A publication from the Department of Animal Science, Oklahoma State University

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INSIDE:

Minnie Lou Bradley & Linda Cline Faculty Spotlight: Dan Stein Student Internship Stories



Fall 2015



Cowpoke News is published each semester by the Department of Animal Science within the Division of Agricultural Sciences and Natural Resources (DASNR) at Oklahoma State University. We strive to keep students, alumni, and friends of the department informed about our activities and success.

The Department of Animal Science offers two majors to students; animal science and food science. It is the largest department on campus with nearly 1,000 undergraduate students, but with a small town feel, a caring attitude and a commitment to every student.

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Stay Connected





Welcome to the fall 2015 edition of Cowpoke News, which strives to share information about the Department of Animal Science at Oklahoma State University. You may notice we have a new look, but the same great content! We hope you enjoy reading about our department, including information on the success of our students, faculty and alumni.

On The Cover: Minnie Lou Bradley

A picture of Minnie Lou Bradley is featured on the cover of this edition. Minnie Lou was recently chosen as a 2015 DASNR Distinguished Alumni. It could be said that Minnie Lou Bradley has been a pioneer of the beef industry her entire life. She was the first female to enroll in animal husbandry at Oklahoma A&M in 1949. Not only did she become the first female to ever compete on the livestock judging team at Oklahoma A&M, but she became one of the most



successful livestock judges in the history of the university. Read more about Minnie Lou on page 8!

Linda Cline and the Equine Center

Thanks to the generosity of Linda Cline, students will be able to attend classes at the new equine teaching center this spring semester. The Clines have supported OSU and its equine program for decades through donations, opening up Char-Lin Ranch to student tours and providing employment opportunities for OSU students. They have also allowed our department to use their animals for teaching opportunities, judging team practice, clinics and contests, and even donated several world class horses to improve the genetics of OSU's teaching herd. Linda was recently recognized as a 2015 DASNR Champion. Read more about Linda and the new equine center on page 10!



Student Internship Stories

Internships provide students with an opportunity to gain hands-on experience in their desired field. They can explore career options related to their interests, gain professional skills, gather insight into an industry and establish a network of contacts. Not only does interning help a student narrow down the career path they want to take, but it also makes students more desirable to companies because of the experience and knowledge they gain. We have featured student internship stories on pages 13-23 in this edition of the Cowpoke News. Want more stories on internships? You can read blogs from our animal science and food science students online at https://okstateanimalscienceinterns.wordpress.com/.



2015 AQHA World Champions

It was a great day for Oklahoma State University on November 18th, 2015. Not only did the Horse Judging Team work out diligently for one week at the world show held in Oklahoma City, but they were locked in and ready to fire the morning of the competition. After competing at the 2015 AQHA World Championship Senior Collegiate Horse Judging Contest the team brought home all the buckles and the big win. The team members spent many long hours of work, tears, determination and passion during six months of practice. Read more about the big win on page 27!





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Courtney Mapes was selected as a Top Ten Freshman Woman. Read more about the award on page 26.



From the Department Head

Dear Alumni and Friends:

We hope you enjoy this issue of the "Cowpoke News." We are committed to keeping you informed about the OSU Department of Animal Science. Our goal is to stay in touch with you on a year-round basis. We plan to send you the Cowpoke News three times per year and the Alumni Update once in the spring.

In this issue of the Cowpoke News, you will read about Minnie Lou Bradley who was recognized this fall by the Division of Agricultural Sciences and Natural Resources (DASNR) as a Distinguished Alumni. You will also read about Linda Cline, who was recognized as a DASNR Champion for her generous gift that has resulted in the Charles and Linda Cline Equine Teaching Center at the OSU Equine Center. You will also learn about our Seniors of



Significance, plus stories about several of our students who gained valuable experience this past summer through internships.

This issue of the Cowpoke News also contains stories about our student teams who have represented the Department of Animal Science well this past summer and fall in various events and competitions. Special recognition goes to our National Champion Academic Quadrathlon Team, our International Champion Meat Judging Team and our World Champion Horse Judging Team!

This issue of the Cowpoke News features stories about our talented faculty and some of their recent accomplishments. You will also read about one of our recent hires, our new therapy dog and the most generous Alumni Association in the world! We have also included a page full of announcements, as well as a list of our major sponsors and those who have donated animal genetics to our department.

If you or someone you know would like to receive a hard copy of the Cowpoke News or would like to be added to our e-mail list, please contact Rebekah Alford at cowpokenews@okstate.edu.

Sincerely,

Clint Rusk, Head Department of Animal Science



Linda Cline with OSU Horse Judging Team Members



New Tealand Study abroad Trip (Pg. 28)

Meet Hitch, the Therapy Dog



Written by Rebekah Alford

The Department of Animal Science is happy to introduce you to our newest staff member, Hitch the therapy dog! He has joined our team as part of OSU's pet therapy program, Pete's Pet Posse.

Hitch is an eight year old Australian Shepherd. He moved to Stillwater, Oklahoma in the summer of 2014 when his mom, Dr. Kris Hiney, was hired by our department as the equine extension specialist. Kris found Hitch at a colt sale in River Falls, Wisconsin.

"There was a pen of puppies that the sale company had and my old dog, Easy, walked over to the pen of puppies," said Kris. "Easy totally picked him. Hitch was a really cute puppy; just a huge fluff ball."

Kris approved of Easy's pick of the litter and was happy to add Hitch to her furry family. At the time, Kris was teaching at the University of Wisconsin—River Falls. She soon began to see a way that her dogs could help out.

"My dogs are a big part of my life," said Kris. "I know how much I enjoy being with them and I remember what it was like to be a college student and not have pets when that's a big part of a lot of kid's lives and families." Wanting to benefit the lives of students, Kris decided to register her dogs as therapy dogs. Therapy dogs are trained to provide comfort to people, including those in hospitals, retirement homes, nursing homes, schools, disaster areas and to anyone going through difficult times.

"It's really cool to see the kids so happy to have the chance to pet a dog and how much it means to them," said Kris.

Hitch has competed as an agility dog, but his favorite activities include playing fetch and being a therapy dog helping others. He will serve in our department and participate in special appearances across campus as part of Pete's Pet Posse.

Pete's Pet Posse was established two years ago as a wellness program for students, staff, faculty and campus visitors. At present, there are 22 pet therapy teams participating in Pete's Pet Posse. All dogs receive special training during an eight week group training class. The dogs



can then become a Canine Good Citizen and register with Therapy Dogs, Inc.

Interaction with OSU therapy dogs and their owners is encouraged. The dogs can be identified by their uniforms, which include special orange vests with "Ask to Pet Me" patches, "Therapy Dog" patches and "Pete's Pet Posse" patches. They also wear unique orange leashes and collars that identify them as being part of the program.

Hitch is happy to be able to continue his work with our department. Welcome to the Animal Science family Hitch! Thank you for making our department a little brighter... and furrier.



Students taking time between classes to meet Hitch.

Faculty Spotlight

If you take animal science undergraduate courses, chances are that at some point you will have a class taught by Dr. Dan Stein. He currently teaches Animal Reproduction and Introduction to Animal Science. His Extension emphasis is in the area of reproduction. Dan shows a genuine dedication to students through his teaching and advising efforts.

Stein was raised on a family ranching operation located near Cherokee, Oklahoma. He graduated with a bachelor's in animal science from Northwestern Oklahoma State University in 1978, then joined the Stein Angus Farm where he bred and marketed over 375 head of registered Angus cattle for over 30 years. He managed the herd and developed an embryo transfer program.

"His production background and knowledge is priceless to any student at Oklahoma State," said OSU alum Samantha Lowman.

He went back to school in 2002, receiving an M.S. degree in reproductive physiology and a Ph.D. in animal breeding and reproduction from Oklahoma State University. While working on his Ph.D., Stein received a Graduate Student Teaching Award from the National Association of College Teachers of Agriculture



Dan Stein and his wife, Jana.

(NACTA) and a Graduate Student Teaching Award of Merit from Gamma Sigma Delta.

Stein became an assistant professor at OSU in 2009. Along with being a favorite teacher of many students, he is also one of the most requested advisors. He goes out of his way to help students in need, whether they have questions, personal issues or need guidance. Stein wants his students to understand the class material and to succeed, both academically and in their future career goals. His real world experience in the animal science field helps students have a clear understanding of their classroom material.

For Stein, there is no "8 to 5" shift. He works until the job gets done, and then he works some more. Chances are, if you drive by the Animal Science building late in the evening; Dr. Stein's office lights will still be on and he will be there working on his lectures, grading or advising students.

"Dr. Stein is the kind of professor that actually gets to know his students," said OSU student Mary Temple-Lee. "He is a support system away from home and is always there when you need advice or a pep talk after a hard week. He knows each of my family members by name and asks about them every time I see him. He is always willing to answer a student's question whether it is a current issue discussed in class or if it is a previous student who needs advice on breeding his herd."

In a 2014 O'Colly newspaper article, Stein was listed as one of the top 10 professors at Oklahoma State University. The article was based on the popular website "Rate My Professor" where students gave him an average rating of 4.6 out of 5. According to the website, he is the eighth most popular professor in the



entire university and the most popular in the Department of Animal Science.

"I do not know another professor who works as hard and devotes as much time to perfect his curriculum, his exams and laboratory work to give his students the most beneficial and influential learning experience possible," said undergraduate student Lexi Apgar-Arpin. "As my professor, he has instilled within me the desire to succeed, not solely for a passing grade in a course, but for my own personal enrichment. Regardless of the subject, it is a privilege to be taught by Dr. Stein."

In 2014, Dr. Stein was awarded the Advising Excellence Award at the CASNR Fall Convocation, which provides institutional recognition for outstanding advising. In 2011 he was recognized as an Outstanding Advisor by CASNR Student Success Leaders, was chosen as an Alpha Zeta Outstanding Teacher and was selected as an Outstanding Faculty Member by OSU Fraternity and Sorority Affairs.

Dr. Stein is more than deserving of the fall 2015 Faculty Spotlight. Thank you Dr. Stein for your dedication to students and our department! "Dr. Stein is the definition of a great advisor and professor. He has always been extremely supportive of me throughout my academic career here at OSU, beginning in his Introduction to Animal Science course and continuing on to graduate and veterinary school. Without him and his guidance, I do not think I would be where I am academically.

"I know without a doubt that if I am ever in need, I can contact him and know that he has my best interest at heart and is going to do everything in his power to help me. His door is always open and he is always willing to give guidance or just talk. Dr. Stein treats all of his students this way, he makes you feel like you and your goals matter and that you're not just another face. This is obvious by the huge line of students waiting to meet with him anytime he has a break. He is well-respected by his students and peers for good reason. Dr. Stein sets the bar for what an advisor and professor should strive to be."

- Jesse Patton, OSU undergraduate student

"I met with Dr. Stein during a college visit my senior year and he laid out all my options for college majors that would allow me to pursue my dreams. I was ecstatic to have options that would allow me to be a part of the College of Agriculture and Natural Resources. I chose animal science biotechnology because it matched my passion and allowed me to have Dr. Stein as a mentor.

"Dr. Stein has been nothing but helpful in my college career. He helps me keep track of my required courses for Dental school as well as for my bachelor's degree. I cannot express how great it feels to have a professor that truly cares and believes in his student's success. I cannot imagine going through college without having Dr. Stein as an advisor."

- Mary Temple-Lee, OSU undergraduate student

"Dr. Stein has always stood out as a professor who goes above and beyond for his students and his department. Over the three years that I have known him, Dr. Stein has always expressed an overwhelming desire for his students to succeed, not only in the classroom, but in all pursuits. He challenges his students to master content taught in the classroom and leaves us with the confidence to apply that knowledge in real world situations. He expects dedication and respect from his students and returns it tenfold.

"He has and continues to support me through every step of my undergraduate experience at Oklahoma State University, celebrating my triumphs and helping me overcome challenges."

- Lexi Apgar-Arpin, OSU undergraduate student

"Dr. Stein initially served as my undergraduate academic advisor and professor. He continues to be a mentor, boss, friend and my "dad-in-Stillwater" now that I am a graduate student in the same department. The day I met Dr. Stein, he took me under his wing, as he does for all of his students, and helped me begin my path to success.

"Often, I think I am one of his special students, but the truth is everybody is special to Dr. Stein. He will spend countless hours with anyone who walks in his office, stops him in the hallway or calls him on his cell phone. He does this for one reason: he CARES. He cares about his students, advisees and mentees like I have never seen in my 18+ years of school. He pushes every one of his students to be the best they can be in and out of the classroom."

- Corbit Bayliff, OSU graduate student

"Dr. Stein's passion for teaching is contagious. I quickly realized as his graduate student, I too, wanted to teach at the collegiate level.

"Aside from teaching and advising, Dr. Stein truly cares for every present, past and future student of the Department of Animal Science at Oklahoma State University ."

- Samantha Lowman, OSU alum

Photo of Samantha Lowman and Dan Stein at her OSU commencement ceremony.

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Minnie Lou Bradley

"Minnie Lou has become a living legend and an inspiration to all those who choose to follow in her footsteps!"

DISTINGUISHED ALUMNI

This year, DASNR selected Minnie Lou Bradley as one of three Distinguished Alumni. Minnie Lou is well known in the cattle industry and is seen by many as an innovator, educator, industry leader and master breeder. It could be said that Minnie Lou Bradley has been a pioneer her entire life.

She was the first female to enroll in animal husbandry at OSU (then Oklahoma A&M) in 1949, and graduated with a bachelor's degree in animal husbandry in 1953. Not only was she the first female to ever compete on the livestock judging team at Oklahoma A&M, but she became one of the most successful livestock judges in the history of the university. She was the first female to win high individual in beef cattle at the 1952 American Royal. She was also the first female to win high individual overall at the Chicago International Intercollegiate Livestock Judging competition in 1952 when she beat 180 male collegiate judges with a score of 901 points out of 1,000 possible points.

"Minnie Lou Bradley has overcome the challenges and opened the door for other young woman to accomplish their dreams in the livestock industry," said Dr. Clint Rusk, head of the OSU Department of Animal Science. "Minnie Lou has become a living legend and an inspiration to all those who choose to follow in her footsteps!"

After graduation, she worked for the Texas Angus Association as an assistant to the executive secretary and also served in the role of fieldman. This position allowed her to work with commercial cattlemen in Texas and gave her an inside perspective on the needs of cattle ranchers in the southwest. Minnie Lou took a leave of absence in the summer of 1954 to work for Angus Valley Farms in Tulsa, Oklahoma. At the age of 22, Minnie Lou was tasked with visiting 60 of the farm's best Angus customers in 22 states. Along with gaining valuable experience, Minnie Lou obtained a deeper understanding of cattle genetics.

In 1955 she married Bill Bradley, who she met in college, and they purchased a ranch in Childress County, Texas. They registered it as the Bradley 3 Ranch, which represents the third ranch and third generation of Bradleys to ranch in Texas. Minnie Lou and Bill started out with 20 cows and 3,300 acres.

In an effort to meet changes in consumer demands, the Bradleys started a beef processing facility named B3R Country Meats, Inc., in 1986. This was considered a bold move at the time. The processing facility allowed the Bradleys to produce high-quality beef while providing ranchers with a value-based system. Their facility was one of the first to produce beef for Certified Angus Beef[®] brand Natural.

"She has been a leader all her life, accomplished in all aspects of a multifacted arena," said Ben Egger, Sydenstricker Genetics. "From phenotypic evaluation to genotypic evaluation, and from pasture to plate, Minnie Lou has proven herself as a breeder, marketer and business innovator."

In 1986, the Bradley 3 Ranch created a system for collecting ultrasound and carcass data in order to develop more predictable genetic packages. Soon after, the ranch saw the value of collecting DNA markers on their bulls. Since 1994, every Bradley bull has had DNA markers obtained. This allowed the ranch to match every calf sired to the bull that fathered it.

"Blazing trails as the first purebred Angus breeder to recognize that the use of multiple sires best fit the rugged conditions of the land she ranches, and being the first to adopt the use of DNA for parentage verification of the calves sired from that exposure opened the pathway for her B3R Ranch to be among the earliest adopters of HD50K technology that



has changed the art and science of breeding cattle forever," said Dick Beck, Dick Beck Professional Marketing, Inc.

Being recognized as a Distinguished Alumni is one of many awards Minnie Lou has received in her lifetime. She was selected for a prestigious honor in 2014 when she became the second woman to ever be inducted into the Saddle and Sirloin Portrait Gallery in Lexington, Kentucky. Only one person each year is selected.

Some of her other accomplishments include: Top 40 Cattleman, Master Breeder Award, National Cowgirl Hall of Fame inductee, 2005 American Angus Association President, Parks and Wildlife Stewardship Award, Ladd Hitch Award, Beef Merchandiser Award, Visionary Award, Range and Land Management Award, Environmental Stewardship Award, Heritage Award, Seedstock Commitment Award and Seedstock Producer Award.

There is no question that Minnie Lou is more than deserving of being a Distinguished Alumni. She broke down barriers, questioned standards and created methods that made great improvements to the beef industry. Minnie Lou Bradley; a trailblazer; a pioneer; a champion of the industry.

Linda Cline

"Their involvement in the horse industry is well respected. They have impacted Quarter Horse genetics with their produce both nationally and internationally."

DASNR CHAMPION

Linda Cline was selected as a 2015 DASNR Champion, an award given to leaders of the industry who have contributed to Oklahoma State University. Linda and her husband, Charles, made a great impact on the Quarter Horse industry and have been very generous to the OSU Equine Program.

Linda and Charles decided to buy a ranch near Cushing, OK when they began to retire from their trucking company, Cherokee Lines, in 1985. Not long after, Charles convinced Linda they should buy a couple of geldings to ride at the ranch so the two went to a sale in Dewey, OK. They ended up coming home with 17 horses and the Char-Lin Ranch began.

Not having a background in horses, the Clines wanted to learn as much as possible and reached out to OSU for guidance. Department of Animal Science faculty members, like Dr. Dave Freeman, visited their ranch to instruct and give advice.

"It has been great to work with Linda and everyone at the ranch for several decades," said Freeman. "Their involvement in the horse industry is well respected. They have impacted Quarter Horse genetics with their produce both nationally and internationally. While doing so, Linda has always had a hands-on approach to all levels of management. She truly enjoys the process of improving genetics and making management decisions that enhance the quality and wellbeing of her horses. It's that dedication to animal agriculture and education that makes her an example for future horse industry leaders who come to OSU for their educational needs."

Linda and Charles put a lot of hard work into the Char-Lin Ranch and it became extremely successful, growing to over 300 horses and 2,500 head of cattle. Their show horse operation also became a huge success, earning more than 200 World and Reserve World Championships.



Linda Cline with members of the 2015 OSU Horse Judging Team at her ranch.

The Clines have given support to OSU and its equine program for decades. They have been very generous through donations, opening up their ranch to student tours and providing employment opportunities for OSU students to work at the ranch. They also supported youth and adult Extension by allowing the Department of Animal Science to use their animals for teaching opportunities, judging team practice, clinics and contests. Char-Lin has even donated several world class horses to improve the genetics of OSU's teaching herd and endowed a professorship in the Department of Animal Science. Linda recently made the new teaching/outreach equine center a reality through her generous donation.

Linda has a deep interest in the students and education at OSU and doesn't hesitate when she sees a way she can provide support. She enjoys opportunities to interact with OSU students and provide them with platforms for learning, both in and out of the classroom.

"Linda believes in education, students and our educational goals for the Department of Animal Science Equine Program," said Freeman. "She has supported those goals with her insight, hospitality, ranch resources and finances."

The Cline Equine Teaching Center

When Charles passed in 2012, Linda decided to memorialize her marriage to him by contributing funds for the new equine facility at OSU. A groundbreaking ceremony for the state-of-the-art facility took place on April 30th, 2015. Starting this spring, OSU equine students will be able to go to class, conduct lab work and get hands-on experience at one convenient location for the first time.

The new facility includes an indoor arena, classroom, conference room, two offices, a viewing area, feed/tack room, a wash rack and multiple stalls, including foaling stalls and a foaling center watch room that will allow students, staff and faculty to easily observe and monitor mares during foaling. Classes and labs for horse science, equine training, equine breeding, nutrition and health will be held at the facility, as well as other activities and outreach efforts like horse judging, workshops, 4-H programs, industry and producer meetings, clinics and demonstrations.

"The new center gives OSU an opportunity to integrate classroom and arena instruction with our resident instruction and Extension outreach programs," said Freeman. "Prior to this building, we didn't have a center that facilitated onsite instruction as well. The new facility also provides an identity to the Department of Animal Science Equine Program that will bring more opportunities for outreach and aid in student recruitment."

Linda's experience in the horse industry was very useful when it came time to design the new facility. It is extremely important to her that the Cline Equine Teaching Center meets the needs of students.

"Linda is familiar with our students and our activities, so she had some great ideas of how to emphasize the layout of the new building to meet student needs," said Freeman. "She also has a lot of experience with horse farms so she knows what works and what doesn't work with horse use. Because of that, she was very hands-on with our initial design and layout. Her input has helped us develop a very functional center that allows classroom work to be elevated onsite with hands-on horse management for horse training and broodmare management. The new center will ensure that future generations will recognize her family's dedication to agriculture and OSU."

If you are interested in investing in the Equine Program and/or facilities at Oklahoma State University, we have interior naming opportunities still available. For more information, please contact Kathy McNally at 405-385-5606 or <u>kmcnal-</u> <u>ly@OSUgiving.com</u>.

Indoor Arena	\$500,000
Classroom	\$100,000
Conference Room	\$50,000
Foyer	\$30,000
Offices (2)	\$25,000
Viewing Area/Office	\$25,000
Stalls (6)	\$10,000
Feed/Tack Room	\$25,000



Jenn Cordova: Kwantu Internship

My name is Jenn Cordova. This summer I had an internship in South Africa at Kwantu, a private game reserve. I worked with the reserve veterinarian and acted as a technician by administering vaccines, performing post mortems, drawing blood and expressing abscesses.

After breakfast on the first day, we piled into the safari jeeps to head towards the reserve. By far the most exciting part of the safari was how close we got to the lion pride. Zulu, the male, was sunbathing beneath a bush. Everyone was absolutely amazed at how big and majestic he was. On the other side of the bush was Zulu's pride, which consisted of his wife, two daughters and a son. Xolani, our driver, was very adamant and good about educating us about different species and their behaviors and characteristics.

We then went to the big cat rehabilitation and breeding center. Seeing all the exotic felines reaffirmed my love for them. There were tigers, white lions, regular lions and cheetahs. Lucas, one of the Kwantu rangers, took us to the back of the rehabilitation center to give us a quick skeletal lesson. He showed us different skulls from a rhino to a spring bok. I really enjoyed how the rangers educated us and made sure we knew the



different types of animals on the reserve.

After being released for the day, a group of us headed straight for the touch farm. There was a parrot named Monica, huge rabbits, geese & ducks, pygmy marmosets, love birds and a meerkat named Faith. I went into the pygmy marmoset enclosure and fed them bananas. The little monkeys crawled all over me and played in my hair. Next, I made my way to Faith's enclosure. Faith was so sweet; she ran right up to the side and allowed us to pick her up! She ran around our shoulders and cuddled up close to us.

The next morning, our first activity was butchering a cow for the big cats. This was the first time I met the veterinarian, Ru. He was there to informally meet us and give us a brief anatomy lesson; but most importantly to check the cow and see if the carcass was safe for the felines to consume. He showed us each and every organ, and quizzed us about their functions. He showed us the stomachs and was very surprised when I was able to name all four of them and their functions (shout out to Dr. Stein).

On day nine, we met with Ru in the morning to check on Faith, the meerkat, because I noticed a laceration on her back. After examining it with Ru, it turned out to be a cuterebra hole, or a bot fly maggot. Because I noticed it, I got to treat her. I squeezed the laceration to get the puss out. With some tweezers, I pulled the maggot out and started to disinfect and clean her wound. I used iodine to clean the area. After three scrubs with iodine, I injected penicillin into her little glute muscle and then put two drops of penicillin into her open wound.

Next on our agenda was deworming the sheep and injecting them with ivomec as well. After we injected them and searched for lacerations and broken



hooves, we spray painted their wool with blue to mark which sheep we had treated. Ru made sure we knew how to inject them properly. Just like a routine vaccination, except with four inches of wool.

On day 10, we took a van to the local village's school. The school was one concrete room with posters and a chalkboard. No desks. No chairs. Just one cold room. One little girl named Evylnese, age six, took to me. She followed me everywhere and constantly asked me to pick her up. After our interaction time, we gathered them into the school house for an animal science lesson. We brought various skulls, bones, pelts and horns for the children to examine. We taught them how to tell the difference between a carnivorous skull (cheetah) and a herbivore skull (cow) based on their teeth.

This internship and travel abroad opportunity forever changed my life. I cannot explain in words how amazing it was. Once someone experiences the joy and education I received, then they can relate to how I feel. God really blessed me with this internship. I made life-long friends and gained such an awesome veterinary experience. I will forever miss this place and all the people.

Rachel Mitacek: Cargill Internship

My name is Rachel Mitacek and I am 20 years old. I was born in California and moved when I was nine months old, and then every two years after that. I have moved nine times and the longest I have lived in one state is Oklahoma for college. Coming to Oklahoma State University has been the best three years of my life and I cannot imagine it any other way. Then, I started a new journey with my internship in Iowa. I have never lived in Iowa and corn was all I could think of when I found out where I was going.

In May, I started work in Eddyville, Iowa as a food safety and quality regulator chemist intern at a Cargill corn milling plant. They have many different departments: citric acid, acidulants, sugar refinery, feed milling and vitamin E. When I first arrived, we started with safety training for two weeks learning all the basics of safety and standard operating procedures with all of the new hires, co-ops and interns. This made me happy to know that Cargill takes safety very seriously and spends so much time and effort to ensure the safety of the product, as well as the employees working in the plant.

For my internship, I spent six weeks conducting projects and six weeks



doing chemist shift work. My first project involved the adsep tanks profiles. I took timed samples from the recycle line on the adsep tanks to determine the amount of sugar in the system at a certain flow step. I then took the samples, determined the amount of dry solids and then ran high performance liquid chromatography to determine the amount of each type of sugar in each step of the adsep tank.

The results helped me to determine if there was too much water in the tank at a given time, if the valves were working correctly and if the resin bed was healthy. The purpose of this project was to cut down on water waste within the plant. I then conducted a similar project on the dextrose demineralization tanks. I also had projects in the feed mill and citric acid departments.

The project I finished first was the adsep mini-profiles. Then I completed another project, DME ISO Column profiles. The ISO columns were big columns that convert dextrose into fructose using an enzyme resin. This enzyme has a life expectancy of six months. Usually at the end of its life, the enzyme slows down and pushes more product out, so we turn up the temperature and lower the flow. We found that we have to process the sugar in these tanks further due to quality issues.

My project was to profile a low, medium and high flow ISO column based on micro, color, pH, degree of fermentation and sugar concentration. The data helped to determine if Cargill would save money by cutting the enzyme offline when it's production decreases and replace it, or by processing it further down the road.

I also performed some moisture meter cross checks in the sweetbran department. An engineering intern installed new in-line moisture meters that had to be calibrated. By using a calibration equation and taking samples to dry in the oven, I was able to determine if they were accurately measuring the moisture in our process. This is important because moisture is a key specification that must be the same between all of the plants for customer satisfaction.

I learned a lot and really enjoyed my time in lowa. I was nervous at first that I was not going to fit in with the culture at Cargill or that I was going to be doing all of the projects no one else wanted to do, but I was wrong. I fit in perfectly with the culture in lowa and at Cargill, and I performed meaningful experiments that helped me learn a lot. Throughout my internship, I gained the knowledge and experience of a chemist and will take that with me into my master's program, as well as any future work.

At the end of the summer, I was happy walking away with more knowledge and experience to help me determine if being a chemist at a plant would be something I am interested in doing in my future. Having this real-world experience helped me identify my strengths, as well my weaknesses. I hope to use this experience to help me grow as an individual and a professional.



Matt Arendt: JBS Cattle Buyer

This summer, I was fortunate enough to spend time with a commissioned JBS cattle buyer, Kendall Wilsted. Kendall buys cull cows for the beef plant in Tolleson, Arizona. He travels to sales five days a week throughout Southern and Central California buying cattle. Kendall is a very knowledgeable, professional buyer and certainly knows a lot about cattle and the markets.

Each morning, Kendall talks with Rex Hoagland, the head buyer at the Tolleson plant. Rex oversees a team of buyers that cover primarily Arizona and California. Rex and Kendall discuss the markets, what types of cattle Rex needs for the plant for the coming days and how much Kendall can buy the cattle for. It takes a team of buyers to supply this plant with sufficient cattle of the right quality.

The main things a cull cow buyer observes when looking at cattle to buy are the possible dressing percentage of that certain animal, their condition and seeing if there are any potential health problems with the cattle. For the dressing percentage, we looked at the animal to see how much fat and muscle they had; the top of the animal to see the muscle and fat thickness along the spine; and we looked at the stomach to see how full the animal was.

There is a significant difference in a fat cow and a full cow, and the fat cows do sell for a lot more. The "fullness" is just waste and adds no value to the animal. By observing the animal in the ring, one can tell whether it is a skinny animal or fat animal, but what I just mentioned above helps to determine what the value of that animal is. There are also places to look for potential tumors in these cull cows such as at their flanks, behind their ears or at the top of their udders. A lump in one of these spots is very risky because if the findings are not good at the plant when the animal is slaughtered, the carcass is condemned and that reflects straight back to the buyer.

Knowing dressing percentages on cows and what their weighing condition is like on the hoof is extremely crucial. Considering the cows are only in the ring for seconds, one must have a good eye for estimating what the cows will yield on the rail. While we bought, I estimated what I thought each cow would dress and what their "in the meat" price would be with that dressing percentage. It was a fast paced environment and something I really enjoyed!

I learned so much from Kendall. He knows a lot about cattle in general and about the markets. The cattle marketing process is one that is really fascinating to me. It is safe to say I am now hooked on cattle buying. Hopefully it is something I can become really good at and continue to learn more about. Kendall recommended I see the beef plant and meet with his boss, Rex Hoagland. I was fortunate enough to get in touch with Rex, and we set up a time and were able to meet!

First of all, I was completely in awe at the size and magnitude of the facility in Tolleson. Rex and I had a great discussion and he shared with me more about what he does on a daily basis and how the cattle procurement process works at that particular plant. For Tolleson, the majority of cattle processed there are Holstein steers and cull Holstein cows. They harvest roughly 2,000 head of cattle every day. Rex and his team have relationships with all of the major feed yards and sale barns around Arizona and California. I have to admit, he has a pretty cool job and it was neat to see someone so passionate about what they do.

Rex was generous enough to take me on a full tour of the plant. We started at



the cattle pens and worked our way all the way up to the distribution center. During my whole tour, I was in awe at the size and efficiency of this facility. The amount of man power, logistics and machinery required to run the plant is inconceivable. It was such a great experience to see a facility of this size, how smooth it runs and how much quality assurance is put into their product.

I am very thankful Rex was kind enough to take the time with a 20-yearold kid who is interested in doing what he is doing as a career. He spent a good part of his day with me and that really meant a lot. It is a very fascinating process and one I am thankful to have learned this summer.

I am so thankful for the opportunity to work along side a JBS buyer and for his expertise and insight. It was a great experience and I learned a ton. Kendall and Rod taught me so much about the markets and about cattle buying. There is so much more that goes into it than I thought and I have really found something that I enjoy doing!

Kalyn McKibben: Noble Research Center Internship



Kalyn McKibben (left) with Dr. Patsy Houghton, owner and general manager of Heartland Cattle Company.

I am a senior at Oklahoma State University studying animal science business and agriculture economics. I greatly enjoy being involved and interacting with people, and have had the opportunity to serve as president of Oklahoma Collegiate Cattlewomen, ambassador of Oklahoma Beef and an ambassador of National Beef.

While at the 2015 Cattle Industry Convention in San Antonio, Texas, I spoke with some of the Noble Foundation's employees about their company and later applied for an internship with them. The Noble Foundation is an amazing organization that is dedicated to encouraging producers to be kind to the land while helping to increase producers' profits and community involvement.

After getting accustomed to the current goals and projects under the Noble Foundation's plans, I knew what I wanted to get out of the internship. My passion is clearly rooted in the beef community, especially production. I hoped to gain a better knowledge of range and cattle interactions; to learn more about the cohabitation of wildlife and livestock as it pertains to a healthy ecosystem; and I wanted to take advantage of the opportunity to learn more about groundbreaking horticulture and backyard gardening techniques the Foundation was working on. There are not very many native ranges sprawling the landscapes of Oklahoma. Even so, one of my projects while interning with the Noble Foundation was a mob, or density, grazing simulation. Density grazing is a type of rotational grazing pattern that uses relatively large herds of cattle in untraditionally small paddocks to allow them to graze for a short period of time. The main goal is to manipulate eating habits to focus on more native, traditionally less desired plants while improving overall soil health and quality. Here are a few things I learned on the project:

Water and electricity do not mix well. Because of abundant rain (over 30 inches while I was there to be specific), things were a little soggy at times in Ardmore America. The first day of the grazing project greeted me with subtle rolling thunder and calming rain showers. The only issue I found was that high voltage electric fences and water droplets do not mix, even when plastic insulators are used. I lost track of how many times I got shocked.

Cattle are great learners. It takes a little training for cattle to be okay with going from a wide-open pasture to a 1/12 acre paddock. Thankfully, cattle are wonderful learners. Interacting with the cattle by mingling and moving them on foot (or horseback) in a low stress, calm approach encouraged trust from the cattle.

Eating habits can be changed. The whole point of the study was to monitor change and manipulate the eating habits of the cattle. Just like most people, if given the choice, I would eat ice cream constantly. But from a health standpoint, munching on veggies would be much more beneficial for my body. When I

model my eating habits to be closer to what my body needs, I start to lose my appetite for ice cream. In the same way, cattle enjoy the "ice cream" plants, but their bodies need the nutrients found in the initially less palatable plants. It is all about managing the calves and the land to train a new pattern of eating that is great for the animal and even better for the land.

Taking care of the land pays big dividends. The whole idea of vigorously grazing the land for short periods at a time allows the grass to recuperate and come back healthier- free of invasive species. Years of diligent land management techniques reap big dividends in overall soil health, tilth and quality by aerating the soil, returning organic matter to the soil and encouraging insect and bacteria interactions.

Working at the Noble Foundation was outstanding. Even more than the priceless experience, the most important asset gained was the expansion of my network. Within the Agriculture Division and the entire Noble Foundation, there is a plethora of diversity and knowledge. I met some remarkable people this summer during my internship.

In addition to having access to some of the most respected experts in their field in the same office, I was able to meet many allied industry partners. I am thankful to be a part of an industry that recognizes the importance of working together to produce safe, wholesome and nutritious beef.



Allison Christian: Zoetis Internship



I am a junior at Oklahoma State University majoring in animal science with a pre-veterinary option and my dreams are closer than ever before. However, my career goals for myself are not necessarily the norm. Veterinary pharmaceutical sales have always interested me, and I have often wondered what the profession entailed. For a long time, I went back and forth as to whether I wanted to pursue a career in pharmaceutical sales or continue my education in an attempt to become a veterinarian.

Luckily, an incredible opportunity seemed to fall in my lap. A cattle genetics specialist from Zoetis Animal Health called and wanted to interview me for an internship with the company, and I was enthralled. This was the perfect opportunity for me to explore a profession I really did not know much about and solidify whether or not I would truly enjoy this area of the industry.

When I met with the Zoetis representative, I inquired about the role veterinarians play in their company and on this side of the industry. He informed me that Zoetis employs over 700 veterinarians and there is a large demand for veterinarians within the industry. This seemed like the perfect opportunity for me to gain experience in both of my interest areas in hopes of solidifying my career plans. I accepted the position of cattle genetics intern, and was extremely excited for what I was going to be able to experience. I wanted to see firsthand what a pharmaceutical sales representative does in the industry, as well as the role veterinarians play in this area.

After being in the field for three weeks, I learned more than I could have ever imagined about the sales industry. I learned that some people are not receptive to sales calls, regardless of who you are. I learned that some weeks will be extremely busy while others consist of very few appointments with producers. I learned to be flexible, as my whole schedule could change in an instant. The biggest thing I learned was how rewarding this field can be. There is simply no feeling like finding the perfect solution to a producer's needs and earning the sale after working hard to do so. I had plenty of experiences to share and made lots of memories from this internship.

Day to day, my schedule was extremely sporadic. I was solely dependent on when producers could meet with me, so some days were extremely busy while others tended to be slower. I set up my own schedule, so it was my responsibility to call on producers and set up my appointments for the week. Due to my short time on the job and large territory to cover, each week I was in a new place. Many nights were spent on the road and in hotels, but I got to see plenty of new sights I would not have seen otherwise. I was on my own entirely, which has its pros and cons. I like the flexibility of being able to control my schedule, but being alone all the time can be lonely.

Most of my calls to producers were cold calls. I looked up State Angus Association directories, worked with the Zoetis territory business managers and worked with veterinarians to look for producers to call on. A lot of my job was calling and chasing leads; some were dead ends but most ended up in appointments. I targeted Angus producers, Commercial Angus producers and Red Angus producers in the areas of Oklahoma, Northern and Eastern Texas, Southern Kansas, Southern Missouri, Arkansas and Louisiana.

The products I was working with were the genetic tests that Zoetis has to offer. One test aimed at enhancing the EPD's in purebred Angus and Red Angus. Another was a Commercial Angus test that provides some genetic information to rely on rather than strictly using phenotypic evaluation. I had a lot of success with and receptivity to our products, which made my job a little easier.

Overall, I enjoyed my time with Zoetis. The company itself is an incredible organization to work for, accompanied by extremely helpful senior employees who were always available for answering questions. I feel so blessed and grateful for this opportunity. I have been challenged and pushed, and have grown more than I could have ever imagined. From the sporadic daily schedule to the hours spent on the road, I walked away from this internship with more than I ever thought possible. From the good calls to the bad, each one had a significant impact on me.



Jess Hernandez: Boots Cassie Quarter Horses Internship

My name is Jessica Hernandez and I am from Matawan, New Jersey. Going all the way to Oklahoma for school was a big decision, but I knew if I wanted to be a veterinarian I would need to go somewhere that would give me the best education. Being from New Jersey, getting dropped in Oklahoma where the culture is completely different was anything but easy. But, being in a different culture gave me a new insight to farm life and animal care. It was my animal science classes that made me realize I really want to focus on the large animal side of veterinarian medicine.

With this new insight, I looked into internship options for the summer. Horses have always been in my life; I've shown and owned horses since I was little. So, when my trainer said I could intern at Boots Cassie I jumped at the chance. I was excited for all the new things I would learn at this internship. I wanted to learn how to run a successful business, how to care for a barn full of horses and learn new training methods for young horses.

I was assigned to train a three-yearold filly named Stormy who had no previous training. This filly had been at the barn for about two years; the owners had just left her. So, Stormy became my responsibility. Along with helping around the farm and working with other horses, my day pretty much involved working with Stormy for short periods of time. I had to teach her to lead, not pull your arm off and to go into a wash bay. At first, she was testing my patience (of which I had very little). After working with Stormy for about two weeks, I had her walking on a loose lead rope and walking in and out of the wash bay with no problem. There is something

extremely rewarding when you see your project animal responding to you and learning. The next lesson was to teach Stormy to lunge. Our first attempt was anything but smooth.

Working with Stormy along with the other horses has definitely taught me patience. You have to prioritize and take things at a slower pace since you are on their time and not your own. Rushing anything leads to a negative result in the end. Along with working with Stormy, I slowly learned the ins and outs of running a large successful barn. All of the lists and records are a must to keep organized.

Working at Boots Cassie Quarter Horses has honestly taught me so much; not only about horses but about my future as well. I have worked with horses for years, so going into this experience I didn't think I would learn much but I did. I learned how to run a business, keep things organized and how important it is to stay on top of things. I learned so much about horse health and how to spot an issue right away, whether it was lameness or illness. Not only did I find myself learning; I gained wonderful opportunities.

As I was working one day, the vet came to give shots. I held the horses for him and shortly after he asked if I wanted to be a part of the ride along program. This was when you rode along with the vets in his practice, basically shadowing them. After my first ride along, the doctor offered me a job at the office working with the other vets. I started working the next day. Without the internship at Boots Cassie, I would have never had the opportunity at the vet practice.

This internship was amazing. Working at Boots Cassie with the young horses really showed me that nothing goes the way you plan and you need patience to get through it. Working with Stormy last summer was so rewarding. Seeing her figure things out and actually learn to trust me was a feeling everyone should experience.

I am so glad I did this internship. I would definitely work another summer at Boots Cassie. An internship is something everyone should try; even if you don't enjoy all of it, you will most definitely learn something.



Morgan Holcomb: All Creatures Animal Hospital Internship



My name is Morgan Holcomb and I'm 21 years old. Ever since I was four years old, I have wanted to be a vet, but certainly work in a field where I could help animals. I was born in Hot Springs, AR, but grew up in Houston, TX.

All of my previous experiences at other jobs led me to take this internship at All Creatures Animal Hospital in Hot Springs, AR. I knew this hospital was in good standing and how well they took care of their animals. Another amazing thing about this animal hospital is they literally see and try to help almost every type of animal. I have walked in there before and a snake was on the table or a man was there with his bird; it was truly amazing.

I spoke with Dr. Katie Price Letcher about getting an internship there. I told her about my plans to get my vet tech license and she was extremely supportive. She even offered to cater to my goals to make sure I got to see some surgeries, had good clinic hours and rotated what I got to see in all aspects of the animal hospital. This allowed me to have as much hands-on experiences as possible. Through this internship, I hoped to have experiences with various types of animals and learn more about what it takes to become a vet tech. It was grueling, but wonderful. I thought my feet were going to fall off the first day. I worked eight hours straight and only sat down 15 minutes for lunch. It was crazy and overwhelming, but it was amazing what all I got to see and do. As my internship progressed, I fell even more and more in love with it.

I've gotten to see and do so many great things. All Creatures Animal Hospital means what it says in the title; it takes all creatures. I saw a turtle, baby bunnies, adult rabbits, baby birds, baby skunks, cows, ducks, baby deer and of course the adorable dogs and cats. I've worked at other clinics before, but I've only been able to work in the kennel area, which is for boarding. But at All Creatures, I was able to draw blood, help do x-rays, trim nails, give shots, go into appointments with Dr. David and Dr. Letcher and I even got to assist with surgery!

I saw so many interesting animals and cases and was able to feed and take care of the cutest exotic animals. I was also able to go into appointments with both of the doctors and see them examine a dog and talk with the owner. Watching the doctors mentally narrow down so many causes of what could be wrong with a dog was amazing. In addition, I watched the doctors do surgeries such as spaying, neutering and emergency Csections.

Both doctors were so nice and Dr. Letcher even took time to sit with me and go over all the types of lymphoma, how to treat it and what makes it the worst kind or a more slow developing



kind. I was also allowed to scrub in and hold up the scapula of a dog that had to get his front right leg amputated by Dr. David.

This was truly an amazing experience and I'm so grateful to both the doctors for teaching me, taking the time to show me how to do things and allowing me to ask questions whenever I wanted. It was also awesome to learn from the techs and others there. I'm so grateful to have been able to work with animals and help them in any way I could. This internship reinforced my career path of helping animals.

I learned more during this internship than I have at any job I have ever had and in any class I've ever taken. It was such a physically grueling job, but so worth it. I even adopted a kitten! I'm truly going to miss being there and I will miss every single one of them.



Carlye Hiebert: OKC Zoo Internship

My name is Carlye Hiebert and this summer I had an internship with the Oklahoma City Zoo. It was one of the most exciting and interesting things I have encountered. I am currently a student at Oklahoma State University in Stillwater, OK and have started my junior year studying animal science with the option of pre-vet. I had the opportunity to work in a veterinarian clinic handling dogs and cats, but I decided I wanted to expand my interests. So, I applied to intern in the Great EscAPE section at the Zoo (this includes chimpanzees, orangutans, apes, and monkeys).

During this internship, I wanted to increase my knowledge of other animals to see if I would want to pursue becoming a zoo veterinarian, or some other field that involves exotics. Zoo animals are very similar yet very different to working with dogs and cats. They're similar because they require human care, vaccinations and they love treats just like dogs and cats do. They are very different in the way you handle them though. I hold dogs and cats daily at the vet clinic, but at the zoo it was a whole different world. Even though the apes would do almost anything for the treats we gave them, they are still wild animals and being cautious 24/7 was a MUST.

I enjoyed talking and interacting with the apes and chimps. Working in the Great EscAPE at the OKC Zoo was a wild



and exciting experience. I learned so much about all of the animals in such a short time. We started our morning by preparing their medications. A majority of the females were on birth control and several of the older gorillas and orangutans were on Cosequin, which is a joint supplement. Next, we "shifted" the gorillas, which means we separated them from each other in order to train them individually, gave them their own small food bucket and their own medications. Training included a clicker like you would use for your dog. Whenever they did something right, they received a grape as a reward because all training at the zoo is through positive reinforcement.

The apes and orangutans have learned certain tasks, such as how to open their mouths and stick their tongues out when asked. They also allowed the zookeepers to feel their ears, back, chest/heartbeat and stomach. They have learned how to give an item back if someone drops it and were being trained to start pressing their arm against the mesh so the vets can give vaccines more easily instead of having to sedate the animals. All training at the zoo has a medical purpose, so the gorillas, chimpanzees and orangutans can perform these tasks.

The monkeys performed a small number of training skills. We used a target for them to reach and touch. Some of the gorillas, chimps or orangutans could perform more specific skills depending on what they had been working on. Next, we prepared their dayrooms, which were cleaned, scrubbed and sprayed with cleaner, and their outdoor area. This is the area the public is able to see when they go and visit the zoo. All the orangutans, chimps and gorillas were given wood wool, which is a soft-like bed. Some received blankets and toys like boxes, Kong's and blocks. Their food



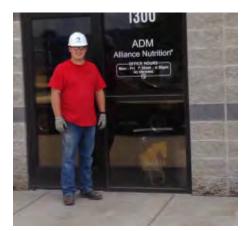
consisted of vegetables, fruits and seeds and they were given enrichment projects to do.

An enrichment project included something that kept their interest and minds engaged. For example, hiding food, like raisins or nuts, so that it was a challenge for them to get the food. One day we made them a pasta based dish and scattered it throughout the room. Another time, I hid Honey Nut Cheerios in some tissue paper. The majority of the enrichment projects provided challenges for the animals so they would become more engaged.

Ape families, from what I was able to observe, show a lot of what human families show. Some disputes will happen from time to time, but overall they always make up and look out for one another. Each ape definitely has their own personality and special place in my heart.

Overall, it was an exciting experience. Having the opportunity to build relationships with these intelligent animals was something I never knew I would get to experience! It was truly amazing to watch them be far more intelligent than you can ever imagine unless you experience it for yourself. Being able to become such a big part in this department was truly amazing and I will have these memories for the rest of my life.

Joshua Haven: ADM Internship



My name is Joshua Haven and I am from Cheyenne, Oklahoma. I'm currently attending Oklahoma State University and majoring in animal science with a business option. I started my junior year this fall. When I was 15 years old, I purchased a feed store from my grandfather as an SAE project for FFA. I am now a local feed dealer for ADM Alliance Nutrition.

Last fall, I attended the career fair at Oklahoma State and noticed a booth that said ADM. Already being associated with their Alliance Nutrition branch, I thought I should stop by their booth. I began asking questions about the company and learned that it was much bigger than I had ever anticipated. I handed over my résumé and later that evening I got a call asking for an interview and the rest is history. I was hired about four hours later and received an e-mail that said I would be in Springfield, MO for the summer, which is where the feed I sell is manufactured.

I've always had an interest in animal feed ever since I was a little boy when my grandfather had me stacking it and making delivery runs with him. I have now seen the process from a whole new perspective. I saw all the little things that go into the process of making the feed. The first week of my internship was spent in Decatur, IL which is the location of ADM's headquarters. I learned about the company in its entirety and got the opportunity to network with many of their employees, as well as 262 other interns who worked across the nation for ADM.

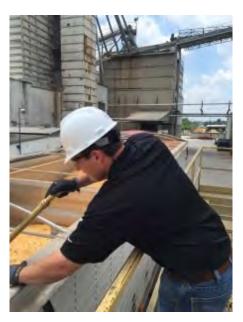
In Springfield, I did a lot of safety training and learned a lot about the ingredient side of things. I unloaded trucks of corn, corn gluten, wheat midds, DDG, HFP, oats, wheat, amino plus, soybean hulls, limestone and a few other ingredients. Depending on the ingredients, I measured the density, as well as moisture and bushel weight. I tested for Aflatoxin and Fumonisin in the corn and learned the process for testing. I inventoried ingredient bins and helped order ingredients through Quincy, which is the headquarters for the Alliance Nutrition branch.

The only ingredient that is ordered locally and doesn't go through Quincy is corn. I also collected feed samples and properly stored those in case a problem occurred in a feed and we needed to check it for something (same process as the ingredients). In the afternoons, after all of the trucks had unloaded, I made and printed feed tags for the baggers to put on the feed sack itself. My Intro to Animal Science class with Dr. Stein taught me how to specifically read a feed tag and comprehend all that entailed. One of the most interesting things ADM does is having a safety moment every morning to start the day and discuss a different safety topic. Safety is very important to their company and keeping their employees safe is a priority.

I was super busy learning several different aspects of the company. I first learned how to run a feed mixer. I measured out smaller ingredients that go into three ton batches of feed and added them to the very large amounts of ingredients that were weighed up by the computer such as corn gluten, wheat midds

and other things that were put into the feed in large quantities. I spent time in the office putting grain products and feeds into inventory. I also spent some time in the micro room where the micro ingredients are weighed up and put into barrels that are dumped into the mixer by the mixer operator. This was where the drugs and medications were added into the feed, as well as the ingredients that go into the feed in extremely small amounts. After all the ingredients are ran through the mixer, they are then sent to a pellet mill where each batch of feed was sequenced in order to keep different species from obtaining medications meant for another species.

The internship related to my field of study in animal science very closely. The nutrition and products that help animals grow and maintain a healthy diet are extremely important to the well-being of an animal. I am positive that as I continue in higher level animal science courses, I will obtain extremely important knowledge that will benefit me in the feed making business. My time in Springfield was very valuable to my education of the workforce and to my degree.



Katie Dillon: FoodProtech Internship



My name is Katie Dillon and I am majoring in food science at Oklahoma State University. I was born in Durango, Colorado and went to school at CSU in Fort Collins, Colorado for three semesters. I then moved to Stillwater, Oklahoma to pursue my interests in food science. I grew up with a ranching background and a sincere interest in food safety and the food industry.

When I was searching for a job on the Hire OSU Grads website, I found Food-Protech and the description of the position was EXACTLY what I had been looking for. When I took the position at Food-Protech, I made it my goal to make sure I learned everything there was to learn about what made FoodProtech the business it is. I didn't really know what to expect when I was hired, except for what was described during the interview and what was explained in the job description.

I started in January, just after the start of the semester. The only thing that prepared me for my first few days was expecting this job to be much more difficult than anything else I had ever done, and I was very correct. The lab was divided into five different sections: media, plating, receiving, sample preparation and PCR. The first couple months I was in the media section of the lab, where I prepared media that was used to carry out various operations inside the laboratory. Media is either a liquid or a gel to provide nutrients for microorganisms to grow. To make a lot of the media, the three main pieces of equipment I used were a balance, hot plate and an autoclave.

I prepared various forms of media necessary for the lab to perform tests for clients. The gel media (depending on the type) allows organisms such as yeast, mold, E. coli, etc. to grow. The liquid media (depending on the type) allows organisms such as listeria, salmonella, E. coli, etc. to grow.

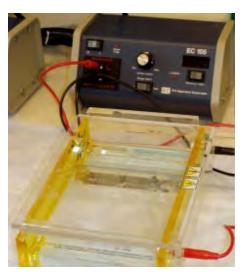
Once I started to feel a little more comfortable in the lab, I started spending some of my time in the plating room. This is where we pour agar (jelly substance) into petri dishes. This was really interesting to me because I took an introduction biology class my freshman year and we used petri dishes to grow organisms, so it was exciting to learn how these plates were actually made.

After I got used to being in the lab, I started to work in the receiving and sample preparation areas. In the receiving area, we received and logged in the samples we got from our clients. One of the fun parts about working at FoodProtech was all of the different kinds of samples we received, including: flour, beef jerky, chicken, environmental sponges, chocolate, bean salads, beef, etc. Once the samples were logged in, we took them to the sample preparation area to weigh out the samples. The liquid or gel media we needed to use depended on what the client wanted us to test.

The months I spent at FoodProtech were a lot of fun and very interesting. I was really blessed to be able to work with people who were willing to take time and teach me the things I needed to know, help me and answer my questions. Although I was really scared the first couple months on the job, I felt more and more comfortable every day and was able to perform the majority of the duties in the lab. It was also pretty great to tell my friends and family that what I was doing helped to prevent people from getting food poisoning.

I didn't start out very strong when I got hired as a lab technician at Food-Protech. It was a difficult job to learn without previous experience and I had low self-confidence in the beginning. I was afraid I wouldn't like the job and have to end up changing majors (again) and never really figuring out what I wanted to do as a career after college. I was happily surprised about how everything turned out though because I loved my job, even during the stressful times, and I could see myself doing something similar after college.

It was very difficult for me to make the decision to move from Colorado to Oklahoma, but it's the best decision I've ever made. I am also extremely lucky that I got to work with people who were incredibly smart and driven, and they always made time to impart their knowledge to me. What's even greater about the field I'm studying is that there is so much more to learn and I'm truly ecstatic about being able to dedicate my time and energy to food science and feeling wonderful about what I will do for this field in the future.



Laura Kerschen: Eleven Point & Barn Hollow Internship



My name is Laura Kerschen and I am a junior majoring in animal science with a pre-vet option. All my life, I have wanted the same career, to be a veterinarian and work with animals. Animals have always been part of my life, so the career I wanted to pursue was obvious. For years, I debated what type of vet I wanted to be. After finding a love of horses and bovine, I realized they chose the path for me to follow.

I have a background in horses but cattle are a different ball game. I had no prior knowledge of these animals. All I could tell you was "this is a cow, that's a calf and that's a bull," plus generally tell someone what breed they could possibly be.

So with that being said, this internship opportunity gave me a chance to work an average day with two different vets, Dr. Roger Shaw III, an equine specialist, and Dr. Mikael Orchard, a small animal and bovine specialist. Both vets were amazing to work with. They took the time to explain what they were doing and how I could help them. Being part of the everyday life of a vet, I learned the different signs animals exhibit when their sick; the proper way to hold or restrain a dog or cat; and how and where to give shots on horses and cattle.

I learned so much from being able to

see different cases involving the health and welfare of the animals being treated. By the end of my internship, I was able to understand more about bovine and how to work with them, as well as equines, in a safe and professional manner.

When summer officially arrived, all the activities I was involved in at both veterinarian clinics increased ten-fold. That meant waking up earlier to beat the heat when working cows, more lameness exams on horses and cattle, routine vaccinations on all species and emergencies. On a day-to-day basis, there seemed to be one or two very odd emergencies that happened at both clinics.

At Barn Hollow, case in point was this Jersey cow and something I had never seen before. When she first stepped off the trailer, what I noticed first was that she was limping severely and there was an opening in the middle of her left toe that resembled looking down the barrel of a gun. Once we got her in the chute and flipped her on her side, we got a better look. We determined that she had an abscess that had been festering for some time. It had turned into an infection and ate away part of the bone. We trimmed as much as we could off of her hoof to relieve pressure, and gave her some antibiotics.

At Eleven Point, we saw cases of salmonella in foals and tendon sheath infections in adult horses. Day-to-day activities at this clinic included lameness exams, floating teeth and yearly vaccinations. Floating teeth was a pretty fun procedure, but sometimes getting the horse into the stocks was a rodeo all its own. This mare in the photo had her sharp points filed down so she wouldn't cut her gums. We dosed her with a drug to sedate her enough to get everything cleaned up. Now when she eats, her teeth no longer grind against her mouth.

Besides the normal situations, other issues arose when we had a sick horse come in with a tendon sheath infection. The biggest thing to help the horse was to go in surgically to relieve the pressure of the infection, continuously wash the incision out and give it antibiotics.

My summer internship went great and I loved every minute of working with these amazing animals, learning behaviors and how I needed to react to certain situations. Getting to see different cases is what makes being a vet interesting. You never see the same weird case in the same species or to the same degree of severity again. The fun part is figuring out the problem and the correct treatment to help the animal.

As my internship came to a close, I looked back on all the experiences I had. I got into sticky situations with cows and bulls, learned how to use my body weight to hold a foal to give it antibiotics and just the overall experience of working with the vets. Having them take me under their wing is one of the most rewarding opportunities I was given.



Awards & Recognition

Top Ten Freshmen

Courtney Mapes was one of the students selected as a Top Ten Freshman Woman for 2014-2015! Courtney, now a sophomore, is majoring in animal science. She is originally from Alva, Oklahoma and is the daughter of Jeff and Michelle Mapes. Students who receive this award are selected based on campus involvement, scholarship, community service and leadership during their freshman year at Oklahoma State University. A total of 10 men and 10 women are selected each year for the award.

Courtney was selected for the original Top Twenty Freshmen, then underwent additional interviews to advance to the Top Ten Freshmen. She was honored with the other awardees at a reception on September 29th, 2015 for the Top Twenty Freshmen and a ceremony for the Top Ten Freshmen on November 7th, 2015. Assistant Dean Steve Damron, Associate Dean Cynda Clary, Assistant Professor Dan Stein, and Department Head Clint Rusk were in attendance at the Top Twenty Freshmen reception.



Left to Right: Steve Damron, Cindy Clary, Courtney Mapes, Dan Stein and Clint Rusk at the Top Twenty Freshmen reception.

OSU Seniors of Significance

Department of Animal Science students Kaylen Baker, Lindsay King, Kalyn McKibben and Mary Temple-Lee were chosen as 2015-2016 OSU Seniors of Significance. This award recognizes students who excel in scholarship, leadership, service to campus and community and who have brought distinction to OSU. Selected students represent the top one percent of the Class of 2016 throughout all six OSU undergraduate colleges.



Mary Temple-Lee is originally from Pauls Valley, Oklahoma. She is majoring in animal biotechnology, biochemistry and molecular biology. She is advised by Dr. Dan Stein. After graduation, Mary plans to attend the Oklahoma College of Dentistry to obtain a Ph.D. in dental surgery.



Lindsay King is originally from Oakland, Nebraska. She is majoring in animal science and agricultural communications. Lindsay is advised by Dr. Jennifer Hernandez Gifford. After graduation, she plans on pursuing opportunities in graduate school and the professional world for agricultural communications.



Kaylen Baker is originally from Yukon, Oklahoma. She is majoring in animal science and agricultural communications. She is advised by Dr. Jerry Fitch. After graduation, she plans on going to graduate school to earn her master's in animal welfare.



Kalyn McKibben is originally from Wyandotte, Oklahoma. She is majoring in animal science with an option in business and is advised by Dr. Dan Stein. After graduation, she plans to serve the agriculture industry as a pharmaceutical sales representative, while also serving as a professional beef industry advocate and producer.

Distinguished Graduate Fellowship Award

Graduate student Pushpinder Kaur Litt was awarded the 2015 Distinguished Graduate Fellowship. The fellowship includes a \$2,500 annual award that can be renewed for up to three years. The award is sponsored by the OSU Foundation and coordinated by the OSU Graduate College.

Pushpinder is currently working on her Ph.D. in food science within the Department of Animal Science. She was nominated for this fellowship by her advisor, Divya Jaroni, and Department Head Clint Rusk.

"Pushpinder has impressed me with her maturity, scientific mind and a true passion for conducting research," said Dr. Rusk. "Pushpinder has a work ethic that is second to none in our department."

Pushpinder works as a graduate research assistant in the area of food microbiology. In addition to her own research, she has conducted several research projects in Dr. Jaroni's lab and presented her findings at professional, scientific meetings.

"She impressed me immediately in her first semester at OSU by suggesting her own dissertation project," said Dr. Jaroni. "Since then, she has shown tremendous initiative in getting the project started and also completing initial objectives of the project."

Along with research, Pushpinder trains other graduate students and is mentoring an undergraduate research scholar. She has also served as a teaching assistant for Fundamentals of Food Science and Pre-Harvest Food Safety.

"She has a wide-array of technical lab skills that are outstanding," said Dr. Rusk. "She does all this with a contagious smile and a willingness to always go the extra mile."

Hires and Departures

Josh Payne

State Poultry Specialist

Josh Payne joined our department in July as our state poultry specialist. He develops educational outreach programs and provides both training and support. His research and Extension activities focus on animal mortality management, pathogen control, soil fertility, nutrient management and water quality as they relate to agricultural productivity and environmental quality.

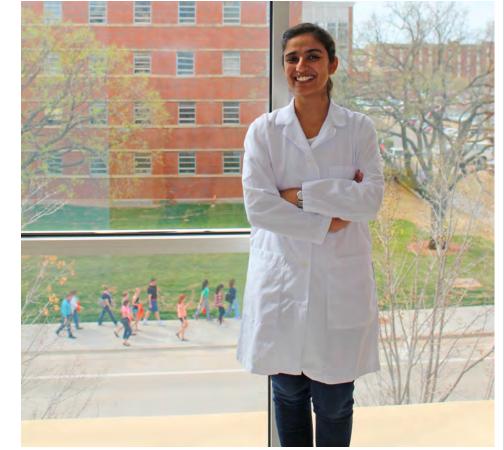
He also serves as coordinator for Oklahoma's Poultry Waste Management Education Program and the Oklahoma Litter Market.



Michelle Calvo Lorenzo

Michelle Calvo Lorenzo, livestock behavior specialist, has accepted a position with Elanco. She has left our department and is now living in Fayetteville, Arkansas. We will miss you Michelle!





Pushpinder Litt in the FAPC building on the OSU campus.

Meat Judging Team Wins 2015 Intercollegiate Championship

The 2015 Oklahoma State University Meat Judging Team was the overall champion at the 26th Australian Intercollegiate Meat Judging Competition hosted by Charles Sturt University in Wagga Wagga, Australia. More than 130 students from 11 Australian Universities and four international teams from the U.S., Japan, South Korea and Indonesia competed for the Roy McDonald Shield sponsored by Meat & Livestock Australia.

OSU finished first in primal and retail ID, pork judging, beef judging and reasons/questions. **Chandler Steele**, Midland, MI, was high individual overall, first in reasons/ questions and first in beef judging. **KC Barnes**, Hulbert, OK, was first in retail/primal ID and first in pork judging. **Hannah Nelson**, Chickasha, OK, was second in pricing and placings. **JT Hearn**, DeLeon Springs, FL and **Haley Seals**, Wasco, CA also represented the team at the contest. Other team mem-



Members of the 2015 OSU Meat Judging Team.

bers include Ty Davis, Macy Perry, Karisa Pfeiffer, Afton Sawyer and Sydney Stewart. The team is coached by Dr. Gretchen Mafi, Morgan Neilson and Wes Griffin.

Quadrathlon National Champions

In July of 2015, the OSU Animal Science Quadrathlon Team won the national championship title at the American Society of Animal Science (ASAS) Academic Quadrathlon competition in Orlando, Florida. The competition occurs at the local, regional and national levels, with winning teams moving up to the next level of the competition. The OSU team won both the local competition at OSU and the regional Quadrathlon (southern section) in order to compete at the national level.

The team placed first in the lab practicum and oral exam, second in the quiz bowl and fourth in the oral presentation. The team competed against Oregon State University, Penn State University and the University of Minnesota. The 2015 OSU Quadrathlon team includes Kelly Vierck, Jessica Neal, Wilma van der Laan and Kara Sutphen. The team was coached by Dr. Scott Carter.



Left to right: Jessica Neal, Kara Sutphen, Wilma van der Laan and Kelly Vierck.

Livestock Judging Team Named Reserve National Champions

On November 16th, the 2015 OSU Livestock Judging Team completed their intercollegiate judging career in Louisville, Kentucky as the Reserve National Champion Team! Within divisions, the team was first in cattle, second in swine, third in oral reasons and 3rd in sheep. The team was fortunate to have three members recognized as All Americans: Elizabeth Nixon, Kyndal Reitzenstein and Matt Walta.

Kyndal Reitzenstein was fourth high individual overall, first in oral reasons, eighth in sheep and tenth in cattle. **Matt Walta** was seventh high individual overall, second in cattle and second in performance cattle. **Ricky Burns** was sixth in oral reasons, seventh in swine and ninth in cattle.

Other team members include: Sam Anthony, Blythe Graham, Macy Griswold, Elizabeth Nixon, Ethan Propp, Trent Ray and Lindsay Tasos. The OSU Livestock Judging Team is coached by Dr. Blake Bloomberg with assistance from Ashley Judge.



The 2015 OSU Livestock Judging Team is pictured above. The picture was taken at the 2015 National Western.

AQHA World Champion Horse Judging Team

It was a great day for Oklahoma State University on Wednesday, November 18th. Not only did the Horse Judging Team work out diligently for one week at the world show held in Oklahoma City, but they were locked in and ready to fire come the morning of competition. After competing at the AQHA World Championship Senior Collegiate Horse Judging Contest, the team brought home all the buckles and the big win. The team members spent many long hours of work, tears, determination and passion during six months of practice. They are an outstanding bunch inside and out. The results are listed below.

Team members consisted of Laura Kerschen, Marissa Chapa, Hope Onstot, Kathryn Rodman, Faith Onstot, Laura Winfield, Kamry Martin and Jeron Rotert. Coaches consisted of Dr. Steven Cooper and Sarah Schobert.

Halter - 1st High Team

2nd High Individual-Faith Onstot 5th High Individual-Hope Onstot 9th High Individual-Laura Kerschen 10th High Individual-Marissa Chapa

Performance - 2nd High Team 2nd High Individual-Hope Onstot

Reasons- 1st High Team

2nd High Individual-Faith Onstot 3rd High Individual-Hope Onstot 7th High Individual-Marissa Chapa 8th High Individual-Laura Kerschen

Overall - 1st High Team

1st and High Individual Overall-Hope Onstot 6th High Individual Overall-Faith Onstot 7th High Individual Overall-Marissa Chapa



Left to right: Dr. Steven Cooper (Coach), Sarah Schobert (Coach), Laura Kerschen, Marissa Chapa, Hope Onstot, Kathryn Rodman, Faith Onstot, Laura Winfield, Kamry Martin, Jeron Rotert and Dr. Clint Rusk (Head, Animal Science).

Events & Activities

Students Visit New Zealand

Dr. Clint Rusk, head of the Department of Animal Science at Oklahoma State University, teamed up with Dr. Julie Walker, beef extension specialist at South Dakota State University, to lead a group of students from both universities on a study abroad trip to New Zealand in May of 2015.

The two week trip was filled with educational visits to farms, purebred studs, agricultural industries and tourist attractions across one of the most beautiful countries in the world. Students were able to visit New Zealand dairy farms, beef studs, sheep farms and red deer operations during their trip. Along with local hotels, the students were able to stay one night with host farm families, which most students said was a highlight of the trip. The study abroad trip went so well that the department is planning another trip to New Zealand for interested students! To learn more about the May study abroad trip, go to http://2015newzealandag.blogspot.com/.



ENG Symposium

Oklahoma State University hosted the 2015 Kenneth and Caroline McDonald Eng Foundation Symposium on September 17th -18th, 2015 in Oklahoma City, OK. The symposium serves as an outlet for universities to present research findings that target improvements in beef cow efficiency and profitability by intensive and semi confined production systems. Research is conducted through grants provided by the Dr. Kenneth and Caroline McDonald Eng Foundation. The 2015 symposium, titled "Innovations in Intensive Beef Cow Production, Care and Management," had speakers from the University of Nebraska, Texas A&M University and Oklahoma State University, as well as a panel of industry professionals.

"I think we've demonstrated that some type of confinement, for semi or partial or part-time, is a very viable management procedure," said Dr. Eng.

Videos of the symposium can be found online at: <u>https://www.youtube.com/watch?v=6p0-Uy1TkPg&list=PLqRdN0lxJF-</u> <u>mR2oR14Ted5Azxh_ymWayU</u>.

Free Horse Workshop

The Open and 4-H Show Management and Exhibitor Seminar will be held December 12th, 2015 at the Totusek Arena from 9a.m. to 4p.m. and is intended for exhibitors, managers and volunteers involved with 4-H and Open Horse Shows. Featured speakers will educate on the needs and criteria for horse show classes, specifically the Ranch classes. There will be a live demonstration with cattle to cover ranch riding, ranch roping, boxing and ranch trail. Presenters will talk about equipment and course design, performance criteria for the horse (what to train for) and how the event is scored.

The workshop is free and open to all ages of the general public, but registration is requested. To register, go online to <u>http://ansi.okstate.edu/equine-program/osu-horse-workshop</u>.

Block & Bridle Convention

The Block and Bridle chapters of Oklahoma State University and Panhandle State University hosted the 96th National Block and Bridle Convention on October 15th to 17th, 2015 in Tulsa, OK. This was OSU's first time to host the convention.

Over 450 students and advisors from 37 universities attended the event. Dr. Deb VanOverbeke, Department of Animal Science professor and OSU Block and Bridle advisor, had a large part in planning this year's convention, including tour stops, speakers, sponsorships and registration. The convention included etiquette sessions, agricultural tours and networking events.

SUPPORT THE DR. MARK JOHNSON CHAIRBACK CAMPAIGN

Each year the Animal Science Alumni Association (ASAA) recognizes an individual with a chairback in the Totusek Arena due to their service and contributions to the department. For the 2016 Chairback Campaign, proceeds will benefit the OSU Purebred Beef Cattle Headquarters Renovation Fund in honor of Dr. Mark Johnson and allow for much-needed renovations. ASAA will also match up to \$25,000 in contributions toward the Purebred Beef Cattle Headquarters Renovation Fund. The matching dollars will go toward the Purebred Beef Center Endowment Fund to help ensure the maintenance of the facility and purebred herd for years to come.



Dr. Mark Z. Johnson OSULivestock Coach, 1992-2013

A lifelong cattleman who made a lasting impression as a livestock judging coach and entrepreneur in the beef industry. Dedicating over 21 years, coaching four national champion teams, and being a seven time Coach of the Year proves his impact at OSU. Family being a priority, his teams were always included in their lives.

A true stockman, Dr. Johnson instilled in his teams the ability to judge smart and capitalize on the experience.

ANIMAL SCIENCE WEEKEND

Friday, April 1

6:00 - 9:00 p.m. **ASAA Gala Reunion** ConocoPhillips OSU Alumni Center Recognition of Dr. Mark Johnson's career, 50-year teams, current judging teams and more.

Saturday, April 2

10:30 a.m.	Old Timers Judging Contest	Totusek Arena
10:30 a.m.	Tour of New Charles and Linda Cline Equine Center	Totusek Arena
12:30 p.m.	Luncheon	Totusek Arena
1:00 p.m.	Annual Meeting of ANSI Alumni Association	Totusek Arena
5:45 p.m.	Animal Science Banquet	Wes Watkins Center

Sunday, April 3



ANIMAL SCIENCE ALUMNI ASSOCIATION OFFICERS AND BOARD OF DIRECTORS

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JOIN US IN HONORING DR. MARK JOHNSON AND HIS COMMITMENT AND SERVICE TO OSU, THE BEEF INDUSTRY AND THE LIVESTOCK JUDGING PROGRAM

Former judging team members, colleagues, and friends in the beef industry have joined together to raise support for Oklahoma State University's Purebred Beef Cattle Center in honor of Dr. Mark Johnson's 20 plus year career in the Animal Science Department and coach of the OSU Livestock Judging Team. Dr. Johnson has been an instrumental leader in the OSU livestock judging program and beef cattle industry. Within animal science, Dr. Johnson has taught Introduction to Animal Science, Live and Advanced Live Animal Evaluation, Beef Seedstock Management and Sales, Beef Cow-calf Management and Animal Breeding. He served as the OSU Livestock Judging Team Coach from 1992 to 2013, coaching the 2001, 2005, 2010 and 2012 National Champion Livestock Judging Teams, including the 2005 team which set the all-time record high team score. The 2001, 2010 and 2012 OSU National Champion teams are

three of only 12 teams in history to win the American Royal and Louisville contests back to back. Dr. Johnson also coached four other teams that won the American Royal, including the 2007 team that holds the all-time record high team score. During his tenure as coach he earned the National Coach of the Year award seven times. Dr. Johnson has served as the Supervisor of the OSU Purebred Beef Cattle Center since 1992; the 300 cow operation includes Angus, Brangus, Hereford, Limousin and Simmental cattle. A lifelong cattleman, he has much experience in judging cattle shows including national events and state fairs. Dr. Johnson has been heavily involved in the American and Oklahoma Angus Associations, along with the Oklahoma Cattlemen's Association. Mark, his wife Brenda and two daughters Sydney and Charley, live on a ranch near Orlando, Oklahoma where they operate J&J Cattle Company.



OUTSTANDING ACHIEVEMENTS OF DR. JOHNSON

1992-2013 | OSU Livestock Judging Team Coach 1992-Present | Supervisor of the OSU Purebred Beef Cattle Center 1993-1995 | Senior College Livestock Judging Coaches Association, President 2004 | OSU CASNR Exemplary Faculty Award 2006 | Tyler Animal Science Professor of Distinction 2009-2010 | Oklahoma Angus Association, President 2009-2011 | Coordinated Oklahoma Angus Association Educational Field Days 2009-2014 | Totusek Endowed Chair in Animal Science 2013 | CASNR Excellence in Student Advising and Mentoring Award 2014 | Oklahoma Angus Association, Mr. Angus Award

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