lexington,
- Tony Wagner-Adams Land & Cattle, Broken Bow, Neb.
- Bill Rhea-Feedyard, Arlington, Neb.
- Byron Ford-Feedyard, Cairo, Neb.
- David McDonald-Feedyard, Phillips, Neb.
- Neal Kanel, Todd Coppel, Justin Tolman and Dick Travis, own or work for companies related to cattle feeding.

Several students have completed the internship prior to enrolling in graduate school. Rob Cooper, Casey Macken, Kyle Vander Pol, Matt Greenquist, Will Griffin, and Curt Bittner have Ph.D.s and work as feedyard nutrition consultants in Nebraska. Dirk Burken works as a consultant in Canada; and Josh Benton works for Lone Creek Cattle Co. in Nebraska. Jim McDonald is an Animal Science faculty member.

Three former interns have M.S. degrees and work in Nebraska: Meredith Bremer at the Nebraska College of Technical Agriculture at Curtis, Brianna Conroy at the

UNL Feedyard at Scottsbluff, and Hannah Greenwell with Purina.

This is not a complete list of the 157 students, but it gives an overview of the successes of these former interns. Internships are tremendously useful to all students. Sometimes they learn what they do not want as a career. In most cases, it gives them some "credentials" when they apply for that first job. The Feedyard Management Internship has provided those experiences and credentials for some excellent students.

In 2014, Norm and Sharon Timmerman, of Indianola, Neb., made a generous contribution to the UN Foundation to support the internship program. The earnings from the endowment support a coordinator/ recruiter for the program. This person is a graduate student who has completed the internship program, currently Shelby Garland. The Timmerman fund also supports student tuition. The Nebraska Cattlemen Foundation also supports student tuition for the

2016 class was the largest class ever.

Written by: Dr. Terry Klopfenstein, Dr. Galen Erickson, and Shelby Garland



2016 Feedlot Management Internship participants with Norman Timmerman Front row l-r: Dr. Terry Klopfenstein, Viviane Ferrari, Shelby Garland, Kara Behrens, Sam Sechler, Norman Timmerman, Kacie Clark, Elizabeth Schumacher, and Shelby Oldenkamp; back row l-r: David McDonald, Dave Shields, Braden Troyer, Josh Estrada, Mitch Norman, Rob Berner, Anthony Geary, Cody Hanssen, and Dr. Galen Erickson



Front row l-r: Dr. Tiffany Heng-Moss, Dean, College of Agricultural Sciences and Natural Resources; Michaela Clowser; Krista Carter; Alison Bartenslager; and Jackie Schroeder; back row l-r: Jefferson Keller, Asst. Coach; Jesse Paxton; Nicolas Herrera; Ethan Wilke; Tyler Pickinpaugh; and Brad Bennett, Coach

Photo by: Greg Nathan-University Communication

Livestock Judging Team

What a fall it has been for the 2017 UNL Livestock Judging Team. After one of the more successful spring semesters in recent memory, eight driven young people returned to accomplish the goal of winning a national championship.

Preparation for the fall started before school was in session in August, with multiple practices across the state, including the Nebraska State Fair and two weekends spent in Iowa judging hogs. The team's first contest was actually a full weekend with the Flint Hills/Mid-America Classic in Hutchinson, Kan. on Friday and the AKSARBEN contest on Sunday. At

Flint Hills, the team finished 9th overall highlighted by Tyler Pickinpaugh receiving 4th in sheep/goats, 7th in hogs, and 6th overall while Jesse Paxton was 9th in hogs, and 9th overall. Two days later at AKSARBEN, Tyler Pickinpaugh was 6th overall with the team placing 5th in cattle, 7th in reasons, and 7th overall.

Things did not slow down at all from here, as the following weekend was another double-header with the Tulsa State Fair and State Fair of Texas. At Tulsa, Jesse Paxton finished 5th in sheep/goats while the team was 10th overall. However, there was quite the bounce back from a performance not up to our

standards when the team travelled just down the road to Dallas, Texas. Here the team was 3rd overall, 2nd in cattle, 3rd in sheep/goats, 5th in hogs, and 5th in reasons. It was even a greater highlight of the year with Tyler Pickinpaugh being named High Individual Overall after first finishing 3rd in cattle, 4th in sheep/goats, 8th in hogs, and 2nd in reasons. This was quite the accomplishment and served as an excellent spring board into our final two contests of the year.

At the end of October, after a trip over fall break to Illinois and Iowa, along with many other long days and nights spent practicing, the team was loading up and heading for the American Royal in Kansas City. This contest serves as one of the largest and most prestigious contests of the year, even more so since Kansas City is right in our backyard. In an incredibly tough, challenging competition the team managed to finish 8th in cattle, 4th in sheep/goats, and 13th overall. Tyler Pickinpaugh was also 9th in sheep/goats. No one was satisfied with that output, and the team worked as hard as ever to ensure a better outcome two weeks later.

As the team embarked on their final venture, it was evident they were driven toward their goal. We had excellent workouts on the way to Louisville, Ky. for the North American International Livestock Expo – the site of our national championship. The history of this contest dates back pre-1900 to the historic Chicago Stockyards and Chicago International Stock Show. Our group showed they were up to any challenge and finished 9th in the entire nation! This was highlighted by team finishes of 5th in hogs, 5th in performance hogs, 3rd in swine reasons, 9th in cattle, and 10th in reasons. Alison Bartenslager finished in the top-20 (out of 138 contestants) in both sheep and hogs. Krista Carter and Jesse Paxton did the same in cattle and cattle reasons, respectively. Tyler Pickinpaugh turned in another great day taking home 3rd in hogs, 2nd in hog reasons, 10th in reasons overall, and 14th high individual.

As we begin a brand new group for 2018 at the National Western Stock Show, we hope they (and all our friends and supporters) look at the 2017 team as the pillar of excellence. This is one of the first teams in recent Nebraska memory to be as consistent in the

STUDENT NEWS

top-10 in the nation weekend in and weekend out. These students have upheld themselves academically as well, with an average cumulative GPA of 3.25 while also being involved in other student organizations, undergraduate research, and undergraduate employment. Without the support of faculty, alumni, and friends of the program – none of these accomplishments would be possible. We look forward to a great 2018, highlighted by seeing all our alumni return to Lincoln on April 13 & 14 for our inaugural Alumni Weekend. We especially encourage all our judging alumni to be in attendance, as we'd love to catch up! As always we thank the Kimmel Foundation, Nebraska Cattleman's Foundation, and Department of Animal Science, as well as the numerous donors, alumni, and producers for everything they do.

Written by: Brad Bennett

Livestock Judging Team in Louisville, Ky.



Front row l-r: Alison Bartenslager, Jackie Schroeder, Krista Carter, and Michaela Clowser; back row l-r: Jesse Paxton, Ethan Wilke, Tyler Pickinpaugh, and Nicolas Herrera

Photo by: Brad Bennett

ANIMAL SCIENCE NSIDER 43



Front row l-r: Selena Finn, Joeli Walrath, Caitlin Davis, and Bailey Ziegler; back row: Dr. Clint Krehbiel, Head, Department of Animal Science; Haylee Lavoie, Assistant Coach; Neil Henderson; Valerie Skaalrud; and Dr. Kathleen Anderson, Coach

Photo by: Greg Nathan-University Communication

Horse Judging Team

The University of Nebraska-Lincoln Horse Judging Team had successful year competing across the nation. This year's team included Bailey Ziegler from St. Paul, Neb., Neil Henderson from Ashton, Neb., Caitlin Davis from Waverly, Neb., Selena Finn from Winside, Neb., Valerie Skaalrud from White Bear Lake, Minn., and Joeli Walrath from Ashton, Neb. coached by Dr. Kathleen Anderson and assistant coach Haylee Lavoie.

A variety of contests allowed this year's team to see a large diversity of the equine industry and meet professionals all over the world. The 2017 judging season started off in Tulsa, Okla. at Tulsa State Fair where UNL receiving 5th place overall. Next stop was Columbus, Ohio for the All American Quarter Horse Congress Collegiate contest. In the limited division Selena Finn received 2nd overall, 4th in halter; Joeli Walrath placed 1st in reasons and 2nd in halter; and Valerie Skaalrud was 7th in halter. In the open division Caitlin Davis was 18th overall and 11th in reasons.

After a great contest in Ohio at the largest one breed horse show in the world, UNL continued to the 2017 AQHA World Championship Show Collegiate Horse Judging Contest held on November 12th in Oklahoma City, Okla. Bailey Ziegler finished 8th in performance, 9th in halter, and 8th overall at the AQHA World collegiate show in the limited division. The National Reining Horse Association Intercollegiate Horse

Judging Contest came back this year with the great opportunity to judge live the NRHA futurity semi-finals finishing 10th overall as a team. The majority of this year's team members were fortunate enough to compete in the limited division so they can compete as a team in the senior division to represent University of Nebraska-Lincoln next year.

STUDENT NEWS

Next year's season looks to be promising with talented individuals to represent the great state of Nebraska. University of Nebraska-Lincoln's horse judging team would like to thank the Department of Animal Science for their support through another year to participate and learn about the equine industry!

Written by: Dr. Kathleen Anderson



Front row l-r: Ryan Schoeder, Keaton Lusche, Brent Tenopir, and Hunter Schroeder; middle row l-r: Sophia Lentfer, Renae Sieck, and Jessica Lancaster, Coach; back row l-r: Dr. Ty Schmidt, Faculty Advisor, and Dr. Tiffany Heng-Moss, Dean, College of Agricultural Sciences and Natural Resources

Photo by: Greg Nathan-University Communication

Meat Judging Team

The 2017 Junior Meat Judging Team consisted of Renae Sieck, Sophia Lentfer, Ryan Schroeder, Hunter Schroeder, Brent Tenopir, and Keaton Lusche and was coached by Jessica Lancaster. The team has some outstanding results to report. This fall we traveled to the National Barrow Show Meat Judging Contest in Austin, Minnesota, the American Royal Intercollegiate Meats Contest in Omaha, Neb.,

the High Plains Intercollegiate Meat Judging Contest in Friona, Texas, and the International Intercollegiate Meat Judging Contest in Dakota City, Neb.

At the Barrow Show Renae Sieck received Reserve High Individual Overall, High Individual in Processed Meats, High Individual in Placings, 4th in Specifications. Ryan Schroeder was 10th High

44 SPRING 2018 ANIMAL SCIENCE N<mark>SIDER</mark> 45

STUDENT NEWS



Tour of John Morrell Plant in Sioux City, Iowa From l-r: Coach Jessica Lancaster, Hunter Schroeder, Sophia Lentfer, Ryan Schroeder, and Renae Sieck; back row l-r: Brent Tenopir, and Keaton Lusche

Individual Overall, High Individual in Specifications, and 8th in Fresh Meats. The team at the National Barrow Show was 3rd High Overall Team, High Team in Specifications, 3rd in Total Placings, 4th in Processed Meats, 5th in Questions and 5th in Processed Meats.

At the American Royal, the team came away 9th overall in addition to 4th in Beef Grading. Individual Ryan Schroeder was the Reserve High Individual in Beef Grading. Brent Tenopir was Reserve High Individual in Placings. Hunter Schroeder wrote the High Set of Lamb Carcass Reasons. At the High Plains Meats Contest the team was for 7th in Beef Judging

and 7th in Lamb Judging, 7th in Total Placings and 10th High Team Overall. Individual Renae Sieck was 6th in Beef Judging, 7th in Total Placings, 11th in Pork Judging and 11th in Reasons. Keaton Lusche was 9th Overall Alternate.

At the International Meat Judging Contest in Dakota City, Neb., the team was 5th in Pork Judging, 6th in Beef Grading, 6th in Placings, and 7th in Specifications along with 8th Team Overall. Ryan Schroeder tied for 6th in Placings. Renae Sieck was 8th in Lamb Judging, 9th in Pork Judging and wrote the high set of reasons for the contest in Pork Carcasses. Hunter Schroeder wrote the high set of reasons in Lamb Carcasses. Keaton Lusche was 8th in Specifications.

In addition, this year the University of Nebraska hosted the Mini American Royal, an invitational contest for teams to help prepare for the major contests in the fall. The contest allowed all individuals to compete and was a great learning opportunity. Renae Sieck was the High Individual Overall and the High Individual in Specifications, 3rd in Placings and 3rd in Reasons. Brent Tenopir was High Individual in Placings, Reserve High Individual in Specifications, and 3rd High Individual Overall. Keaton Lusche was Reserve High Individual in Specifications. Ryan Schroeder wrote the high sets of reasons for Short Loins and Rounds.

Team members had the tremendous opportunity to tour the Hormel Processed Meats Plant in Austin, Minn., where they got to see products like pepperoni, bacon, and SPAM be made. They also got to tour the SPAM Museum where they learned the history of SPAM, how SPAM is used in different countries, and sample various flavors of SPAM. In addition, the team toured Beef Products Incorporated (BPI) in Dakota City, Neb. where they learned more about Lean Finely Textured Beef and the enhancement of lower value subprimals. The Cargill Meat Solutions Schuyler Plant included the team in a pilot project for tours and information to youth across Nebraska and surrounding states. Plus, the team visited the John Morrell, operated by Smithfield Foods,



International Welcome Dinner hosted by Tyson Foods at its headquarters in Dakota Dunes, SD. From l-r: Jessica Lancaster, Sophia Lentfer, Renae Sieck, Brent Tenopir, Keaton Lusche, Ryan Schroeder, and Hunter Schroeder

Photo courtesy of Jessica Lancaster.

plant in Sioux City, Iowa. The plant is the oldest pork plant in operation that still runs a harvest operation, fabrication floor, and processed meats division all out of the same location. It definitely was a unique piece of history for the team members to experience. Plus, the Cumming County Cattle Feeders held a dinner for the team and shared some University of Nebraska Meat Judging History, an outlook on the beef industry, and insight into day to day feedlot operations.

The team experienced once in a lifetime opportunities in the meat industry, many members are pursing meat industry internships for the summer of 2018 and graduating members are pursing positions in the meat industry. The experiences throughout the past year will stay with these members for a lifetime and have a positive impact on their future endeavors.

Written by: Jessica Lancaster

GREAT JOB HIRUNI!

Hiruni Wijesena received the Neal A. Jorgenson Genome Travel Award to attend the Plant & Animal Genome XXVI Conference in San Diego, Calif. in January. Hiruni is a Breeding & Genetics Ph.D. student advised by Daniel Ciobanu.









IANR Fellowship Luncheon

Dr. Archie Clutter, Dean UNL's Agricultural Research Division, presents the Widaman Distinguished Graduate Assistantship to Ashley Bigge in recognition of her outstanding performance as a graduate student at the Institute of Agriculture and Natural Resources Fellowship Luncheon, Nov. 6, 2017. Ashley is a Non-Ruminant Nutrition Ph.D. student advised by Dr. Sheila Purdum.

Dr. Tiffany Heng-Moss, Dean, College of Agricultural Sciences and Natural Resources, presents Ashley Conway (left) with the Nebraska Corn Board Fellowship at the IANR Fellowship Luncheon, Nov. 6, 2017. Ashley is a Ruminant Nutrition Ph.D. student advised by Dr. Mary Drewnoski.

Caitlin Cadaret (left) receives the Milton E. Mohr Fellowship from Dr. Tiffany Heng-Moss, Dean, College of Agricultural Sciences and Natural Resources, at the IANR Fellowship Luncheon, Nov. 6, 2017. Caitlin is a Physiology Ph.D. student advised by Dr. Dustin Yates.

Photos courtesy of IANR.

STUDENT NEWS

STUDENT NEWS

Doane Scholarship



Scholarship Recognition Reception

Oct. 8, 2017, International Quilt Study Center and Museum

Nebraska Cattlemen Foundation Scholarship

From l-r: Wes Anderjaska, Cassidy Curtis, A.J. Underwood, Hannah Esch, Jacy Spencer, Marissa Kegley, Hannah Settje, Shelby Cammack, Tressa Reiner, and Jake Crumly



Feedlot Management Scholarship

From l-r: Terry Klopfenstein with recipients Jonathan Fischer, Callie Eastin, Adam Oldemeyer, Megan Homolka, and Kailey Conway.



Frank and Shirley Sibert Scholarship

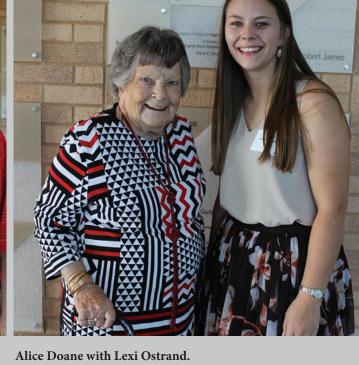
Frank and Shirley Sibert (center) with recipients (from l-r) Elizabeth Elliott, Hannah Settje, Sarah Buehler, and Jacob Lammers.

Don and Ray Gard Scholarship



Ray Gard with Kara Robbins.

Oxbow Animal Health Companion Animal Scholarship



Andy Bruntz Beef Industry Scholar Scholarship



Ann and Dave Bruntz with Joe Sonderman (right).



John Miller with Sophie Dinan and Emma Winters (right). Photos courtesy of Alli Raymond.

STUDENT NEWS

Block and Bridle



Club volunteers serve food at the Nebraska Cattlemen's Beef Pit. From l-r: Lexi Ostrand, Brigitte Rathey, Gilbert Seck, and Sheridan Swoteck

The Block and Bridle Club kicked off the fall 2017 school year by making an appearance at both the Big Red Welcome Back Fair on City Campus as well as the East Campus Welcome Back Fair. This was a great opportunity to network and recruit new members.

The following weekend, members made a trip to Grand Island to volunteer at the Nebraska Cattlemen's Beef Pit to help serve food to fair attendees.

September began with club hosting the annual Steak Fry with steaks donated by Cargill, Inc. Members served a steak dinner to faculty, students, and community members and took donations for hurricane relief. At the end of the month, members helped with the AKSARBEN stock show which provided members a chance to network with the show community, various extension agents, and industry professionals.

In October, the club took advantage of an opportunity at the Department of Animal Science Open House to visit with prospective students to discuss the benefits of being a member of Block and Bridle. Towards the end of the month, members participating in the Little AKSARBEN show began to work with their animals.

The month of November started off with the Little AKSARBEN show. This event is a unique experience for members who have either shown in the past or as members with limited to no show experience to learn and compete with each other. This year we gave the option to show horses, swine, sheep, and/or cattle. At our monthly meeting we had the pleasure of listening to guest speaker, Russ Vering, NPPA President and owner of Central Plains Milling, talk about his feed milling business and the future of agriculture in Nebraska.

During December, we hosted an appreciation breakfast for the Animal Science faculty and staff with



2017 Block and Bridle Club Members

breakfast burritos, muffins, and coffee as a thank you for everything they do for our organization.

In Spring, the Big Red Beef Show committee will be hosting their cattle show, March 3 and 4. The club traveled for an industry tour to Missouri, January 12-15, and visited operations dealing with beef cattle, dairy cattle, swine and visited a few Amish family farms. They were joined on the tour by members of the University of Missouri's Block and Bridle Club. Other opportunities and events include National Block and Bridle Conference in Orlando, Fla., Porkfest, and

the Lincoln Public School's Science Fair where they educate the elementary kids on where their food comes from.

This year, the club will also be having a ham sale prior to Easter. More information will be available closer to that time. Finally, the Honors Banquet will be held, April 14, in conjunction with the Animal Science Department's Alumni Reunion.

Article and photos by: Erin Blucher











ALUMNI NEWS

Joy Kovar, Principal Scientist, Biology Research & Development



Joy (M.S. 1992) joined LI-COR in May 1999 as a Research Technologist. While at LI-COR, Joy has provided significant contributions and provided application support for LI-COR products, including the DNA Analyzer, Odyssey CLx, Aerius and Pearl. Joy's collaborative efforts, to characterize optical probes for use in small animal imaging systems, helped align LI-COR as a leader in NIR dye technology, bioconjugation and probe development. As part of the IRDye 800BK Clinical team, Joy has lead the non-clinical testing efforts for safety, pharmacology, and toxicology. She works closely with our Contract Research Organizations and our Regulatory Consultants to schedule necessary studies, draft and review protocols, monitor study progress and communicate these findings with the internal LI-COR team. The nonclinical strategy and implementation is just one of the essential components to successfully translate LI-COR's IRDye 800BK to the clinic.

Joy is named as an inventor on two granted LI-COR patents and three patent applications. She has published 19 peer reviewed journal articles while at LI-COR and presented posters at several scientific meetings. Joy maintains relationships with key collaborators in optical imaging, photodynamic therapy and optoacoustic imaging. She will continue evaluating various probe technologies to enhance our understanding of how they work (IRDye 700DX/PDT), how these technologies might translate to the clinic, and ultimately promote new business opportunities for LI-COR.

Joy received her Associates Degree in Veterinary Technology from UNL NCTA, Bachelor of Science degree in Agriculture and her Masters of Science degree in Animal Science, both from UNL. Prior to joining LI-COR, Joy worked 17 years at UNL in the Department of Biochemistry and Biotechnology. In January 2014, Joy was appointed as an Adjunct Research Associate Professor at UNL Department of Biochemistry.

Please join me in congratulating Joy on her promotion!

,

ALUMNI NEWS

Casey Blum



Casey Blum (B.S. 2017) recently won a prestigious National USDF Championship – in Adult Amateur Dressage – 2nd Level with her gelding Eschaton. Blum just started a position in northern Illinois at Hueber Feeds as Equine Specialist.

Photo courtesy of Annan Hepner.

Ron Kohlmeier



Having tons of fun with family, alumnus Ron Kohlmeier (B.S. 1959) is sandwiched by daughter, Debbie (right), and wife, Carol at the 2017 NCAA Division I Women's Volleyball Championship match at the Sprint Center, Kansas City, Mo., in December.

Photo courtesy of Ron Kohlmeier.

SAVE THE DATE

ASGSA Clothing Sale

The Animal Science Graduate Student Association is having its annual spring clothing sale! This year, the organization is selling soft-shell vests, hats, and short sleeve t-shirts. All proceeds from the sale goes towards helping fund the graduate students' travel to conferences as well as other needs. If you are interested in supporting current Animal Science graduate students, or have any questions or comments in regards to design or pricing, that information is available at www.animalscience.unl.edu/asgsa or contact asgsa@unl.edu. Payment is due at time of order. All orders are due to the department by 5:00 p.m., March 16, 2018. Orders can either be picked up at the university or shipped directly to your location.







Article and photo courtesy of LI-COR.



University of Nebraska-Lincoln

What's big for UNL Rodeo from 2017?

CNFR Qualifiers Logan Dibbern Reed Kraeger

Regional Champions Reed Kraeger Steer Wrestling All-Around

CNFR Results

Reserve National Champion Steer Wrestler -

Reed Kraeger

Scholar Americans Logan Dibbern Trevor Ginkens Kara Robbins

Big deals for 2018?

Three returning two-time CNFR qualifiers Logan Dibber Jake Fulton Jarrett Oestmann

Men's Team - 3rd in the regional standings after the fall portion of the season

60th Annual UNL Rodeo

Friday, April 20: 1:00pm & 7:00pm Saturday, April 21: 1:00pm & 7:00pm Kid's day: 9:00am - noon (kids free at 1:00 performance)

Lancaster Event Center, 4100 N. 84th St.

Advanced tickets sold at

lancastereventcenter.org --> \$5 off

VIP: \$25/\$30 Reserved: \$15/\$20 General Admission: \$10/\$15 College Student: \$5 at door with ID Youth Reserved: \$7.50 advanced/\$10 door (12 and under) Youth General Admission: \$5 (12 and

under)

--Youth free: Saturday 1:00pm show

-- 2 and under Free on lap

2018 Animal Science Alumni Weekend

Friday, April 13

6:00 p.m. **Animal Science Alumni Reunion** Nebraska Innovation Campus Conference Center

6:00-7:00 p.m. **Social Hour**

Cash Bar & Heavy Hors d'oeuvres

7:00 p.m. **Reunion Program**

Recognition of judging teams and alumni awards (Undergraduate Distinction, Graduate Distinction, and Distinguished Service)

8:30 p.m. Auction

Live and silent auction

Saturday, April 14

9:30 a.m. **Old Timers Judging Contest** R.B. Warren Arena 11:30 a.m. Lunch **Animal Science Commons**

1:00 p.m. "Bulls Worth Waiting For" Sale

5:30 p.m. **Block & Bridle Honors Banquet** Nebraska Innovation Campus Conference Center

Blocks of rooms have been reserved at the Lincoln Marriott Cornhusker Hotel 402.474.7474, Hyatt Place 888.492.8847, Country Inn & Suites 402.476.5353, Staybridge Suites Lincoln I-80 402.438.7829, Comfort Inn & Suites 402.325.8800, New Victorian Suites 402.464.4400. Please specify "Animal Science Alumni Weekend" and make reservations by March 13.

Visit our Alumni Reunion webpage (https://animalscience.unl.edu/alumni-reunion) for more information about the events as well as alumni awards criteria and how to nominate.

EVENT REGISTRATION

Return by March 30

| Name(s) | |
|---|--|
| Address | |
| Email | Phone |
| Please reserve tickets for the following events: | |
| Friday, April 13 | |
| Ticket(s) for Alumni Reunion Cash bar and heavy hors d'oeuvres at 6:00 pm, Friday, April 13 at Nebraska Innovation | \$30.00 each on Campus Conference Center |
| Animal Science Students | \$15.00 each |
| Registrations received after March 30 a | nd walk-in guests will be an additional \$10.00 each |
| Saturday, April 14 | |
| Old Timers Judging Contest | |
| Lunch prior to Bull Sale | |
| Block & Bridle Honors Banquet, Honore Cash bar with Prime Rib and Chicken dinner 5-6 pm Reception/Social Hour, 6 pm Dinner at Nebraska Innovation Campus Conference Cer | |
| | Total |
| | ake checks payable to: ment of Animal Science |
| Please list all names as you would like them on y Names (please print) | your name tags If ASCI alumni, year graduated |
| | |

Return to Alumni Reunion, Department of Animal Science, C203 Animal Science Complex, University of Nebraska-Lincoln, Lincoln, NE 68583-0908

For further information, call 402.472.3571

ANIMAL SCIENCE NSIDER 67 66 SPRING 2018

SAVE THE DATE



February 22: **Block & Bridle Club Porkfest**, 5 – 6:30 p.m., Animal Science Complex

February 24-25: **Equestrian Team Show**, Animal Science Complex

March 5-16: Block & Bridle Club Ham Sales

March 10: **4-H Companion Animal Challenge**, 9 a.m. – Noon, Animal Science Complex

March 10: 4-H Horse Stampede, 8 a.m. – 3 p.m., Animal Science Complex

April 13: **Animal Science Alumni Reunion**, 6 – 9 p.m., Nebraska Innovation Campus Conference Center

April 14: Old Timers Judging Contest, 9:30 a.m., Animal Science Complex

April 14: "Bulls Worth Waiting For" Sale, 1 p.m., Animal Science Complex

April 14: Block & Bridle Honoree Banquet, 5 p.m., Nebraska Innovation Campus Conference Center

April 28: **Horse Judging School**, 9 a.m. – 4 p.m., Animal Science Complex

May 30-June 1: Nebraska Youth Pork Conference, Animal Science Complex

June 5-7: Winners Unlimited Livestock Judging Camp, Animal Science Complex

June 11-13: Winners Unlimited Livestock Judging Camp, Animal Science Complex

District Horse Show Dates and Sites:

June 13 - Ord

June 14 – York

June 20 – Gordon

June 21 – Central City

June 22 – Curtis

July 15-19: Fonner Park State 4-H Horse Exposition, Grand Island, Neb.

For more information about any event, visit: www.animalscience.unl.edu

Reconnect...

Facebook and Twitter



Like our Facebook page at UNL Animal Science.



Keep up-to-date on department awards, events, and research by following @UNL_AniSci on Twitter.

Animal Science alumni website:

https://animalscience.unl.edu/alumni

Update contact information:

Alumni members, you can update your contact information by contacting the Nebraska Alumni Association at: https://go.unl.edu/aw2t

Connect to job opportunities with Husker Hire Link

Husker Hire Link is UNL's free online service that connects UNL students and alumni with employers. The site allows students and alumni to post and send resumes; search jobs, internships, and employers; request on-campus interviews; and stay updated on career opportunities.

For more information, visit Husker Hire Link at: https://www.unl.edu/careers/hhl

The University of Nebraska-Lincoln Department of Animal Science publishes the Nsider semi-annually.

Where are you now?

Attention alumni! We want to know where you are and what you are doing!

STAY CONNECTED

Please take a moment to answer the following questions and return your responses by mail to:

University of Nebraska–Lincoln Department of Animal Science 3940 Fair Street P.O. Box 830908 Lincoln, NE 68583-0908

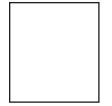
Or, email your responses to: pclachar2@unl.edu

| Name: |
|------------------------------------|
| Degree: |
| |
| Year Earned: |
| JNL Advisor: |
| Email: |
| Current and past career positions: |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

Please let us know of any significant events in your life and/or career since leaving the University of Nebraska–Lincoln. Also, please feel free to send any photos and/or recollections of your time at UNL to Peta-Gaye Clachar at pclachar2@unl.edu.



Department of Animal Science P.O. Box 830908 Lincoln, NE 68583-0908





University of Nebraska does not discriminate based upon any protected status. Please see go.unl.edu/nondiscrimination.

© 2018, The Board of Regents of the University of Nebraska. All rights reserved.