



K News from KSU Animal Sciences

- **Implementing Your Company's HACCP Plan** will be held March 29-31st 2023 in Columbia, Missouri. This workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors. The registration fee is \$450 per person and is available online at <http://bit.ly/HACCPCourse>. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu or 785-532-1247.)
- Plan to attend the **Midwest Meat Processing Workshop** on Friday, April 28, 2023, in Weber Hall room 111 on the K-State campus. Join us at the workshop and see, hear, taste and ask questions as state award winners share their expertise and demonstrate the manufacture and techniques used to make award winning products. Registration is \$100 per plant and includes lunch for two people and a parking permit for one vehicle. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu or 785-532-1247.)
- **2023 State Livestock Nominations** – the information for state livestock nominations has been released. The process transitioned to an online system in 2022, so there are no longer physical forms for families to complete and mail. Families will purchase DNA envelopes in advance, submit their animal and exhibitor information online, then mail their completed and signed DNA samples by the deadline. Extension Agents and FFA Advisors will approve nominations online. Exhibitors who nominated animals last year (in 2022) need to use their existing ShoWorks account. Market Beef nominations will be due May 1, with Small Animal due by June 15. The deadline to order DNA envelopes has been moved up to 10 days prior to the deadline, which is April 20 and June 5, respectively. Information may be found under the "Nomination Information" tab on the youth livestock website: <http://bit.ly/ksunominations>.
- **K-State to host training leading to BQA certification.** -- Kansas cattle producers will have the opportunity to become Beef Quality Assurance (BQA) certified, or renew an expired certification, this spring through four in-person trainings across the state. BQA is a nationally coordinated, state implemented program that offers education for cattle producers on up-to-date best management strategies with a commitment to quality through every segment of the beef industry. The BQA trainings will be offered by K-State Research and Extension, Kansas Livestock Association and the Kansas Beef Checkoff. At no cost to them, producers can attend one of the following trainings; March 28 - City Limits Convention Center in Colby, March 30 - Butler County Community and 4-H Building in El Dorado, April 11- Stanley Stout Center in Manhattan, or April 13- Hilton Garden Inn in Hays. Each workshop is free of charge and includes complimentary meal. To register for one of the sessions contact Brooke Wines (brooke@kla.org or 785-273-5115.) Onsite registration will also be available at each location. More information is available at www.KSUbeef.org.
- **The 2023 K-State "Wildcat Showdown" will be Sunday, May 7 in Weber Arena.** This will be a sheep and goat livestock show with education and information on sheep and goat production for youth. For more information, contact Payton Dahmer (dahmerp@ksu.edu or 417-448-4934.)

Department of Animal Sciences and Industry
Kansas State University
218 Weber Hall, 1424 Claflin Road
Manhattan, KS 66506
785-532-6533
www.asi.ksu.edu - [Facebook.com/KSUASI](https://www.facebook.com/KSUASI)

March 2023



UPCOMING EVENTS...

- ↪ **Spring Shows and Local Youth Livestock Opportunities'** — Any county that has a youth livestock educational opportunity open to kids outside of the county is invited to share that information with Lexie Hayes (adhayes@ksu.edu). This includes spring shows, showmanship clinics, skillathons, field days, other related events, etc. These opportunities will be included on the youth livestock website, under the events tab.
- ↪ **YQCA Certification Information** - Last March, Youth for the Quality Care of Animals (YQCA) transitioned to a new platform, including a new website. With this change, the original website became inactive and the program is no longer connected to 4HOnline. It is imperative that everyone is using the appropriate link! The correct link is: <https://yqcaprogram.org/>. The old link (yqca.org) should be disregarded from all resources. Everyone is encouraged to utilize the YQCA tab on the K-State Youth Livestock Program website, as it is updated with the most recent information: <https://www.asi.k-state.edu/extension/youth-programs/qualityassurance/qualityassurance.html>. Families who had already received their certification when the transition occurred last year will need to go to the new YQCA Website, create an account for their family, add children to the family, and sign up for their 2022-2023 training. There are several resources available to help guide them through the process, including step-by-step instructions. The YQCA staff also recently released instructional videos to help families correctly create their account and sign youth up for training. Through these videos, they also include common errors that make things more challenging for the families to complete the process. The videos are located at the bottom of the YQCA homepage. All youth who plan to exhibit in the Kansas State Fair Grand Drive and/or KJLS should complete the training at their earliest convenience. It is required for all exhibitors at both state shows. This is an annual training. Those submitting state livestock nominations must have completed their certification at the time of nomination and submit a copy of their completion certificate. Instructor-led trainings are \$3/child, while the web-based course is \$12/child. Youth who are 12 or 15-years-old by January 1 are eligible to test out. Only those two ages have the option to test out, as it is the first year of each age division. For more information about YQCA certification, please contact your local extension office or Lexie Hayes at adhayes@ksu.edu.
- ↪ **2023 K-State Animal Science Leadership Academy (KASLA)**- This academy now has applications open. The goal of this academy will be to further develop young leaders within the livestock industry and prepare them for a successful future in this field. In 2023, the program will be June 21-24. This four-day session will focus on increasing knowledge of Kansas' diverse livestock industry, as well as building participants' leadership skills. Twenty high school students will be selected to participate based upon educational, community, and agricultural involvement, as reflected through an application process. Applications must be postmarked by April 15, 2023. More information and the application form are available at: <https://www.asi.ksu.edu/kasla>. For questions about the academy, please contact Sharon Breiner, Director, at sbreiner@ksu.edu.
- ↪ **Save the date:** 2023 K-State Animal Sciences & Industry Family & Friends Reunion Saturday, October 7. Plan now to join us at the Stanley Stout Center as we recognize Dr. Larry Corah as the 2023 Don L. Good Impact Award Winner. Watch for more details at asi.ksu.edu/familyandfriends and on social media.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
March 18, 2023	Junior Meat Goat Producer Day	Manhattan
March 28, 2023	BQA Training	Colby, KS
March 29-31, 2023	HACCP Workshop	Columbia, MO
March 30, 2023	BQA Training	El Dorado, KS
April 11, 2023	BQA Training	Manhattan
April 13, 2023	BQA Training	Hays, KS
April 28, 2023	Midwest Meat Processing Workshop	Manhattan
May 7, 2023	K-State Wildcat Showdown	Manhattan
June 6-8, 2023	HACCP Workshop	Manhattan
June 21-24, 2023	K-State Animal Science Leadership Academy	Manhattan
June 30-July 1, 2023	Dr. Bob Hines Kansas Swine Classic	Manhattan

What's New for Beef Cattle Producers

Management Minute – Justin Waggoner, Ph.D., KSU Extension Beef Systems Specialist, Garden City, KS

“Agriculture and OSHA”

Agriculture is a high-risk industry, where “near misses,” accidents and even fatalities unfortunately occur. Many agriculture employers believe they are exempt from OSHA regulations and standards. However, agriculture does fall within the scope of OSHA per the “General Duty Clause” (Section 5.a.1., OSHA 1910), which states that “Each employer shall furnish to each of his employees employment and place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.” K-State will be hosting an OSHA-30 hour course for agriculture workers this spring. I would highly encourage anyone who is not familiar with OSHA and your role and responsibilities as an employer or supervisor to take an OSHA course. For more information, contact Justin Waggoner at jwaggon@ksu.edu.

**30 Hour
OSHA
General
Industry
Course**

*for Feedyard,
Dairy, and
Agriculture
Workers*




March 31 • April 14 • April 28 • May 12, 2023
8 AM - 5PM

KSU Southwest Research-Extension Center
4500 E Mary Street
Garden City, KS 67846

Participants must attend all class dates in order to receive OSHA Card.

Cost is \$100/person.
(Discounts offered for multiple registrations from same company.)

**Course size is limited.
Register by March 24, 2023!**

Online Registration Link:
<https://bit.ly/40Ye8xi>
or scan QR Code.



Questions? Contact:
• Justin Waggoner: jwaggon@ksu.edu or 620-275-9164
• Renee Tuttle: rstuttle@ksu.edu or 620-272-3670

Kansas State University is committed to making its services, activities and programs accessible to all participants. If you have special requirements due to physical, vision, or hearing disability, contact Justin Waggoner at 620-275-9164. Kansas State University Agricultural Experiment Station and Cooperative Extension Service. K-State Research and Extension is an equal opportunity provider and employer.

Feedlot Facts – Justin Waggoner, Ph.D., KSU Extension Beef Systems Specialist, Garden City, KS

“Focus on Feedlots: Cattle Performance in 2022”

The *K-State Focus on Feedlots* is a monthly publication that summarizes feedlot performance and closeout data from cooperating commercial cattle feeding operations in Kansas. Each year I summarize the data from the monthly reports, in an effort to document annual trends in fed cattle performance and cost of gain. The tables below summarizes the average performance and closeout data reported for steers and heifers in 2022.

For more information, contact Justin Waggoner at jwaggon@ksu.edu.

Annual Closeout Summary: Steers

Year	Total Head	In Weight	Final Weight	Days on Feed	Avg. Daily Gain	Feed/Gain (Dry Basis)	% Death Loss	Cost of Gain/Cwt
2022	330747	768 (738-804)	1387 (1389-1461)	181 (170-193)	3.57 (3.31-3.76)	6.16 (5.95-6.46)	1.86 (1.15-2.49)	\$125.18 (113.10-139.40)

Annual Closeout Summary: Heifers

Year	Total Head	In Weight	Final Weight	Days on Feed	Avg. Daily Gain	Feed/Gain (Dry Basis)	% Death Loss	Cost of Gain/Cwt
2022	254819	729 (708-763)	1311 (1288-1344)	176 (162-185)	3.23 (3.01-3.50)	6.49 (6.30-6.66)	2.18 (1.27-3.09)	\$134.22 (114.56-147.84)

KSU Cow-Calf Checklist – March 2023

Management Considerations for May 2023

By Jason M. Warner, Ph.D., Extension Cow-Calf Specialist

Cow Herd Management

- If cows are marginal (BCS 4.0 – 5.0) going into breeding, possibly consider:
 - Supplementing 2-3 weeks prior to and through 1st cycle.
 - Using monensin (200 mg/hd/day) in feed supplements.
 - Temporary calf removal or a CIDR to initiate estrus in anestrus females.
 - Early weaning if BCS doesn't improve during the season.
- Pregnancy check and cull fall calving cows, if not already done.
- With higher costs, it's important to closely manage salt and mineral programs.
 - Record date and amount of salt and mineral offered and calculate herd consumption.
 - If consumption is 2X the target intake, then cost will be too!
 - Properly store bags and pallets to avoid damage and product loss.
- Continue to provide high magnesium mineral formulas to cows grazing high risk forages: wheat, rye, triticale, oats, bromegrass, and other cool-season forages.
- The estrus synchronization planner on KSUBeef.org is a helpful tool for scheduling synchronization protocols.
 - Order your A.I. supplies well prior to starting your protocols.
- Closely monitor bulls at the start of the breeding season for injury and to make sure they are aggressively covering cows.

Calf Management

- Calculate the value of gain relative to cost of gain for:
 - implanting nursing calves and grass cattle.
 - creep feeding nursing calves
- Finalize health protocols for spring-born calves and cattle going to summer grass.
- Consider supplementing or feeding replacement heifers for a period when initially turning to grass if they don't have post-weaning grazing experience and/or forage supply is limited.

General Management

- Reconsider stocking rates and turn-out dates for drought stressed pastures.
- Begin implementing early-season weed/invasive species control.
- Use the Management Minder tool on KSUBeef.org to plan key management activities for your cow herd for the rest of the year.
- Employ multiple strategies and chemistries for controlling flies and insects.
- With high feeder calf prices this spring, consider price risk management tools.
- Make and evaluate important production calculations:
 - Calving distribution (% 1st cycle, % 2nd cycle, % 3rd cycle)
 - Calving interval
 - % calf crop (# calves weaned/# cows exposed for breeding) for calves born in fall 2022.

What's New for Beef Producers

↪ **Effects of Prescribed-Fire Timing on Stocker Cattle Performance, Forage Biomass Accumulation, and Native Plant Species Composition**- The objective of this experiment was to document the effects of prescribed-fire timing on stocker cattle performance, forage biomass accumulation, soil cover, and plant species composition in the Kansas Flint Hills. A total of 1,416 yearling stocker cattle were assigned to one of three prescribed-burn treatments: spring (April 9 ± 5.1 days), summer (August 23 ± 4.9 days), or fall (September 29 ± 8.7 days) over a 4-year period. Calves were grazed from May to August for 90 days. Individual body weights were recorded at the beginning and end of the grazing season. Native plant composition and soil cover were evaluated annually using a modified step-point method, and forage biomass was measured biannually.

The Bottom Line: Flint Hills ranchers can employ late-summer prescribed fires to manage sericea lespedeza (*Lespedeza cuneata*) infestations without negatively impacting stocker cattle growth performance, forage biomass accumulation, or native rangeland plant species composition. More information is available on this experiment and others in the KSU Cattlemen's Day report at www.KSUbeef.org. For more information, contact KC Olson (785-532-1254; kcolson@ksu.edu) or Dale Blasi (785-532-5427; dblasi@ksu.edu.)

↪ **Assessment of Novel Semen Evaluation Technologies and Breed Comparisons in Yearling Beef Bulls**- The objectives were 1) to evaluate the iSperm, when conducting breeding soundness exams (BSE) on bulls by comparing sperm motility to a technician's assessment and 2) to evaluate correlations between sperm response to reactive oxygen species (ROS) and functional sperm measurements. Ejaculates were collected via electroejaculation from yearling bulls as part of a BSE. All BSE were conducted by one veterinarian and ejaculates were evaluated by a single technician. Additional sperm motility analysis was conducted with the iSperm analyzer. Ejaculates meeting minimum thresholds for passing a BSE were diluted and sent overnight for flow cytometry evaluation. Data were analyzed using Pearson's correlation coefficients in SAS. Both gross and progressive motilities were significantly ($r = 0.30$; 0.38 ; $P < 0.001$) correlated to the technician's assessment of progressive motility. Percentage of live spermatozoa with positive ROS status was correlated ($r = 0.53$; $P < 0.001$) with percentage progressive motility. Percentage of live spermatozoa with negative ROS status was moderately correlated with percentage spermatozoa exhibiting secondary abnormalities ($r = 0.33$; $P = 0.02$). Percentage live spermatozoa that had disrupted acrosomes was strongly correlated with percentage live spermatozoa with negative ROS ($r = 0.66$; $P < 0.001$) and moderately negatively correlated with percentage live spermatozoa with positive ROS ($r = -0.31$; $P = 0.04$). Percentage of live spermatozoa with positive ROS status was correlated ($r = 0.58$; $P < 0.001$) with percentage of spermatozoa with active mitochondrial membranes. Percentage of live spermatozoa with positive OS status was strongly correlated ($r = 0.92$; $P < 0.001$) with percentage of live spermatozoa with intact acrosomes.

The Bottom Line: The iSperm can be used to produce semen assessments similar to those of a trained technician and may offer a useful tool for producers to perform on-farm semen analysis. Sperm health and function continue to be related to negative ROS status. More information is available on this experiment and others in the KSU Cattlemen's Day report at www.KSUbeef.org. For more information, contact Karol Fike (785-532-1104; karol@ksu.edu) or Sandy Johnson (785-462-6281; sandyj@ksu.edu.)

↪ **Determination of Consumer Color and Discoloration Thresholds for Purchase of Retail Ground Beef When Evaluating Multiple Days of Display Simultaneously**- The objective of this study was to identify the threshold for color and discoloration for consumers to purchase ground beef in a simulated retail display and to determine the best objective measurement to predict consumer purchase intent. For this study, 180 1-lb 80% lean/20% fat ground beef packages were assigned to a day of retail display (day 0–9). Consumers ($n = 216$) and trained descriptive panelists evaluated ground beef samples from each day of display simultaneously. Instrumental L^* (lightness), a^* (redness), and b^* (yellowness) values were collected, and spectral data were recorded. Logistic and simple linear regression models were calculated for consumer likelihood to purchase and appearance ratings. Pearson correlation coefficients were calculated for all measurements.

The Bottom Line: The models generated from this study provide the ability to predict consumer willingness to purchase ground beef of varying days of retail display and provide ground beef producers an indication of potential consumer purchasing behaviors based upon objective values that are easy to measure. More information is available on this experiment and others in the KSU Cattlemen's Day report at www.KSUbeef.org. For more information, contact Travis O'Quinn (785-532-3469; travisquinn@ksu.edu) or Elizabeth Boyle (785-532-1247; lboyle@ksu.edu.)

What's New for Swine Producers

☞ **Evaluating a Dry vs. Wet Disinfection in Boot Baths on Detection of Porcine Epidemic Diarrhea Virus and Porcine Reproductive and Respiratory Syndrome Virus RNA-**

Maintaining biosecurity between swine barns is challenging, and boot baths are an easily implementable option some utilize to limit pathogen spread. However, there are concerns regarding their efficacy, especially when comparing wet or dry disinfectants. The objective of this study was to evaluate the efficacy of boot baths in reducing the quantity of detectable porcine epidemic diarrhea virus (PEDV) and porcine reproductive and respiratory syndrome virus (PRRSV) genetic material using wet or dry disinfectants. Treatments included 1) control; 2) dry chlorine powder (Traffic C.O.P., PSP, LLC, Rainsville, AL); and 3) wet quaternary ammonium/glutaraldehyde liquid (1:256 Synergize, Neogen, Lexington, KY). Prior to disinfection, rubber boots were inoculated with 1 mL of co-inoculants of PRRSV (1×10^5 TCID₅₀/mL) and PEDV (1×10^5 TCID₅₀/mL) and dried for 15 min. After the drying period, a researcher placed the boot on the right foot and stepped directly on a stainless steel coupon (control). Alternatively, the researcher stepped first into a boot bath containing either the wet or dry sanitizer, stood for 3 s, and then stepped onto a steel coupon. After one min, an environmental swab was then collected and processed from each boot and steel coupon. The procedure was replicated 12 times per disinfectant treatment. Samples were analyzed using a duplex qPCR at the Kansas State Veterinary Diagnostic Laboratory. Cycle threshold values, which indicate the presence or absence of the inoculants and their relative concentrations when present, were analyzed using SAS GLIMMIX (v. 9.4, SAS Institute, Inc., Cary, NC). There was no evidence of a disinfectant \times surface \times virus interaction. An interaction between disinfectant \times surface impacted the quantity of detectable viral RNA. As expected, the quantity of the viruses on the coupon were greatest in the control, indicating that a contaminated boot has the ability to transfer viruses from a contaminated surface to a clean surface. Comparatively, the dry disinfectant treatment resulted in no detectable viral RNA on either the boot or subsequent coupon. The wet disinfectant treatment had statistically similar viral contamination to the control on the boot, but less viral contamination compared to the control on the metal coupon. In this experiment, a boot bath with dry powder was the most efficacious in reducing the detectable viral RNA on both boots and subsequent surfaces.

More information is available on this experiment and others in the KSU Swine day report at www.KSUSwine.org. (This study conducted by Olivia Harrison, Grace Houston, Allison Blomme, Haley Otott, Jianfa Bai, Elizabeth Poulsen Porter, Jason Woodworth, Chad Paulk, Jordan Gebhardt, Cassandra Jones.)

☞ **Effect of Increasing the Level of a Modified Corn Protein on Nursery Pig Growth Performance, Feed Efficiency, and Fecal Dry Matter-**

A total of 360 barrows (DNA 200 \times 400; initially 13.4 ± 0.12 lb) were used in a 38-d study to evaluate the effects of increasing levels of a modified corn protein product on nursery pig growth performance and fecal dry matter. Upon arrival to the nursery research facility, pigs were randomly assigned to pens (5 pigs per pen) and pens were allotted to 1 of 6 dietary treatments with 12 pens per treatment. Experimental diets were fed in two phases with phase 1 fed from d 0 to 10 and phase 2 fed from d 10 to 25. Phase 1 diets were formulated with 3, 6, 9, 12, and 15% of a modified corn protein or 6% enzymatically treated soybean meal (ESBM). The inclusion level of the test protein source and ESBM for the phase 2 diets were: 1.5, 3, 4.5, 6, 7.5, and 3%, respectively. A common phase 3 diet was fed from d 25 to 38. Phase 1 treatment diets were fed in pellet form, with phases 2 and 3 fed in meal form. During the phase 1 period, there was no evidence for differences in ADG, ADFI, or F/G. There was a tendency for increased d 10 BW as the level of the modified corn protein increased. From d 10 to 25 (phase 2 period), increasing the level of modified corn protein increased d 25 BW, ADG and ADFI. Feed efficiency worsened with increasing levels of modified corn protein source. From d 0 to 25 (experimental period), ADG and ADFI increased, and F/G worsened. From d 25 to 38 (common period), there was no evidence for differences in growth performance. For the overall experiment, ADG and ADFI increased then decreased, with pigs fed the intermediate inclusion of modified corn protein (6.0 and 3.0% in phases 1 and 2, respectively) having the best performance. There was also evidence for F/G to worsen as the inclusion level of modified corn protein increased and this may be reflective of lower energy diets and/or overestimation of the energy value of the modified corn protein product. Fecal DM on d 25 tended to increase as the level of the modified corn protein was increased, although no evidence of a difference was observed between treatments on d 10. There was greater fecal DM on d 25 compared to d 10. These data suggest that the modified corn protein tested in this trial may be an alternative protein source to consider for nursery pig diets, when fed up to 12% in phase 1 and 6% in phase 2. Additional research should be conducted to confirm the energy value of the modified corn protein product utilized in this study. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Alan Warner, Jason Woodworth, Joel DeRouchey, Mike Tokach, Robert Goodband, Jordan Gebhardt, Keith Mertz.)

ASI FACULTY SPOTLIGHT...



Travis O'Quinn (travisquinn@ksu.edu; 785-532-3469)
Associate Professor

Dr. Travis O'Quinn was born in League City, TX. Through his youth, Dr. O'Quinn was actively involved in 4-H and FFA, participating on numerous judging teams including meats, livestock, and land. He graduated with his B.S. (2008) and M.S. (2010) degrees from Texas Tech University and earned a Ph.D. in Meat Science from Colorado State University (2012). Upon graduation, he returned to Texas Tech to conduct a post-doctoral research project working to develop a palatability-based beef grading system for the largest beef producer in New Zealand. Travis joined the Department of Animal Sciences and Industry at Kansas State University in July of 2014 with a 60% extension and 40% research appointment.

Dr. O'Quinn's research interests center on beef palatability and the factors affecting the traits of tenderness, juiciness and flavor. He has conducted research involving more than 13,000 beef consumers from across the country. He has worked extensively to evaluate the factors affecting beef flavor and to identify the production and management practices that can modify the flavor profile of beef. He has also worked to develop a technique to quantify and predict beef juiciness. He oversees the state 4-H and FFA meat judging programs and works to help increase student involvement in the meat industry through the growth of these programs.

Travis enjoys training and mentoring students, both undergraduate and graduate. He currently serves as the faculty advisor and coach of the K-State Meat Judging Team, as well as the K-State Meat Animal Evaluation Team. He is also the faculty advisor to the Meat Science Academic Quiz Bowl team.

In his free time, Travis enjoys spending time with his wife, Megan. The two live in Wamego, KS, and are avid sports fans, keeping up with all things college football, MLB and NFL.

Celsey Crabtree (celseyb@ksu.edu; 785-532-1193)
Teaching Associate



After graduating with a B.S. from Kansas State University (2015) and obtaining her M.S. degree from Colorado State University (2017), Dr. Celsey Crabtree joined Kansas State University in 2017. Celsey finished her Ph.D. in Curriculum and Instruction in 2022, specializing in online agriculture education courses.

Growing up on a small family farm in northcentral Kansas, Crabtree has always had a love for KSU, cattle, horses, and education. Her parents still have a small herd of Angus cattle and breed a few horses every year in Cuba, KS. Crabtree now lives east of Manhattan with her husband, son, a few dogs, some chickens, and horses.

Crabtree is currently teaching on-campus and online Companion Animal and Equine lab, Beginning Horse Evaluation, and coaches the horse judging team. Crabtree was a part of the KSU 2014 AQHA Congress Champion, and Reserve World Champion Horse Judging team and went on to coach an AQHA Reserve Congress Champion team at CSU.

In her free time, she enjoys showing horses throughout the Midwest and spending time at home with her son and husband. Crabtree is very involved in the horse industry as she is a State Director for the American Paint Horse Association and is a part of the American Quarter Horse Association's Young Adult Leadership Program.

*We need your input! If you have any suggestions or comments on **News from KSU Animal Sciences**, please let us know by email to katiesmith@ksu.edu*