

ANIMAL SCIENCE INSIDER

University of Nebraska-Lincoln



UNL Research
Brings Swine
Industry Closer
to Broad Virus
Protection

Also in this issue:

Managing the UNL Research Feedyard
54 Makes Fall Deans' List/Honor Roll
Warner Bull on Showcase This Spring
UNL Service Awards



ALUMNI & FRIENDS
NEWSLETTER

Spring 2019

DEPARTMENT OF ANIMAL SCIENCE



ANIMAL SCIENCE

Institute of Agriculture and Natural Resources

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

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A message from the
DEPARTMENT HEAD



Dear Animal Science Alumni and Friends,

Welcome to the Spring 2019 edition of our departmental newsletter, the “Animal Science **N**sider”. We are pleased to share a few of the stories from the many wonderful activities and achievements which have occurred throughout the fall 2018 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 with you and sharing our vision as we continue to build on our culture of achieving excellence and advancing our animal and allied industries as part of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln.

Our featured stories include highlights from research led by Dr. Daniel Ciobanu and a team of scientists and students which provided the first direct evidence for the role of a gene and DNA polymorphism in facilitating Porcine Circovirus 2 (PCV2) replication and associated disease susceptibility. This important work will aid in the development of genetic tests capable of predicting susceptibility of swine to the disease prior to PCV2 exposure. We are excited that Dr. Tiffany Heng-Moss has recently been named permanent dean of the College of Agricultural Sciences and Natural Resources. We look forward to Tiffany’s leadership as we work together to prepare the next generation of leaders in agriculture. This edition also shares the story of Richard Brown, a UNL animal science alumnus from Taylor, Neb., and the Hereford bull Golden Design 14.

This edition also features a brief history of the UNL research feedyard at the Eastern Nebraska Research and Extension Center and the evolution of engaging graduate students in the management of the feedyard and the value of that experience to their careers. You will also see highlights from our scholarship reception, meet our undergraduate student ambassadors and beef scholars, review horse judging team highlights, and congratulate our fall 2018 graduates. We welcome Brent Johnson and Austin Holliday as new employees (or employees with new roles) and say congratulations to some very worthy award winners.

Please plan to join us April 12 and 13, 2019 for our second annual Animal Science Alumni Weekend. Registration materials are included in this Spring 2019 edition. Please mark your calendars and join us in April!

We hope you enjoy the Spring 2019 edition of the Animal Science **N**sider!

Sincerely,

A handwritten signature in black ink, appearing to read 'Clinton R. Krehbiel'.

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

FEATURE **STORIES**

*“Unravelling
the host genetic
factors involved in
disease resistance
...is deemed by
some as a nearly
impossible task.”
--Lianna Walker*

This article was written by Lianna Walker, a graduate student of animal science at the University of Nebraska–Lincoln, who is part of the team that led this eight-year research project to identify the gene associated with pigs’ susceptibility to porcine circovirus 2.

Photos by Craig Chandler and University Communication.

UNL research brings swine industry closer to broad virus protection

Recent research conducted at the University of Nebraska–Lincoln provided the first direct evidence for the role of a gene and DNA polymorphism in facilitating Porcine Circovirus 2 (PCV2) replication and associated disease susceptibility. PCV2 is a small virus responsible for a set of symptoms collectively known as Porcine Circovirus Associated Diseases (PCVAD). Measures to manage and prevent PCVAD outbreaks cost US swine industry more than \$250 million/year. PCV2 is found across the globe, but only a small subset of animals in each population will show signs of disease. Currently, there is no way to predict which pigs will develop PCVAD and which pigs will remain unaffected so the entire herd must be vaccinated, posing an increased economic cost to producers. Previous data obtained from field research suggests that a pig's own genetics may be partially responsible for susceptibility to PCV2.

In order to identify the genetic factors underlying susceptibility, maternal crossbred pigs were experimentally infected with a PCV2b strain and each animal was genotyped for ~60,000 DNA markers. Using these genotypes, a genome-wide association study was conducted for weekly measures of virus (viremia) and antibody levels in blood, total amount of virus (viral load), and average daily gain (ADG). All together, the panel of 60,000 DNA markers accounted for 64% of the observed variation in overall viral load. A previously unexplored genomic region on chromosome 12 explained an important proportion of this variation. Gene prediction methods

in combination with extensive DNA sequencing of this region uncovered a DNA polymorphism (SYNGR2 p.Arg63Cys) within the Synaptogyrin-2 (SYNGR2) gene that causes an alteration in the SYNGR2 protein and may impact the ability of this protein to function properly. The favorable genotype (Cys63/Cys63) was associated with lower viremia and higher ADG following PCV2 infection.

In order to validate the potential role of this gene in PCV2 replication, the amount of SYNGR2 gene expression was experimentally reduced in Porcine Kidney 15 (PK15) cells by more than 80%. This reduction in SYNGR2 gene expression resulted in a significant decrease in the amount of virus produced following infection. Additionally, gene editing was performed to generate a PK15 mutant cell line (E1) with a non-functional SYNGR2 gene. These cells were then infected with the same PCV2 isolate. Once again, a significant decrease in the amount of virus generated was observed in the E1 edited cells compared to normal PK15 cells, with little to no evidence of viral multiplication following infection.

All together, the findings of this research provide direct evidence for the role of SYNGR2 in facilitating PCV2 replication and point towards a DNA polymorphism (SYNGR2 p.Arg63Cys) that may be responsible for the variation in PCV2 disease susceptibility. This knowledge enhances our understanding of how PCV2 may act to cause disease, but more importantly will aide in the development of genetic tests capable of predicting susceptibility prior

to PCV2 exposure. The ability to distinguish susceptible animals at an early age and select for those with increased resistance has the potential to elevate animal welfare and reduce the high production costs associated with current PCV2 management regimes.

This study was led by Daniel Ciobanu from the Department of Animal Science of the University of Nebraska-Lincoln and involved Nebraska graduate students Lianna Walker, Taylor Engle and Emily Tosky, and also Thomas Burkey, and Hiep Vu (Department of Animal Science), Stephen Kachman (Department of Statistics), Dan Nonneman and Timothy Smith (U.S. Meat Animal Research Center), Tudor Borza (Dalhousie University) and Graham Plastow (University of Alberta). The results of the study were recently published in [PLOS Genetics](https://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1007750) (<https://journals.plos.org/plosgenetics/article?id=10.1371/journal.pgen.1007750>).



Hiep Vu, a member of the research team who has worked with Walker on this project.

FEATURE STORIES



"Tiffany is a nationally recognized teacher and scholar, and an amazingly collaborative innovator."

--Michael Boehm

Tiffany Heng-Moss has been named permanent dean of the College of Agricultural Sciences and Natural Resources.

Photo by: Craig Chandler, University Communication

Heng-Moss named Agricultural Sciences and Natural Resources dean at Nebraska

Published: Dec. 10, 2018—*IANR News*

Tiffany Heng-Moss, who has served as interim dean of the University of Nebraska–Lincoln's College of Agricultural Sciences and Natural Resources since July 2017, has been named permanent dean of the college.

Mike Boehm, Harlan Vice Chancellor for the Institute of Agriculture and Natural Resources, made the announcement Dec. 10. Heng-Moss will formally begin the appointment, which is pending Board of Regents approval, in early 2019.

"Tiffany has done a tremendous job in leading CASNR's efforts of preparing the next generation of leaders and problem solvers," Boehm said. "Tiffany is a nationally recognized teacher and scholar, and an amazingly collaborative innovator. I am confident in her abilities to build upon the college's momentum and am very excited that she has accepted this key leadership role."

Now in its 146th year, the college is working to link curricular, co-curricular and experiential learning to prepare students for careers addressing global challenges. The college is focused on preparing students to engage in a globalized world. IANR has developed a number of new partnerships around the world to

expand international programming with the shared goal of preparing students as leaders for a future in which demands on food, energy and water systems will challenge sustainability.

"I am truly honored to be named dean of the College of Agricultural Sciences and Natural Resources," Heng-Moss said. "The goal of the college is to foster an inclusive environment that empowers our students to be difference makers on campus, across the state and around the globe. I look forward to continuing to partner with those within CASNR and the broader university community to make this a reality."

In 2018, Nebraska was named one of the top 50 universities in the world for agriculture and forestry in the Quacquarelli Symonds World University Rankings. This was the second year in a row Nebraska appeared in the ranking.

As an administrator within the college, Heng-Moss has led the development of IANR's graduate education framework, graduate attributes and a smart enrollment growth framework. Prior to her administrative role, Heng-Moss developed and taught both graduate and undergraduate courses in the Department of Entomology. She also provided leadership for the development and implementation of the insect science bachelor's degree

program. Her research focused primarily on insect science and pest-management strategies. She has authored or co-authored more than 90 refereed teaching and research articles.

Heng-Moss is a prior recipient of the University of Nebraska's Outstanding Teaching and Instructional Creativity Award, which recognizes faculty members who have demonstrated meritorious and sustained records of excellence in creativity and teaching.

Heng-Moss holds a bachelor's degree in horticulture, and master's and doctoral degrees in entomology from Nebraska.

Written by: Richard Bischoff, Associate Vice Chancellor for Faculty and Academic Leader Success, Institute of Agriculture and Natural Resources





Richard Brown stands behind Warner bull, Golden Design 14, that was showcased last spring inside the Student Commons at the Animal Science Complex during the 2018 FFA competition.

Warner bull on showcase this spring

University of Nebraska-Lincoln students and FFA contestants will have another chance this spring to see Golden Design 14. The Hereford bull sculpture will be on display, April 12-30, 2019, at the Animal Science Complex Student Commons during the FFA competition at the R.B. Warren Arena. This Hereford bull carries with it a historic story and is showcased all over Nebraska by Richard Brown.

Richard Brown is a UNL animal science alumnus who grew up in Taylor, Neb., a community that was fond of Hereford cattle. He too grew to love Herefords while active in 4-H, FFA competitions, livestock judging, and showed Hereford cattle at the state level. Brown graduated in 1972 with a bachelor's degree in animal science then pursued law school at UNL. Today, Brown is an assistant clerk for the Nebraska Legislature and serves as

FEATURE STORIES

parliamentarian for the Lt. Gov. or other senators presiding over the legislative body, when in session. When he is not doing record-keeping or putting out information on Nebraska bills, Brown puts out information about Golden Design 14. Golden Design 14 was the name of a real life Hereford bull owned by a Nebraska farmer named Charlie Warner.

Golden Design 14 was a reserve champion at the Old Reliable Hereford Association Show and Sale in Grand Island, Neb., in 1968. The Warner family bid and won the bull and brought it back to their family farm, Warner Hereford Farms, in Waverly, Neb. At the farm, the bull worked very well with calves. Charlie Warner, who handled the day-to-day running of the farm, grew to love the bull and later on asked artist Arlo Bray to make a replica of it. Bray was also a farmer and Charlie Warner's neighbor. Bray spent 100 hours to complete it by 1975. When completed, it weighed 110 pounds and was 32 inches tall, 56 inches long, 18 inches wide, and welded from sheet metal. Since its creation, the Golden Design 14 sculpture went everywhere with Charlie Warner and was showcased at Hereford cattle shows all over Nebraska. Eventually the bull became a symbol of the Warner Hereford Farms and eventually adopted the name, Warner Bull.

The Warner's were a well-known family in all of Nebraska and known for raising Herefords. Charlie Warner was the son of Charles J. Warner, who owned

Warner Hereford Farms in 1926. Charles J. Warner served 24 years as a Nebraska state legislature and as Lt. Gov. His son Charlie took over the running of the farm while Charlie's brother Jerome went to work for the state. Jerome, became a long-serving state legislator in Nebraska where he met Brown. Brown knew the Warner's from their business of raising Herefords, a kind of cattle Brown was fond of as a kid, and became close family friends with the Warners.

Following the deaths of Charlie and Jerome, in the 1990's, the Warner Bull grew into bad shape. At the request of Jerome's daughter, Elizabeth Warner, Brown began to restore the bull. Brown created the Hereford History Preservation Project and began raising funds to restore the Warner Bull. He received donations from the Taylor community, people who knew the Warners and thought Nebraskans would be interested in its history, and funds from the Nebraska Arts Council. After gaining the funds to restore the Warner Bull, he made a promise to display the sculpture all over Nebraska and to share the story behind it.

Since 2015, Brown has taken over Charlie Warner's tradition of showcasing Golden Design 14. It has been to various locations throughout Nebraska such as: Waverly, Grand Island, Thedford, Curtis, Valentine, Tryon, Kearney, Bassett, Eustis, Taylor, Alliance, Dunning, Norfolk, Crawford, and at the Department of Animal Science, last spring. The audience gets a chance to learn the history surrounding Golden Design

14, the Warner family, and gets to appreciate Bray's artistic rendition.

The sculpture represents more than just a story to Brown. He said that "the bull captures Nebraska, it captures public service, which was what the Warner family stood for, it captures Nebraska art, and it captures the livestock industry."

He finds that displaying the sculpture at the Animal Science Complex is fitting to pass on the history of this Hereford bull, Golden Design 14.

In our next issue, learn how the Warner Bull was lost and the nationwide manhunt to find it after Charlie Warner's death.

To keep track of the continuous journey of Golden Design 14 visit Hereford History Preservation Project on Facebook. If you desire to have Golden Design 14 showcased at your location, contact Richard Brown at 402-560-2193 or Linda Teahon, from the Sandhills Heritage Museum in Dunning, at 308-430-0786.

The sculpture was last shown in November at Cattle Call, in Crawford, Neb. This summer you can expect to find Golden Design 14 on display in August at the Lancaster County Fair in Lincoln, and at Popcorn Days at North Loup, around Labor Day at the Nebraska State Fair in Grand Island, and from September to October at the Custer County Museum in Broken Bow.

Written by: Peta-Gaye Clachar
Communication Specialist

Managing the UNL research feedyard- a win-win

The UNL research feedyard was developed at ENREC starting in 1962 with eight pens and has grown to 150 pens today. The feedyard was managed by full-time managers who helped develop the facility. They managed the cattle and employees with emphasis on good cattle management and did it well. In 1983, we were between managers, so John Merrill, a finishing Ph.D. student took over management for a few months and that worked very well. In 1993, we were again without a full-time manager and because of the positive experience with John Merrill's leadership, we attempted to find a manager that was also pursuing an advanced graduate degree to emphasize the importance of following research protocols and understanding the importance of replication in research. Since 1993, most of the feedyard managers have also pursued a Ph.D. degree while managing. This has allowed the full-time employees at ENREC to help with mentoring the manager, and vice versa. Each situation is different, but the managers have served for three to four years in most cases and then "move on" following their degree program and other job opportunities.

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"The opportunity to manage the research feedlot has helped me tremendously in my current position. In my role as manager, I learned how to deal with real world problems and issues head on."
--Henry Hilscher

The following graduates have served as the UNL feedyard manager:

- John Merrill, now Feedlot Business Manager and Senior Research Advisor at Elanco in Canada.
- Drew Shain, now a Nutritionist with Land O'Lakes Purina.

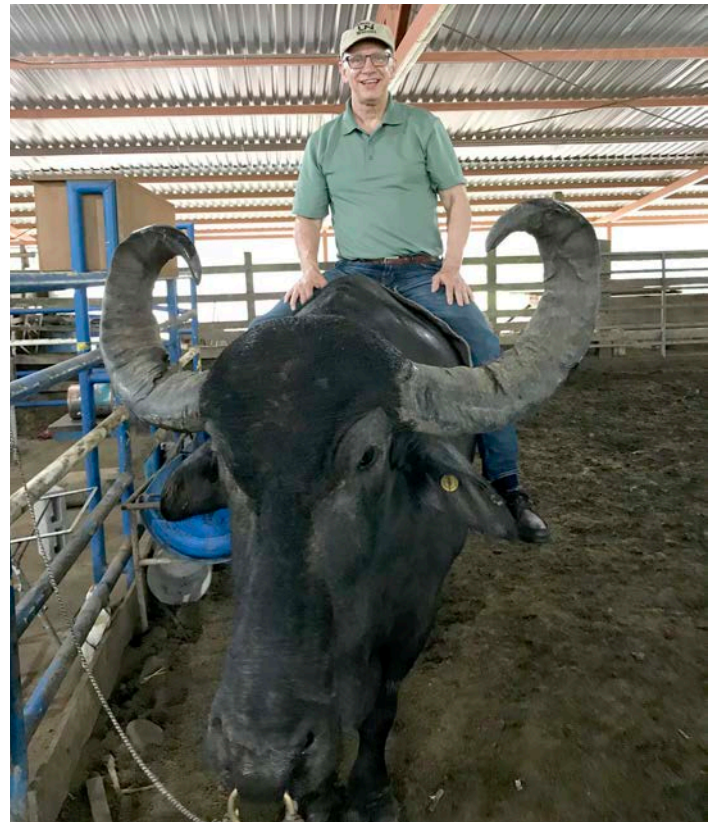
FEATURE STORIES

“Managing the UNL Research Feedyard played an important role in my career development as a consulting nutritionist with Midwest PMS. I work with feedyard managers every day and spending time in their shoes managing people and processes gave me insight and confidence to better support them and their businesses. I’m grateful for being given the opportunity to manage the UNL Research Feedyard and appreciate the support and sacrifice the University and faculty continue to invest in young people in the beef industry.” --Matt Greenquist

- Henry Hilscher, now Nutritionist for Livestock Nutrition Center, Cameron, TX.
- Levi McPhillips, current manager.

These former managers/students have been very successful in their positions and seemed to be very well prepared for these “real world” positions. We believe having research feedyard manager pursuing a Ph.D. is a win-win situation. It is great management experience for their eventual career, including personnel management. It is a win for the faculty because it focuses the feedyard operation on students and research. The students are other graduate students conducting research at the feedyard and feedyard management interns who spend time in the research feedyard prior to their commercial feedyard experience. Seven of the previously listed managers completed the internship program prior to graduate school.

Written by: Dr. Terry Klopfenstein, Professor Emeritus



Dr. Chris Calkins sits on a 23-year-old water buffalo bull, Rambo, at the Vega research station (Finca de Vega) of the Technical Institute of Costa Rica. Calkins is collaborating with ITCR doing research with water buffalo in Costa Rica. Photo courtesy of Dr. Calkins.

- Dan Herold, now in charge of nutrition for Hubbard Feeds.
- Rob Cooper, now Consulting Nutritionist with Cattlemen’s Nutrition Services.
- Mark Blackford, now manager of Craig Cattle Feedyard.
- Matt Greenquist, now Consulting Nutritionist with Midwest PMS.
- Josh Benton, now has a cattle operation in Tennessee.
- Will Griffin, now Consulting Nutritionist with Performance Plus Feed Company.
- Dirk Burken, now In-House Nutritionist for Allied Marketing Group, Alberta, CA.

Nebraska Youth Beef Leadership Symposium 2018

Published: Jan. 5, 2018—*Tri-State Livestock News*, Written by: Ruth Nicolaus

The 15th annual Nebraska Youth Beef Leadership Symposium (NYBLS) was held November 2-4, 2018 in Lincoln. The symposium, a three day program for high school students, is designed to teach them about the beef industry, its career opportunities, current issues, and to develop communication and leadership skills.

To be chosen, students must fill out an application and write a 1,000 word essay. Last year, forty students were selected.

For two and a half days in Lincoln, they participated in the culinary challenge track. They learned from professors, participated in a carcass breakdown demo, toured a feed lot, and were given a culinary project. In groups, students were assigned a cut of beef: the flat iron steak, ground beef, or the shoulder clod. After learning about marinades, palatability, tenderness, spices and flavors, and working with Chef John Kennedy from Omaha Steaks, students were to come up with a new retail product and market it to a fictitious restaurant. They had to figure a marketing strategy, price points, and make and present the dish to judges.

Last year, the winning group made a Japanese dish. Their dish, made with the shoulder clod, which is a tough piece of meat, was as tender as steak, said Alli Raymond, admissions coordinator for the Department of Animal Science at the University of Nebraska-Lincoln and one of the volunteers who organizes NYBLS.

NYBLS has a partnership with the Kentucky Cattlemen's Association, and each year, Kentucky students attend the symposium. Their requirements include an interview process for applicants. Last year, eight Kentucky youth were in attendance.

One of those students, J.W. Cox, from Flemingsburg, Kent., about an hour northeast of Lexington, was a participant. The seventeen year old enjoyed connecting with all kinds of different people, he said, and also enjoyed cooking and marketing the food item. His group designed and cooked their dish, named the "Cornhusker Boat," a flatbread with a layer of ranch dressing, cheese, and a marinated chopped flat iron steak. Then the loaded flatbread was cut into triangles and served.

His team won fourth place with their dish.

Cox found many similarities in the beef industry between Nebraska and Kentucky. But one of the differences was geographical and climate. "Nebraska has a lot more flatland, and it takes more acres per head (to feed a cow/calf pair) than it does for us in Kentucky. Our grasses and seasons are significantly different."

The high school senior has a herd of 25 registered Herefords and ten registered black Angus and has shown and fitted cattle at major livestock shows across the nation. He is a member of the National Junior Hereford Association and the Angus Association, has a 4.0 GPA and will attend either Oklahoma State University or Colorado State University this fall. He plans to major in animal science and pre-veterinary medicine and go on to veterinary school. He'd like to do embryology work after college.

He highly advises others to attend the symposium. "Without a doubt," he said. "It was a great experience. I'm one of those people who believes no matter how much you think you know, you can never learn too much."

TaraLee Hudson was one of the Nebraska attendees at the symposium.

It's the second time for the Belvidere, Neb. youth to attend. She loves going because "it's a great opportunity to strengthen your qualities and communication skills in the beef industry. And you meet new people, make new friends and see old friends."

The seventeen-year-old was part of the third place team, who created an Asian inspired rice bowl with the flat iron steak. The dish included rice, coleslaw and the marinated flat iron, with sweet potato curls on the side.

Hudson has thirteen registered Angus in her herd, shows cattle, and is a member of the Nebraska Junior Angus Association. She has a 4.0 GPA and hopes to become an agricultural lobbyist after college. "I really have an interest in government and politics," she said. She will major in animal science with a minor in economics and, if she attends the University of Nebraska-Lincoln, she'd like to work towards a beef industry scholar minor with an emphasis on policy.

NYBLS costs \$75 for each student, which includes two nights of hotel and all food. The extra expense is picked up by sponsors, who include the Nebraska Cattlemen Foundation, Cargill Corn Milling, the Nebraska Beef Council, the Nebraska Corn Board, and the Kentucky Cattlemen's Association. The planning committee members who are all volunteers, include Raymond; Dr. Bryan Reiling, Associate Professor of Animal Science at UNL; Dr. Gary Sullivan, Associate Professor of Animal Science, UNL; Ashley Benes, Nebraska Extension Educator; and Cole Meador, Nebraska Extension Associate.

The symposium is a way to broaden horizons for its participants, Raymond said, and grow the beef industry through young people. "Nebraska is the beef state and it's our largest industry. There are a lot of people passionate about the industry and a lot of job opportunities in the industry. We see it as an opportunity to educate students about the industry."

The volunteers who host the event know it's worth the effort. "Every year, we think about all the work that goes into it. But every year we are reminded of why we do it. There are always students who come back and say, this is a tremendous program and you have completely changed the trajectory of my career. They love it."



Photo by: Kortni Burnett

NYBLS participants practice identifying different cuts of the beef carcass during one of their sessions at the 2018 symposium.

NEW HIRES



Austin Holliday (left) and Brent Johnson have taken up new positions in the Department of Animal Science since fall 2018. Holliday is building/livestock operations assistant manager and Johnson is now building/livestock operations manager. Johnson replaced Clyde Naber since his retirement June 2018 and Holliday filled Johnson position.

Photo by: Peta-Gaye Clachar

STAFF RECOGNITION

UNL Service Awards

The University of Nebraska-Lincoln presents a Service Award to all permanent employees who complete intervals of five calendar years of service. The following individuals were among 1000 staff and faculty that received awards for their service Sept. 25, 2018.

Dennis R. Brink	40 years
Kenneth D. Cejka	25 years
Erin L. Marotz	25 years
Thomas E. McGargill	30 years
Kenneth L. Rezac	40 years
Calvin C. Schrock	30 years
Matthew L. Spangler	10 years
Jessica J. White	5 years



IANR Outstanding Employee Award winner Scott Kurz, research manager in the Department of Animal Science receives his award from IANR Associate Vice Chancellor Richard Bischoff at a luncheon in the Nebraska East Union on Nov. 30, 2018.

Photo by: Craig Chandler, University Communication



Kristin Beede

IANR Awards Luncheon

Two animal science staff were honored at an awards luncheon hosted by the Institute of Agriculture and Natural Resources at the University of Nebraska–Lincoln, Nov. 30, 2018, at the Nebraska East Union.

Scott Kurz, research manager, and Kristin Beede, research technologist, received the Outstanding Employee Award, which recognizes employees who go above and beyond their job responsibilities. Each of the recipients received \$750, a certificate, and a lapel pin.

You can read more at <https://ianrnews.unl.edu/ianr-faculty-staff-honored-awards-luncheon-2>

A portrait of Megan Homolka, a young woman with long dark hair, wearing glasses and a red jacket, smiling. The background is a plain, light-colored wall.

Megan Homolka first awardee of the Robert and Karla Baltzell Student Innovation Award

Megan Homolka, senior animal science student, was selected as the first recipient of the Robert and Karla Baltzell Student Innovation Award. The award was established in 2016 with a gift from Robert and Karla Baltzell and a matching contribution from the Robert B. Daugherty Foundation, the Robert and Karla Baltzell Student Innovator Fund aims to provide research support to undergraduate and graduate students studying critical questions at the intersection of water and livestock, animal feed, and/or crops.

Watch a video at <https://go.unl.edu/hf6s> to learn more about the award and Megan's research.

Contributed photo

Elisabeth Loseke, a 2018 Colvin Scholarship winner



Elisabeth Loseke

Senior animal science and pre-vet med student Elisabeth Loseke was among six aspiring college students who were awarded \$33,500 through the Certified Angus Beef Colvin Scholarship Fund. Since 1999, the annual awards have supported future leaders in honor of the brand's co-founding executive director of 21 years, Louis M. "Mick" Colvin. The program continues his legacy of inspiration and creative leadership.

Students who demonstrated commitment to the beef community through coursework and activities were awarded based on involvement, scholastic achievement, communication skills and references.

"The committee was blown away by the caliber of applications," said CAB's Lindsey Hoover, representing the selection committee. This year's undergraduate

contenders discussed marketing plans the brand might develop in the next decade to meet global demographics and growth.

Top winner Elisabeth "Liz" Loseke sees room for digital and traditional marketing alike in reaching out to consumers, medical experts, lawmakers and producers.

"Billboards, promotions at the meat counter, radio and television advertisements, and weekly grocery fliers should not be quickly abandoned in the pursuit of trendy marketing methods," the University of Nebraska-Lincoln senior wrote.

"Maximizing the strengths of each generation will be imperative to anticipating demands of future consumers."

Drawing on family experience in medicine, Loseke said many dietary advisors downplay the need for red meat. "Targeting all types of future health professionals will result in a generation of providers giving medical advice that supports a diet featuring healthy, safe beef."

The animal science and pre-veterinarian major hopes to "utilize preventative medicine to ensure high-quality carcasses" to support the growth of an industry she has grown up in.

"A career as a veterinarian encapsulates the opportunity to be involved in something bigger than myself by combining my love for advocating for the beef industry with science and medicine," she said.

Loseke received \$7500 and earned an all-expense-paid trip to the 2018 CAB Annual Conference in Maui, Hawaii.

Written by: By Diane Meyer
Photo by: Greg Nathan,
University Communication

This story was edited for space. You can read more about the Certified Angus Beef Colvin Scholarship Fund at <https://www.certifiedangusbeef.com/press/colvin/>.



2018 SCHOLARSHIP BANQUET

October 7, 2018,
International Quilt Study
Center & Museum

Alice Doane (left) presents Lexi Ostrand the Doane Scholarship.



Ann and David Bruntz present Joseph Sonderman (center) the Andy Bruntz Beef Industry Scholars Scholarship



Ray Gard presents Hannah Settje the Don & Ray Gard Scholarship.



Professor Emeritus Dr. Terry Klopfenstein and his wife Nancy, present four students with a Feedlot Management Scholarship. Recipients are: Brooke Hoyt (top left), Darren Segner (top right), Austin Campbell (bottom left), and Kailey Conway.



Dr. Ki Fanning (center) and his wife, Darci (right), present three Great Plains Livestock Consulting Scholarships to Megan Homolka (pictured above), Micah Most (bottom left) and Rena Sieck (top left photo).

A total of 72 students received awards from 89 departmental scholarships, thanks to our scholarship donors.

STUDENT NEWS

54 make fall dean's list and honor roll

1. Colten Lee Bergt, junior, grazing livestock systems and animal science.
2. Morgan L. Eggleston, junior, animal science and pre-veterinary medicine.
3. Allison Marie Carothers, senior, fisheries and wildlife, and animal science.
4. Ashleigh Ann Woolridge, junior, animal science.
5. Kelsey Ann Loseke, freshman, animal science.
6. Madeline May Misfeldt, senior, animal science.
7. Tressa Katherine Reiner, sophomore, animal science and pre-veterinary medicine.
8. Tucker William Randall, freshman, animal science and pre-veterinary medicine.
9. Dawn Marie Klabenes, junior, animal science.
10. Shaylee Ann Heathers, sophomore, animal science and pre-veterinary medicine.
11. Joseph August Sonderman, senior, animal science.
12. Brooke Elizabeth Bell, freshman, animal science and pre-veterinary medicine.
13. Peter Drew Spilker, freshman, animal science.
14. Heidi Jean Saner, freshman, animal science and pre-veterinary medicine.
15. Taylor Cassidy Dynek, freshman, biochemistry and animal science.
16. Alyssa Louise Gunning, senior, animal science.
17. Malina Jo Lindstrom, freshman, animal science, and agricultural and environmental sciences communication.
18. Joshua Ervin Sebade, freshman, animal science.
19. Emily Grace Burnside, freshman, animal science.
20. Jenna Czaplewski, freshman, animal science.
21. Elizabeth Maureen Elliott, senior, animal science.
22. Chloe Nicole Geise, sophomore, animal science and pre-veterinary medicine.
23. Marissa Star, junior, animal science and pre-veterinary medicine.
24. Ralston Rayan Ripp, freshman, agribusiness and animal science.
25. Emma Caroline Troshynski, sophomore, animal science, fisheries and wildlife, and pre-veterinary medicine.
26. Justin Ryan Hodgson, senior, animal science.
27. Megan Elizabeth Herridge, sophomore, animal science and pre-veterinary medicine.
28. Kayla Lenae Johnson, sophomore, animal science, and fisheries and wildlife.
29. Monty Andrew Roberts, junior, Dean's List, animal science and pre-veterinary medicine.
30. Mackenzie Danielle Stohlmann, freshman, Dean's List, animal science and pre-veterinary medicine.
31. Brent Roy Miller, senior, Dean's List, agribusiness and animal science.
32. Renae Lyn Sieck, senior, Dean's List, animal science.
33. Kathlyn Marie Hauxwell, freshman, animal science and pre-veterinary medicine.
34. Devon Tyler Lockman, senior, Dean's List, animal science.
35. Micah Samuel Most, senior, Dean's List, animal science.
36. Dianna Izabel Cifuentes Lopez, sophomore, animal science.
37. Allison Kate Pachunka, freshman, animal science.
38. Hannah Lee Settje, senior, animal science.
39. Lauren Isabelle Ahlers, sophomore, animal science and pre-veterinary medicine.
40. Cassidy Marie Curtis, senior, animal science.
41. Fina Helen Choat, junior, animal science and pre-veterinary medicine.
42. Hannah Leigh Esch, junior, animal science.
43. Nathan Gerard Bracht, junior, animal science.

Fall dean's list/ honor roll continued

44. McKenna Leigh Rezny, sophomore, animal science and pre-veterinary medicine.
45. Ryan Todd Schroeder, senior, animal science.
46. Daniel Fletcher Ahern, junior, animal science.
47. Isabel Marie Grazian, senior, animal science.
48. Daniel Brock Serdar, freshman, animal science.
49. Elizabeth Eaton Rodgers, sophomore, animal science.
50. Emily Paige Schildberg, junior, animal science.
51. Jacee Kay De Vries, freshman, animal science.
52. Shaye Ocea Koester, freshman, animal science.
53. Alexa McKenna Kapla, junior, animal science.
54. Felicia Marie Pandorf, junior, animal science and pre-veterinary medicine.



Contributed photo

UNL Department of Animal Science and Nebraska Department of Agriculture team up at a booth at the National Cattlemen's Beef Association annual meeting, Jan. 30 - Feb. 1, 2019, in New Orleans, La. From left to right is Nebraska Department of Agriculture Jordan Schlake, and UNL Greg Rechberger, Alex Hays, Dr. Clint Krehbiel, Dr. Chris Calkins, Wayde Rodehorst, and Jessilyn Sayers. Greg, Alex, Wayde, and Jessilyn are students in the Department of Animal Science.



UNL prioritizes first-hand accounts for prospective students

Published: Oct. 17, 2018—*The Cattle Business Weekly*

Since 2000, the University of Nebraska-Lincoln Department of Animal Science selects animal science students to lead campus tours and represent the department to prospective animal science students.

This year serving as UNL Animal Science Ambassadors are Kaylee Wheeler, Hannah Esch, Lexi Ostrand and Danny Ahern. To be selected the students go through an application process, must be a full-time animal science student, have at least 30 credit hours complete, have a minimum a 2.0 GPA and complete an interview, said Alli Raymond, UNL Department of Animal Science Admissions Coordinator.

Esch, an animal science junior, grew up on a farm near Unadilla, Neb. She served as a Nebraska Beef Ambassador and received the Nebraska Cattlemen Beef State Scholarship.

Esch said the animal science program offers her a unique learning style compared to other majors.

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"The animal science program is such a hands-on program," Esch said. "You have a lab in addition to two lectures per week for most animal science classes. This allows you to see and learn versus learning on paper."

She owns Oak Barn Beef, a company which sells dry aged beef directly to consumers. She said she plans to grow the business after graduating college.

Wheeler, an animal science sophomore, grew up on a ranch near Valentine, Neb. She is a fifth-generation cattle producer and is an active undergraduate research assistant.

During her freshman year, Wheeler said she became involved with a research project, which would change her college experience and career path.

"I helped with a metabolism trial, which compared the digestibility of different diet rations," Wheeler said.



UNL Department of Animal Science Ambassadors from left to right is Kaylee Wheeler, Hannah Esch, Lexi Ostrand, and Danny Ahern.

Photo courtesy of Alli Raymond.

She plans to continue undergraduate research throughout college and pursue a master's degree in ruminant nutrition, she said. She added she plans to apply the knowledge she gains to her family's farm.

Ahern, an animal science sophomore, grew up nontraditionally involved in agriculture, compared to his teammates, he said. Originally from Longmont, Colo., he was one of three students in his high school to show livestock out of the of 1,500 students who attended, he said. This unique experience drove him to become more involved within the agricultural industry, he added.

"I am a trailblazer in my family to pursue an animal science major," Ahern said. "My dad is a dentist and my mom was a teacher."

He plans to attend graduate school to further his knowledge in animal science, he added.

Since she was in junior high, Ostrand, an animal science senior, said she knew she would attend UNL. However, it was a bit of a culture shock from graduating with a class size of 21 and knowing

everyone in her hometown of Pender, Neb., to moving to UNL. Ostrand said she considers being an ambassador one of the highest honors for a student within the department to be selected for.

"Being one of those individuals who represents the largest department within the college of agriculture sciences and natural resources is such a cool feeling," Ostrand said. "One of my friends described the ambassador program as faces you associate the animal science department with."

During their two-year term the ambassadors receive a \$2,000 scholarship, Raymond said. She added a student ambassador will meet with all prospective UNL animal science students and attend department and college events.

"We want prospective students to interact with current students to gain a real-world account of what it is like to be a student at Nebraska," Raymond said. "It is important for students and their families to hear from students who are living it every day. It is one of our biggest advantages."

Written by: Kiera Leddy

2018 Horse Judging Team Highlights

The 2018 University of Nebraska-Lincoln Horse Judging Team had a successful year competing across the nation. This year's team included Valerie Skaalrud of White Bear Lake, Minn., Ryan Sedlacek of Gretna, Neb. and Devin Jakub from Dwight, Neb. coached by Dr. Kathy Anderson and assistant coach Haylee Lavoie, graduate student from Riverton, Wyo.

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 2018 team competed in three competitions with the highlight of the season at the National Reining Horse Association Intercollegiate Horse Judging Contest in Oklahoma City, Okla. The team finished 10th overall even with the disadvantage of only having a three-member team. Valerie Skaalrud finished 6th overall at the NRHA with all team members placing in the top 20.

The team also competed in Columbus, Ohio for the All American Quarter Horse Congress Intercollegiate contest. Devin Jakub finished 8th overall in the limited division with 14 teams competing. After a great contest in Ohio at the largest single breed horse show in the world, UNL continued to the 2018 AQHA World Championship Intercollegiate Horse Judging Contest. The AQHA contest was held November 13th in Oklahoma City, Okla with 110 individuals and 16 senior college teams competing for the World title.

Some 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 UNL next year. Next year's season looks to be promising with a new and upcoming team beginning this spring to represent the great state of Nebraska. UNL 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,
UNL Extension Equine Specialist

2018 UNL Horse Judging Team:
Back row, from left to right:
Dr. Kathy Anderson, coach, Dr. Clint Krehbiel, head, Department of Animal Science, and Haylee Lavoie, assistant coach

Front row, from left to right:
Ryan Sedlacek, Valerie Skaalrud, and Devin Jakub

Photo courtesy of University Communication.



STUDENT NEWS



UNIVERSITY OF
Nebraska
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INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
DEPARTMENT OF ANIMAL SCIENCE

ANIMAL SCIENCE NSIDER 23



JOSEPH SONDERMAN

IANR STUDENT SPOTLIGHT

Major: Animal Science (Meat Science)

Hometown: Columbus, Neb.

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

I decided to come to the university after visiting it. East Campus gave me a homey feel and city campus gave me the feeling of a larger campus. No matter what I was looking for, the university seemed to provide it.

What is your favorite thing about the University of Nebraska–Lincoln?

There are a ton of things that I enjoy about the University of Nebraska-Lincoln, but Husker football is definitely my favorite. Memorial Stadium still leaves me in awe, even after being in the student section for 4 years.

How has diversity and inclusive excellence played a role in your CASNR experience?

I have definitely met a wide range of people, from not only across the United States, but from all around the world. I enjoy talking to students from different backgrounds because it give me new perspective.

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

My favorite class that I have taken so far was Animal Science 210. Dr. Jones does a great job teaching the class. This was the first meat science class that I took, and I clearly enjoyed it since I am still a meat science major.

What are your plans post-graduation?

I plan to attend graduate school upon graduating. I have a few schools that I am looking at, but the University of Nebraska-Lincoln is currently at the top of the list.

What's life like outside of school?

Outside of the classroom, I try to be active on campus. I work at the Loeffel Meat Lab on East campus which keeps me busy during the week. I was on the Meats Judging team the past two semesters, I am in the Meat Science Club, and I have been on the Meats Quiz Bowl team for the past three years. Also, I am a member of Phi Kappa Theta Fraternity.

Articles courtesy of *IANR Media*

IANR STUDENT SPOTLIGHT

Hometown: Chambers, Neb.

Anticipated Date of Graduation: May 2020

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

I actually didn't apply anywhere else and honestly didn't even do a college visit here. I had been on campus a number of times for FFA in high school and I just fell in love with it and knew UNL was the college for me. The agricultural program is phenomenal and there is just something special about UNL that makes me so thankful to be a part of it.

What is your favorite thing about University of Nebraska–Lincoln?

My favorite thing would definitely be East Campus. It is so peaceful and the landscaping is beautiful. I also love being able to walk around campus and see so many familiar faces since it is almost like a small town where everybody knows everybody.

How has diversity and inclusive excellence played a role in your CASNR experience?

The diversity and inclusiveness of CASNR has truly made for an exceptional experience. I have been exposed to so many different things that has enabled me to think more open-minded about the different issues and events I run into.

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

My favorite class is probably ASCI 200, which is Animal & Carcass Evaluation. It was fun to get hands-on experience making different cuts of meat. I also found it really interesting trying to predict the quality of a carcass from the evaluation of a live animal. Overall, it was just really enjoyable and I look forward to taking what I learned and using it in my future.

What are your plans post-graduation?

You know, I've been asking myself that question quite frequently this semester, but still haven't come up with a solid answer. However, I am looking towards a career involving the communication side of agriculture and possibly even going to graduate school to become an Extension educator. We shall see what happens!

DAWN KLABENES

STUDENT NEWS



Contributed photos

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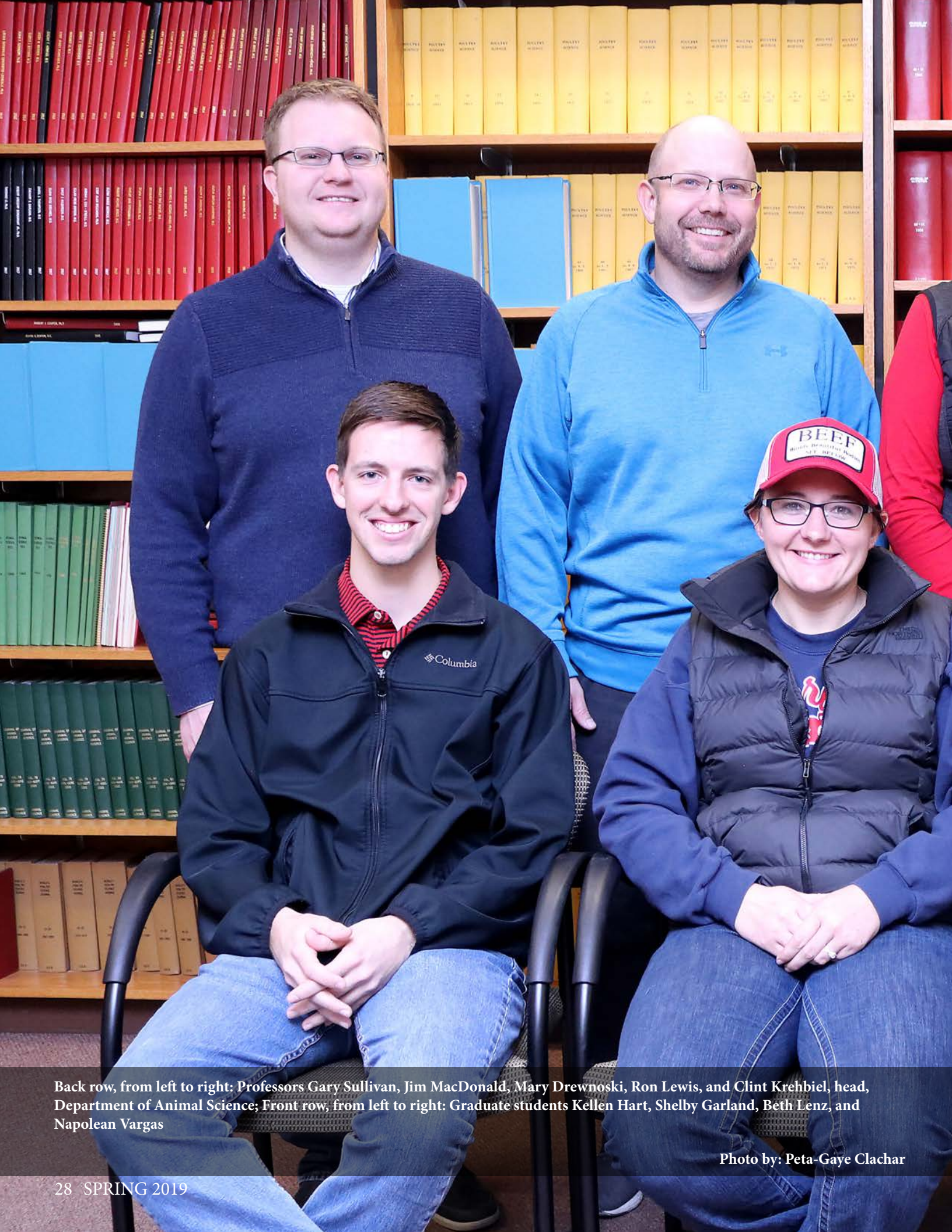
Institute of Agriculture and Natural Resources





FALL UNDERGRADUATE ALUMNI

Front row, from left to right: Morgan Cutlers, Emily Crister, Liz Christensen, Grace Kim, and Bree Sanders
Back row, from left to right: Callie Rathjen, Morgan Parris, Abby Nelson, Kara Valasek, Ethan Wilke, Justin Hodgson, and David Schuler



Back row, from left to right: Professors Gary Sullivan, Jim MacDonald, Mary Drewnoski, Ron Lewis, and Clint Krehbiel, head, Department of Animal Science; Front row, from left to right: Graduate students Kellen Hart, Shelby Garland, Beth Lenz, and Napolean Vargas

Photo by: Peta-Gaye Clachar

**FALL
GRADUATE
ALUMNI**

Graduate Degrees

Erin Boyles- M.S.
Shelby Garland- M.S.
Kellen Hart - M.S.
Beth Lenz - M.S.
Faith Rasmussen - M.S.

Dana Van Sambeek -Ph.D.
Napoleon Vargas Jurado - Ph.D.



2018
BEEF
SUMMIT

November 15, 2018



2018 BEEF SCHOLARS

Front row, from left to right: Katie Nolles, Cassidy Curtis, Megan Murdoch, Bailey Petersen, and Kodi Gehl
Second row, from left to right: Garrett Long, Maddy Misfeldt, Elena Montemagni, Renae Sieck, and Dr. Jim MacDonald;
Third row, from left to right: AJ Underwood, Joseph Sonderman, Cody Zumpfe, Alexa Johnson, and Kailey Conway; Fourth
row, from left to right: Kelton Adair, John Radil, Logan Dibbern, and Emmet Caldwell

Photo by: Peta-Gaye Clachar

Managing risk in volatile markets

Published: Jan. 19, 2019—*Nebraska Cattlemen*

How do you keep from making rash decisions out of fear when the markets are declining rapidly, and the futures are telling you they are not going to return for quite some time? It is difficult, but Michael Murphy, CattleFax vice president of research and risk management, reminds us that it is important to minimize emotion as it drives any sort of decision in the market. Decisions should be data-driven. Of course, this data still needs to be interpreted, but it keeps us in a range of decisions to be made based on the markets.

Murphy visited the University of Nebraska-Lincoln to speak at the Nebraska Beef Summit put on by the Nebraska Beef Industry Scholar senior class. His presentation was titled “Managing Risk in Volatile Markets.”

Risk management is a preemptive attempt to manage uncertainty in order to stay in business. Assessing whether your balance sheet supports the current amount of market volatility and using this to allow you to expand and grow are key components to risk management. It is important to construct a market risk profile with a “no surprises” environment, Murphy said. Everyone has a different level of risk, so knowing your level of risk is crucial to identify what you can do with your business or operation in the years to come. Execution is key, however.

The challenge with execution is that attractants and opinions drag us on a different path. Flashy ways to improve our businesses or ways to get rich fast only push us to fail in our execution of what we should fundamentally be doing.

Reevaluating your risk profile is also extremely important. In this day and age, things change so rapidly that just refreshing your browser brings a new change in the markets. Reevaluating risk profiles on a consistent basis will help manage risk more efficiently. But Murphy points out that the futures markets should be used as a tool to make decisions about risk, not predict the future. Yes, we should rely on them to make management decisions, but they will not tell us exactly what we will see in the markets in the future. That being said, information is a vital tool for us, as it is extremely liquid and at our fingertips. Smartphone apps have made it quick and easy to access the markets, but caution still needs to be taken when making decisions. With technology like this, we can get emotionally attached to the markets. Being able to see the quick changes in the markets also makes us do quick calculations and make quick decisions.

It is indeed an advantage to us, now, to use available technology to make changes, and we should be willing to make these changes, but also, we should stay relatively consistent. Murphy reminded us that it is important not to jump on the bandwagon based on new information we hear. Decisions we make act as a big pendulum. Each time we make a decision on either side of the pendulum, it makes huge sweeps that can blow the

changes out of proportion to either of the extremes.

Another important aspect of developing a quality risk management profile, according to Murphy, is having two separate accounts. One should be dedicated solely to your “true business,” for example, your cattle operation. The second should be for your other sources of income, such as your farming operation or hay sales. This ensures that you can easily identify where your returns come from. In other words, two separate accounts help you realize where you are having successes and where you need to focus more attention.

So, what drives the markets? Leverage. There used to be a more even distribution on who had the leverage and who was putting the leverage back on someone else. The cattle and beef industry segments now largely remain independent of one another. Because of this, leverage does not always funnel all the way back to the cow-calf sector and can remain more in the packer industry. Today, the trickle effect is not quite as efficient and lets the sectors at the top of production hold more of the economic power. This makes hedging an important tool for producers.

Regarding hedging, it is important to realize that cattle are rarely an all-or-nothing game. They will never hedge all the time – especially, for example, in the winter months, when we will rarely see cattle hedged.

“There is a paddle big enough to whoop everyone’s behind,” Murphy said, which is why it is important to have a plan and not panic or make rash decisions based on emotion about huge market changes. In

this ever-changing day and age, there are many tools that can be used advantageously so long as we recognize the fundamental basis for why we are here and what we are doing.

Written by: Maddy Misfeldt, Blair, Student, University of Nebraska-Lincoln

Using tools for more accurate breeding decisions

Published: Jan. 19, 2019—*Nebraska Cattlemen*

Is genomic information worth the cost and labor required to get it? Shane Bedwell, chief operating officer and director of breed improvement at the American Hereford Association, claims phenotypic evaluation is important, but only if you use it to make selection and breeding decisions you support. Bedwell, along with Kenny Stauffer, director of beef genomics at Neogen GeneSeek, presented at the 2018 Nebraska Beef Summit put on by the Nebraska Beef Industry Scholars at the University of Nebraska in November. The two shared with attendees how genomic information helps both seedstock and commercial producers make more accurate breeding decisions.

For breed associations, Genomically Enhanced Expected Progeny Differences (GE-EPDs) are at the forefront of providing more accurate data for producers. Scientists and breed associations have identified a set of genomic markers called single nucleotide polymorphisms (SNPs) that best inform them about the traits they use in the genetic evaluation. This information is then combined with the traditional pedigree, phenotype and progeny information to calculate the final EPD values. Incorporating all this data is necessary in order to get the most accurate representation of an EPD. Biometric Open Language Tools (BOLT) is the system used to combine the pedigree, phenotype and genotype information into one EPD value. One of the most exciting aspects of BOLT is improved EPD accuracy compared to older systems. It has an especially beneficial impact on the accuracy of EPDs for younger animals that have few or no progeny from which to gather phenotype data. Improved accuracy with GE-EPDs is consistent across breeds because creation of the BOLT software was a joint effort between the many breed associations that now use it. GE-EPDs are good at improving the accuracy of data on individual traits, but Bedwell says that indexes are the best way to simplify breeding decisions for producers. Indexes are created to help producers easily identify the data that corresponds to the goals of their operation and focus their selection on these goals.

Traditionally, GE-EPDs are often

used by purebred breeders, but now there are tools that expand the use of genomic evaluation to commercial producers. Neogen's Igenity Confident Selection is the first multi-breed selection tool created specifically for commercial herds. In this evaluation, producers sort their animals based on the priorities of the operation. They can evaluate a single trait or combine multiple traits to form their own version of an index. The Igenity online dashboard presents genomic information to producers by ranking individuals within the herd on a scale of 1 to 10 for different traits. Researchers developed this commercial test using various common cattle breeds, including Angus, Red Angus, Hereford, Simmental, Limousin and Gelbvieh. More than 100,000 animals were used to validate the system.

Another useful genetic test for commercial producers is parentage testing. Producers often have more than one bull with a set of cows, so parentage testing allows producers to identify which bulls are producing the most calves and which phenotypes can be attributed to an individual bull. This helps with bull culling decisions, allowing commercial producers to keep only the bulls that are helping them be the most profitable.

Scientists and breed associations are developing a series of exciting new products to expand the capabilities of genomic evaluation. One pilot project allows customizable indexes within EPDs provided from breed associations. If a provided index doesn't match the current goals of the operation exactly, producers

will be able to alter the index so that it includes all desired data. This will enable producers to use data to help them more accurately make selection decisions specific to their operation goals.

There are tests being designed to improve selection based on fertility haplotypes. A haplotype is a set of variations in DNA called polymorphisms that tend to be inherited together. Haplotypes negatively affect fertility when animals inherit two recessive alleles at the markers in the haplotype. When animals are homozygous recessive, it causes embryo loss and stillbirth. Some haplotypes that affect fertility have been identified, and researchers are continuing to find more. These findings will eventually be incorporated into genetic testing so that producers can better identify animals to cull that are less likely to be fertile. Another future benefit of genetic testing involves development of tolerance to disease, parasites and toxins. A promising discovery that will eventually translate into a test is for fescue tolerance. Fescue toxicity can be a problem for cattle grazing grass infected with a toxin produced by a fungus living on the grass. The toxin leads to growth, health and reproductive problems. Some cattle have a natural resistance to this toxin. Scientists are currently trying to locate the genes related to this resistance, so a genomic test can be developed to identify cattle that possess the desired resistance. There is also potential for identifying animals with natural resistance to other diseases, parasites and toxins that will allow for creation of similar genetic tests.

There are also future opportunities for use of genomic data to predict feedlot performance. Scientists are working on developing different feedlot profiles to be used in genomic tests. Some examples of these include the amount of days it will take an animal on feed to reach the USDA Prime quality grade and tests for feed efficiency. Expanding the use of genomic information has the potential to help all sectors of the beef industry make more informed decisions about animals in their operation.

Written by: Renae Sieck, Student,
University of Nebraska-Lincoln

Beef exports optimism

Published: Jan. 19, 2019—*Nebraska
Cattlemen*

If you've kept up with headlines or scrolled through Twitter in 2018, the trade war that the United States has engaged in is no secret. While this has brought uncertainty to agricultural markets, Joe Schuele, vice president of communications for the U.S. Meat Export Federation (USMEF), says there are reasons for optimism. In his update on U.S. beef trade at the 2018 Nebraska Beef Summit in Lincoln, Schuele informed the audience that beef exports are setting record values this year, despite circumstances. American beef exports will exceed \$8 billion in 2018.

Presently, beef producers are

seeing more value for every head slaughtered in the United States than ever before. This value has doubled to \$321 per head from \$153 in 2010. Contributing to this value increase is, of course, our nation's international relations. The two partners that Schuele conveyed the most excitement about looking to the future are Japan and South Korea.

Japan accounts for 25 percent of the export market for U.S. beef. In 2019, it is expected to account for \$2 billion in exports. Part of the benefits of the country's trade relationship with the Japanese is the difference in consumer preferences, as they are an "extremely reliable, high-value market."

According to Schuele, the American beef industry also sees a "remarkable return" on underutilized cuts, such as short ribs and tongue. As the dominant market for U.S. beef tongue, Japan adds approximately \$12 per head value. Japanese consumers are also gaining interest in thicker steak cuts to barbecue, and restaurants are the target for these cuts. But the future of trading beef to Japan isn't completely clear; at press time, a public hearing was scheduled for December 10 to discuss TPP-11. If the United States wants to keep a profitable Japanese relationship moving and remain competitive, rapid progress on the trade agreement must be made.

Keeping with the Asian market, the United States looks to South Korea as the growth driver for beef. A "steak craze," as Schuele described consumer preferences, has brought incredible growth in U.S. cuts

STUDENT NEWS

featured in Korean supermarkets. Additionally, how Korean consumers purchase their beef has changed recently. Warehouses and convenience stores now carry product that isn't in high demand at restaurants, and online grocery shopping aids this growth as well. The South Korean market has made a remarkable turnaround from 2008-2009, when consumers brought major pushback to U.S. beef after their imports closed from the 2003 BSE case.

A promising future is on the horizon for continued beef trade with South Korea. As Schuele stated, "we are halfway to duty-free!" The United States-Korea Free Trade Agreement (KORUS FTA) is working to eliminate the duty posed on American beef, and to keep it competitive with other countries, such as Australia, New Zealand and Canada. When enacted in 2012, U.S. beef faced a 40 percent duty. Currently, that is down to a 21 percent duty, and U.S. beef will be duty-free in South Korea by 2026.

These certainly aren't the only countries demanding U.S. beef. Hong Kong, Southeast Asia and Taiwan are growing export markets as well. While there are technical barriers in the Philippines, the current administration is working through them. Taiwan is not to be overlooked. As the highest market for U.S. chilled beef in Asia, it holds 75 percent of that market. Like contemporaries, beef consumers in Taiwan are seeing U.S. product expand in supermarkets, restaurants, convenience stores and e-commerce.

"Even food trucks want U.S. beef," Schuele said about growing beef demand from Taiwan. In 2018, U.S. beef exports to Taiwan were on pace to exceed \$500 million. This figure has doubled in the last five years, partly due to infrastructure improvements. Chilled beef has an immediate shelf life and garners a premium for its ability to be consumed in a timely fashion. Cold chain capacity was a barrier 10 years ago but has been overcome to allow for the previously mentioned export growth.

Shifting the focus to a different continent, Europe is still a valued trade partner that poses challenges to the beef industry. Already limited to non-hormone treated cattle (NHTC), the quota that Europe uses to trade with adds a degree of difficulty. Schuele stated that the European duty-free quota is "a sound idea that needs to be fixed." Ideally, this would help offset the high input costs to raise and process NHTC beef.

Europe imports 45,000 metric tons of beef per year. The EU felt that the market needed to be open to "comparable product" from countries such as Australia. The United States disagrees, because American beef is high-quality, well-marbled beef that is not intended to compete with Europe's domestically raised beef. What the United States would like to see is a portion of the quota reserved for American beef. Europe aims to import 11,000 metric tons of beef each quarter. This is described as a race to export product, as that quota usually fills within two weeks of opening. The proposed quota

adjustment could allow exports to double from \$200 to \$400 million per year, which could rejuvenate interest in NHTC without tackling the European hormone ban.

While the trade atmosphere has been tense this year, Schuele and USMEF remain hopeful. Despite challenges, cattlemen continue to toil at their livelihoods, raising the best beef that they can. With strong growing markets in Japan, South Korea and Taiwan, and potential quota adjustments in Europe, U.S. beef remains in high demand across the globe.

Written by: Katie Nolles, Student,
University of Nebraska-Lincoln



Mason Robert Alan Dicks was born to Brande and Jesse Dicks Sept. 18, 2018. Mason was born with a little bit of light brown hair, was 20 inches long, and weighed 8 lbs. 9 oz. Congratulations!

ANIMAL SCIENCE EVENTS



Hong-An Vu (second left) is greeted by Dr. Andrea Cupp as sister Tam Vu (center) looks on. Also in the picture is father of Tam and Hong-An, Dr. Hiep Vu (left), Dr. Dennis Brink and his wife Joan.



These four play catch up. From left to right is Josh Knapp, Garrett See and his wife Marisa, and Johnna Baller.



Nathan Dush (left) and Haiyan Sun play corn hole.



Brent Johnson (left) shares a moment with Jeff Bergman.



Lelanya Yates and husband Dustin meet have talks with baby Nora and her mother, Kristin Beede.



Katie Bidne (right) grabs the attention of Dr. Jennifer Wood (left) and her husband Tim, as Alex Snider looks on.

Photos by: Peta-Gaye Clachar

DEPARTMENT & FAMILY PICNIC
September 6, 2018, Auld Pavilion, Antelope Park



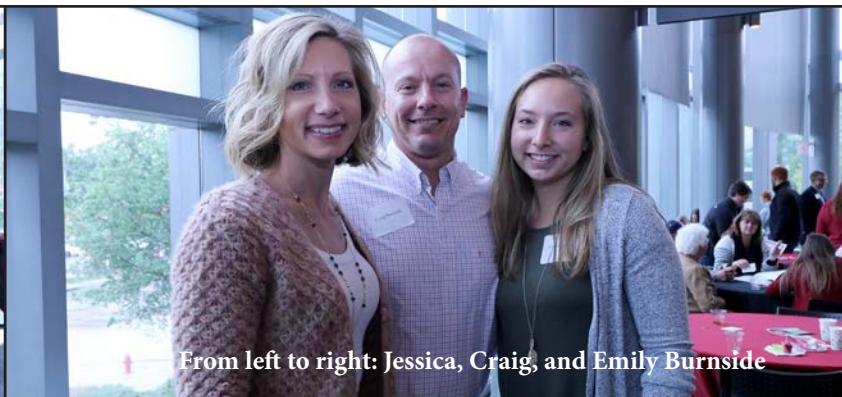
THE DEPARTMENT OF ANIMAL SCIENCE WOULD LIKE TO THANK OUR CONTINUOUS GIVERS.
 From left to right are scholarship donors Ann and David Bruntz, Jenelle Duffy, Marla Mumgaard, Alice Doane, Dr. Ki and Darci Fanning, Dr. Terry and Nancy Klopfenstein, and Ray Gard.

2018 SCHOLARSHIP BANQUET

October 7, 2018, International Quilt Study Center & Museum



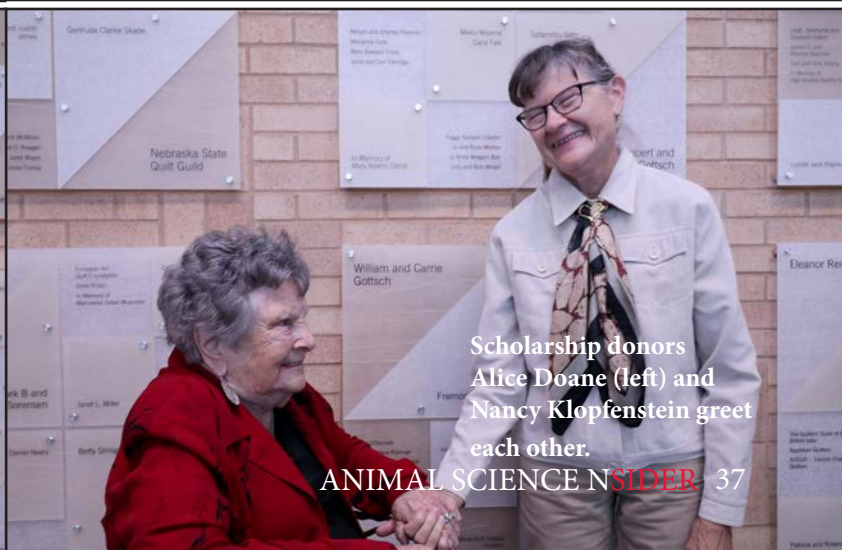
From left to right: Marissa, Marci, and Randy Kегley



From left to right: Jessica, Craig, and Emily Burnside



Alice Doane is greeted by fellow scholarship donor, Ray Gard.



Scholarship donors Alice Doane (left) and Nancy Klopfenstein greet each other.

ANIMAL SCIENCE EVENTS



HALLOWEEN

2018

BOO @ the U



Members of the UNL Equestrian Team dressed themselves and the horses in Halloween costumes for Boo at the U in October at the R.B. Warren Arena, Animal Science Complex. From left to right: Alyssa Waits, Lauren Dawns, Sydney Burdick, Anna Verhage, Tatem Vance, Kayla Schmid, Sydney Patterson, Ashley Zugmier, and Brianna Patrick

See more from that event on the next page.

Photos by: Peta-Gaye Clachar

ANIMAL SCIENCE EVENTS



Photos by: Peta-Gaye Clachar



CHRISTMAS POTLUCK



Photos by: Peta-Gaye Clachar



ALUMNI NEWS

Jimmy Wise, a 2018 Meat Industry Hall of Fame inductee

Dr. Jimmy Wise was among seven individuals inducted in the 2018 Meat Industry Hall of Fame Feb. 11, 2019, at Omni Atlanta Hotel at CNN Center, in Atlanta, Ga.

Among those inducted were: Rod A. Bowling, Ag Marketing Specialist, USDA-AMS and Owner, AgriFood Solutions International; Neil Genshaft, Owner and CEO Fresh Mark, Inc.; Ronald Miniati, Chairman of the Board (retired), The Miniati Holdings; Elsa A. Murano, Director, The Borlaug Institute for International Agriculture and Professor and President Emerita, Texas A&M University; James Riemann, Assistant Secretary (retired), Kansas Dept. of Agriculture and Past President, Certified Angus Beef LLC; and Mike Satzow, Executive Vice President, North Country Smokehouse.

Dr. Jimmy Wise received his B.S. degree in 1967 from Oklahoma State University and in 1967 began graduate study at the University of Nebraska, receiving his M.S. degree in 1970 and his Ph.D. in 1977. In 1970, he accepted a full-time Instructor-Extension Meat Specialist position.

In 1978, Dr. Wise joined the Meat Standardization Branch as a Meat Marketing Specialist of the Food Safety and Quality Service, U.S. Department of Agriculture. During his tenure, he served the industry as an integral member of the National Cattlemen's Association Carcass Quality Task Force and Instrument Grading Subcommittee, American Sheep Industry's Lean Lamb Task Force, and Beef Improvement Committee's ultrasound certification, among others. He was also an essential member of research teams associated with Instrument Grading, the National Consumer Beef Study, National Beef Quality Audits, International Beef and Pork Quality Audits and Beef Customer Satisfaction. In addition, Dr. Wise was intimately involved in the development of the Color Marbling Standards and several training aids.



Jimmy Wise
Meat Judging Program Coordinator
American Meat Science Association (retired)
Ag Marketing Specialist, USDA-AMS

Upon his retirement from USDA in 2005, Dr. Wise joined the staff of the American Meat Science Association serving as the Meat Judging Program Coordinator and staff liaison to the Intercollegiate Meat Coaches Association. After nine years of service to AMSA, Dr. Wise once again retired.

Dr. Wise is one of the world's leading authorities on meat evaluation and grading, and a true student and scholar of the history and research literature relative to grade standards. As the livestock industry has pursued the "War on Fat" and "Value-Based Marketing," he was an active and willing participant in endeavors designed to reduce the waste fat on cattle, sheep, and swine.

Source: <https://go.unl.edu/xvwu>

IN MEMORIAM

KEN PEARSON

Ken Pearson, 67, died Dec. 3, 2018. Ken was the Physiology Lab Manager in the early - mid 1990s. Pearson was buried December 7 in Cotesfield, Neb. He is survived by his sister, three nieces and numerous cousins. Please keep the family in your prayers.

MARY PEO

Mary B. Peo, 96, died Nov. 30, 2018, at the Independence House at Mandarin Circle, Lincoln. A private family interment was held at the Wyuka Cemetery. Please keep Mary Peo family in your thoughts and prayers.

ALAN ZINN

Alan J. Zinn, 82, died Feb. 11, 2019. Memorial service was 10:30 a.m. February 14, at Wyuka Funeral Home, Lincoln. Memorial to Food Bank of Lincoln. Alan served the department as the computer technician from 1999- 2011. Please keep Alan's family in your thoughts and prayers.

ATTENTION!!!!

The Department of Animal Science is seeking candidates to fill two faculty positions, 1) Livestock Evaluation & Youth Assistant Professor of Practice and 2) Sustainable Food Animal Extension Assistant Professor. If you know someone who would be a good fit for either of these positions, please refer them to <https://employment.unl.edu/> to apply.

The Livestock Evaluation & Youth Assistant Professor of Practice and the Sustainable Food Animal Extension Assistant Professor will contribute to the integrated (extension, research, and teaching) land-grant mission of the home unit and the IANR, as an effective scholar and citizen, including supporting student recruitment and IANR science literacy.

Minimum Qualifications:

- Minimum of a M.S. degree in animal science or a related field by time of hire.
- Knowledge and experience in livestock management and animal husbandry.
- Experience teaching animal science related coursework.
- Experience in engaging youth in non-formal educational settings.
- Ability to effectively coach and enhance student success through meat evaluation activities.
- Ability to effectively coach and enhance student success through livestock evaluation activities.
- Excellent written, oral, and interpersonal communication skills and the ability to work in a diverse team atmosphere.

Preferred Qualifications:

- Ph.D. in animal science, meat science, food science, or closely related field with emphasis on beef or pork production.
- Demonstrated commitment to excellence in teaching and learning and capability to develop innovative, effective methods of teaching undergraduate courses.
- Previous experience as livestock evaluation or meat animal evaluation coach.
- Ability to reach youth audiences through creative outreach efforts.

SAVE THE DATE

ALUMNI WEEKEND REGISTRATION

Return by March 29

Name(s) _____

Address _____

Email _____ Phone _____

Please reserve tickets for the following events:

Friday, April 12

_____ Ticket(s) for Alumni Reunion **\$30.00 each** _____
Cash bar and heavy hors d'oeuvres
at 6:00 pm, Friday, April 12 at Nebraska Innovation Campus Conference Center

_____ Animal Science Students **\$15.00 each** _____

Saturday, April 13

_____ Old Timers Judging Contest

_____ Lunch prior to Bull Sale

_____ Block & Bridle Honors Banquet **\$25.00 each** _____
Cash bar with Prime Rib and Chicken dinner
5-6 pm Reception/Social Hour, 6 pm Dinner
at Nebraska Innovation Campus Conference Center

Total _____

**Please make checks payable to:
UNL Department of Animal Science**

Please list all names as you would like them on your name tags
Names (please print)

If ASCI alumni,
year graduated

_____	_____
_____	_____
_____	_____

Judging Team Alumni? Which and Year(s) _____

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

STAY CONNECTED

Connect With Us!

...on Facebook, Twitter, and Instagram.



Like our Facebook page UNL Animal Science.



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



Follow us on Instagram @unl_anisci.

Department of Animal Science alumni website:

<https://animalscience.unl.edu/alumni>

Update Contact Information:

Alumni can update their contact information by contacting the Nebraska Alumni Association at

<https://go.unl.edu/aw2t>.

Connect to job opportunities with Handshake

Handshake 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, view upcoming local and on-campus career events, learn which employers are attending upcoming career fairs, research contact information for local and national employers, and search for and apply to open positions. For more information, visit Handshake at: <https://careers.unl.edu/handshake>.

The University of Nebraska-Lincoln Department of Animal Science publishes the Animal Science **N**sider semi-annually. To request a printed issue of the Animal Science **N**sider, please visit

<https://animalscience.unl.edu/alumni-friends-news> and select Request an Issue.

Share Your Alumni Story:

<https://animalscience.unl.edu/alumni-stories>



Where are you now?

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

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: _____

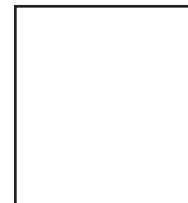
Year Earned: _____

UNL 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 or visit <https://animalscience.unl.edu/alumni-stories>.



University of Nebraska does not discriminate based upon any protected status. Please see go.unl.edu/nondiscrimination.
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2018 BEEF SUMMIT



Linda Smedra (left) from Zero Hereford Ranch, in Miller Neb., and meat scientist Dr. Chris Calkins (2nd left) were seen hanging out with the 2015 Block and Bridle Honoree Bill Rishell and his wife Barb, Nov. 15, 2018, at the annual Beef Summit, at the Animal Science Complex.