

K News from KSU Animal Sciences

↪ **State Livestock Nominations due June 15** – All small livestock and commercial heifer state nominations (non-market beef) are due June 15. This includes commercial heifers, market swine, commercial gilts, market lambs, commercial ewes, and ALL meat goats. Animals must be submitted online by this date, as well as the completed and signed official DNA envelopes being postmarked. Families also need to submit a copy of their receipt showing the list of all animals that were entered in the system for their family. Both state shows now have a breeding doe show. However, there is not a separate division for registered breeding does at either state show, so all meat goats must be nominated in order to be eligible to show. This year, families must submit the animals under each child within the family for all kids to be eligible to show the animal. All youth must also sign the DNA envelope for each animal. Family nominations are still being honored; families just enter them under each kid online and make sure everyone signs the envelopes. There is a red “auto-fill from previous” button that will allow animals already nominated under one child to quickly be added to other siblings. Families must also designate the market or commercial breeding division for each animal. All females can be dual nominated in both divisions. However, only one DNA envelope needs to be submitted, as it is the same animal.

The 2022 state livestock information is available from the KSU Youth Livestock Program website (www.asi.k-state.edu/research-and-extension/youth-programs). No paper forms will be accepted this year; all nominations must be submitted online. Several resources are available to guide families in successfully completing their nominations, including the Rookie Guide and Zoom session recordings. Families must plan ahead this year. The general process includes the following four steps:

- 1) Purchase official DNA envelopes in advance through the online system (deadline has passed).
- 2) Enter animal data and exhibitor information through the online nomination system by 5:00PM on June 15. This includes uploading each child’s current YQCA certificate (valid through 10/2/22) and the Declaration Form representing the entire family.
- 3) Mail completed DNA envelopes and copy of online submission receipt by June 15 (postmark deadline).
- 4) Nominations will be approved online by Extension Agents and FFA Advisors.

All families are encouraged to use the specie checklist as a guide to ensure their nominations are complete upon submission. This resource may be found on the KSU Youth Livestock Program website or through the local county office. There should NOT be a single exhibitor signature DNA, or animals only entered under one kid online, unless there is only one child eligible to exhibit within the family. Once the first animal nomination is entered for each child, the system will prompt users to upload the child’s YQCA certificate and Declaration Form. YQCA certification must be completed at the time of nomination. The Declaration Form needs to be physically signed or have official digital signatures through the Adobe fill and sign function. Families with young exhibitors are encouraged to have them physically sign the forms. Then, they can be scanned in and uploaded, or families may upload a quality photo of the completed form. Either is acceptable. Once any form is uploaded, the system does not allow families to edit their forms. So, both the YQCA and Declaration Form must be uploaded at the same time in the system.

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June 2022 issue



UPCOMING EVENTS...

Youth who only have registered breeding females will submit this information for each show at the time of entry.

Ear notches are also required for swine nominations and full scrapie tag numbers are required for sheep and goats. The scrapie tag number must include the Flock ID and individual animal number (example: KSS0035 16121). Nominations received without this information will be considered incomplete and returned to the family for completion. Resources on reading ear notches and submitting scrapie tag numbers are available on the website.

Confirmation letters will be sent to families once their DNA envelopes are received and nominations have been processed. The reports will be updated on the KSU Youth Livestock Program website periodically until we reach the deadline, then more frequently after that. Families are encouraged to use one of these options to verify their nominations. For more information, contact Lexie Hayes (adhayes@ksu.edu; 785-532-1264).

REMINDER - A complete nomination does NOT constitute show entry. The Kansas State Fair Grand Drive entries will be available once nominations close. The link to entry will be available on the Grand Drive website (<https://www.kansasstatefair.com/p/competitions/2020-special-edition-4-h--ffa-grand-drive>) and KJLS (<https://kjls.org/>) will release entry information to agents and through its website later this summer. State Fair Grand Drive entries will be due July 15, with KJLS entries due August 15. Animals that are nominated, but do not follow the appropriate entry processes set forth by each show, will not be permitted to show. For nomination questions, please contact Lexie Hayes at adhayes@ksu.edu. Questions regarding show rules or entries should be directed to each specific show (KSF Grand Drive 620-669-3623; KJLS 316-706-9750).

↳ **YQCA Requirement for 2022 State Shows** – Youth for the Quality Care of Animals (YQCA) is a national, multi-species youth livestock quality assurance program that focuses on food safety, animal well-being, and life skill development, through age-appropriate educational curriculum for youth 7-21 years of age. This program is an annual certification that grows with a young person, so the learning modules are different every year. ALL exhibitors are required to be YQCA certified in order to participate in the 2022 Kansas State Fair Grand Drive and/or Kansas Junior Livestock Show (KJLS). This includes youth who will be showing market animals, commercial breeding females, and/or registered purebred breeding females. Families should contact their local extension office to see what options are available in their area.

Certification needs to be completed at the time of nomination or the materials will be considered incomplete. The YQCA program transitioned to a new platform in late March. All families will need to create a new account on www.yqcaprogram.org to register and complete trainings. For more information, contact Lexie Hayes (adhayes@ksu.edu; 785-532-1264).

↳ **Implementing Your Company's HACCP Plan** will be hosted June 22-24, 2022, in Manhattan, KS. 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 <https://www.asi.k-state.edu/research-and-extension/meat-science/HACCPcourse.html>. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu; 785-532-1247).

↳ **K-State Animal Science Leadership Academy (KASLA) Program** will offer one session June 22-25. 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. The four-day session will focus on increasing knowledge of Kansas' diverse livestock industry, as well as building participants' leadership skills. For questions about the academy, visit www.asi.ksu.edu/KASLA or contact Sharon Breiner, Director, at sbreiner@ksu.edu or 785-532-6533.

UPCOMING EVENTS...

☞ The **2022 Dr. Bob Hines Kansas Swine Classic** is scheduled for July 1-2 at the Riley County Fairgrounds in CiCo Park in Manhattan. This two-day event includes an educational swine skillathon, photography contest, showmanship, and a prospect and market hog show. It is open to all Kansas youth ages 7-18 as of January 1, 2022. Online entries are required. Checks to accompany entry receipt must be postmarked by June 15, 2022. Outlined below is a schedule of this year's program.

Friday, July 1

- 8:30 a.m. Barn open for arrival
- Noon All pigs in place
- 1 p.m. Swine photo check-in by the show ring
- 1 – 3 p.m. Swine Skillathon in the show ring
- 4 p.m. Ice cream party by the show ring
- 5:30 p.m. Showmanship contests

Saturday, July 2

- 8 a.m. Prospect Pig Show followed by Barrow and Gilt Market Pig Show

Watch the youth livestock website, the KSU Swine website and Facebook for the latest details! For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Lexie Hayes (785-532-1264; adhayes@ksu.edu).

☞ Save the Date - **Livestock Sweepstakes** - The 2022 Kansas 4-H Livestock Sweepstakes is scheduled for August 20-21 on the K-State campus in Manhattan, KS. The Sweepstakes event includes the state 4-H livestock judging contest, meat judging contest, livestock skillathon, and livestock quiz bowl. Rules are available on the 4-H Livestock Sweepstakes tab of the youth livestock program website. The deadline to enter will be August 1. All entries must be made by your local Extension Unit using the link provided directly to agents and KSRE staff. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

☞ Mark Thursday, September 29, 2022, on your calendar for the **KSU Beef Stocker Field Day** hosted at the KSU Beef Stocker Unit. The registration details and a complete schedule will be coming shortly. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).

☞ Watch for more details coming soon on the 2022 **ASI Family and Friends Reunion**. New for this year, the event will change from a Friday event to Saturday, October 8. This year we will be honoring Dr. Dave Nichols with the Don L. Good Impact Award. Make plans now to attend.

☞ Watch the **KSU ASI Headlines** for May 2022 and find out the latest happenings in the department. Follow the link at <https://youtu.be/nk34oSp80v8>. For questions about the department, contact Dr. Mike Day, ASI Department Head, at 785-532-1259; mlday@ksu.edu.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 15, 2022	State Livestock Nominations due	
June 22-24, 2022	Implementing Your Company's HACCP Plan	Manhattan
June 22-25, 2022	K-State Animal Science Leadership Academy	Manhattan
July 1-2, 2022	Dr. Bob Hines Kansas Swine Classic	Manhattan
August 20-21, 2022	Kansas 4-H Livestock Sweepstakes	Manhattan
September 29, 2022	KSU Beef Stocker Field Day	Manhattan
October 8, 2022	ASI Family and Friends Reunion	Manhattan

WHAT'S NEW...

Management Minute – Justin Waggoner, Ph.D., Beef Systems Specialist

“The Current Labor Crisis”

“Good help is hard to find” and that old saying is truer today than it may have ever been. All industries, including agriculture, experience challenges in filling available positions on occasion. However, many seasoned managers indicate that they are struggling to even get applicants for positions. So, what are some of the reasons behind what is being referred to as the “labor crisis?” A recent report from the U.S. Chamber of Commerce (<https://www.uschamber.com>) cites the pandemic as one of the major disruptions in the U.S. labor force. In 2021, 47 million workers quit their jobs. Some chose to return to the workforce seeking jobs with better benefits, flexibility or work-life balance and others may have chosen retirement or to become stay-at-home parents. The industry with the highest “quit rates” was the leisure and hospitality industry, while the financial industry experienced the lowest rates. The question that remains is what can employers do to be more attractive to potential job applicants. The report suggests employers explore providing childcare benefits or provide opportunities for new hires to improve their skills sets through supported training programs or educational benefits.

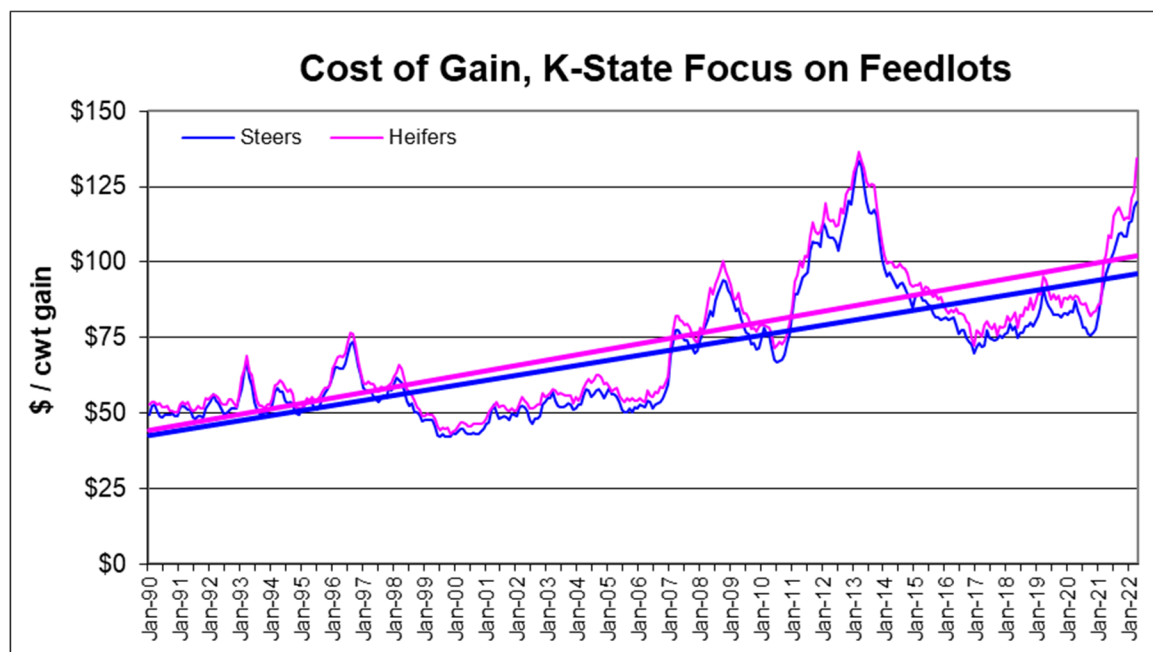
For more information, contact Justin Waggoner at jwaggon@ksu.edu.

Feedlot Facts – Justin Waggoner, Ph.D., Beef Systems Specialist

“Historical Perspective on Feedlot Cost of Gain”

The most recent edition of the K-State Focus on Feedlots reported an average cost of gain of \$119.97/cwt. and \$134.44/cwt. for steers and heifers marketed in April, respectively. The average placed cost of gain was \$138.25/cwt. for steers and \$136.25/cwt. for heifers, with an average corn price of \$7.95/bu. These values have prompted many to ask if these values are the highest cost of gains and placed cost of gains we have seen?

The answer to that question is no, not yet. However, we are certainly getting close. The highest reported cost of gains for steers and heifers in the Focus on Feedlot data (Jan. 1990-present) occurred in March 2013 (\$133.72/cwt. for steers and \$136.76/cwt. for heifers). The graph below illustrates the reported cost of gain from 1990 to present. As the data in the graph illustrates, we have seen cost of gain values in excess of \$125/cwt. for both steers and heifers during the spring of 2013.



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

WHAT'S NEW...

- ☞ **Feed Efficiency is Better and Activity is Greater in Growing Cattle Limit-Fed a High-Energy Diet During the Growing Phase Compared to a Traditional Roughage-Based Diet Fed for *Ad Libitum* Intake** - The objective of this experiment was to compare performance impacts of a high-energy diet limit-fed at 2.2% of body weight (BW) daily on a dry matter (DM) basis to a traditional roughage-based diet fed for *ad libitum* intake during the growing phase. Three hundred seventy crossbred heifers were used in a receiving and growing study at the Kansas State University Beef Stocker Unit in the spring of 2020. Animals were fed once daily at 7:00 a.m. Bunks were visually observed, and feed refused was estimated. *Ad libitum* feed refusal was targeted at 20 lb. A pen scale was used to measure weekly pen BW, adjust feed offerings, and to calculate pen performance.
- The Bottom Line:** Growing heifers limit-fed a high-energy diet at 2.2% of BW daily on a DM basis had 35% better feed efficiency and were more active by 23 minutes per day, on average, than heifers full-fed a traditional roughage-based diet. More information is available on this experiment in the KSU Cattlemen's Day report at www.KSUbeef.org. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu).
- ☞ **Challenges Associated with Semen Quality While Collecting Beef Bulls for Semen Freezing** - The objective of this study was to evaluate the frequency of failure to freeze semen due to semen quality. Semen collection data from 2008 to 2018 were obtained from the Kansas Artificial Breeding Services Unit and consisted of 14,750 ejaculates from bulls. Bulls were collected twice weekly on Mondays and Thursdays with an artificial vagina. Bulls not receptive to the artificial vagina were subject to electro-ejaculation. A single technician was responsible for all pre-freeze and post-thaw semen analysis. Ejaculates were required to meet quality standards for both progressive motility and morphology. Over the ten years, 21% of ejaculates met all freezing quality standards, 11% of all ejaculates collected did not have a high enough motility to be considered satisfactory for a breeding soundness exam (BSE), and 63% of all ejaculates did not reach the motility quality threshold for freezing. Ejaculates from bulls ≤ 12 months of age produced ejaculates that would not meet satisfactory levels of a BSE 15% of the time. Ejaculates from bulls 13–18 months of age produced unsatisfactory ejaculates for motility for a BSE 6% of the time. When evaluating primary sperm abnormalities, 87% of ejaculates had less than 20% primary sperm abnormalities. Ejaculates from bulls ≤ 12 months of age produced the highest amount of ejaculates failing due to primary abnormalities with 24%, while bulls ≥ 31 months of age produced the least amount of ejaculates failing due to primary abnormalities at 10% of ejaculates. When evaluating total sperm abnormalities per ejaculate, 77% of ejaculates met the threshold of less than 30% total abnormalities. Ejaculates from bulls ≤ 12 months of age failed to meet the total sperm abnormality threshold 28% of the time. These results highlight one of the main difficulties of collecting freezing quality semen, in which semen meets the standards of normal spermatozoa but where most samples do not meet needs for progressive motility.
- The Bottom Line:** Of over 14,000 collections, only 21% met all requirements for freezing semen, approximately 63% did not meet progressive motility freezing standards, and 11% did not meet the satisfactory level of a BSE. More information is available on this experiment and others in the KSU Cattlemen's Day report at www.KSUbeef.org. For more information, contact David Grieger (785-532-1229; dgrieger@ksu.edu) or A.J. Tarpoff (785-532-1255; tarpoff@ksu.edu).
- ☞ **Changes in the Perception of Ground Beef Quality as a Result of Price Per Pound Labeling** - The objective of this study was to determine the effect of perceived palatability on ground beef patties by providing consumers with differing price per pound labels. Ground beef chubs of 80% lean/20% fat composition were used for all samples. Patties were formed 11 days after processing into 0.25 lb patties using a commercial patty former. Samples were cooked to 160°F and served to consumers to determine different quality attributes. Consumers were given the following prices for each sample: Ultra-High - \$6.25/lb; High - \$5.00/lb; Medium - \$3.75/lb; Low - \$2.50/lb; Ultra-Low - \$1.25/lb or no information provided (NONE).
- The Bottom Line:** Based on this research, consumer's quality perception is affected by price variations, but not the willingness to purchase, indicating consumers are not willing to pay more for ground beef even with an improved eating experience. 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 Liz Boyle (785-532-1247; lboyle@ksu.edu).

WHAT'S NEW...

- ☞ **Evaluating Dietary Acidifiers as Alternatives to Conventional Feed-Based Antibiotics in Nursery Pig Diets** - A total of 360 weaning pigs were used in a 21-d experiment with six pigs/pen, ten replicate pens/treatment, and two separate nursery rooms, each with thirty pens. Pigs were weighed and allotted to pens based on BW in a completely randomized block design to one of six treatment diets: 1) negative control (no organic acids or antibiotics) and the control with 2) 0.25% acidifier A; 3) 0.3% acidifier B; 4) 0.5% acidifier C; 5) 50 g/ton carbadox; and 6) 400 g/ton chlortetracycline (CTC). Upon weaning, a common diet with no antibiotics or additives was fed for 21 d (Phases 1 and 2; days -21 to 0), followed by a 21-d experimental period (Phase 3; days 0 to 21) where treatment diets were fed. Pigs and feeders were individually weighed on a weekly basis to calculate ADG, ADFI, and F/G. Data were analyzed using the GLIMMIX procedure of SAS with pen as the experimental unit, treatment as a fixed effect, and room as a random effect. Dietary treatment had a significant impact on ADG, ADFI, and G:F each week and for the overall experimental period. Specifically, from days 0 to 7, pigs fed CTC had increased ADG compared with those fed acidifier B, acidifier C, and carbadox, whereas pigs fed the negative control and acidifier A diets were intermediate. Additionally, pigs fed the CTC diet had improved ADFI when compared with all other treatments. From days 7 to 14 and days 14 to 21, pigs fed the carbadox diet had decreased ADG compared with all other treatments. During the overall period, pigs fed diets containing carbadox had reduced ADG and ADFI, whereas pigs fed CTC had improved ADG compared with all other treatments. Additionally, fecal consistency, and fecal microbial populations were analyzed on a subset of pigs. Treatment also significantly impacted fecal score but did not affect fecal microbial growth from days 0 to 21. In summary, CTC continues to be a valuable additive to improve performance in the nursery. Further investigation surrounding the efficacy of dietary acidifiers as antibiotic alternatives is warranted given inconclusive evidence in this study. More information is available on this experiment in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Payton L. Dahmer and Cassandra K. Jones.)
- ☞ **Evaluation of Selenium Source on Nursery Pig Growth Performance, Serum and Tissue Selenium Concentrations, and Serum Antioxidant Status** - A total of 3,888 pigs were used in a 42-d trial. At the time of placement, pens of pigs were weighed and allotted to one of three dietary treatments in a randomized complete block design with blocking structure including sow farm origin, date of entry into the facility, and average pen body weight. A total of 144 pens were used with 72 double-sided 5-hole stainless steel fence line feeders, with feeder serving as the experimental unit. For each feeder, one pen contained 27 gilts and one pen contained 27 barrows. There were twenty-four replicates per dietary treatment. Diets were fed in three phases and all contained 0.3 ppm added selenium. A common phase 1 diet contained added selenium from sodium selenite and was fed in pelleted form to all pigs for approximately 7 d. Three selenium sources [sodium selenite; selenium yeast; and hydroxy-selenomethionine (OH-SeMet)] were used to formulate three experimental diets in meal form for phase 2 and phase 3. From d 0 to 7, there was marginally significant evidence of a difference in ADFI, although no significant pairwise differences were observed. There were no additional differences in growth performance between treatments during the d 0 to 7 period. Clinical disease attributed to *Streptococcus suis* was observed within the trial, and water soluble antimicrobial therapy was administered to all treatment groups. From d 7 to 42, pigs fed OH-SeMet tended to have decreased ADG and had increased serum and tissue selenium concentration compared to other treatments. There was marginally significant evidence of a source × day interaction for T-AOC where the numerical increase over time was less for the OH-SeMet compared to sodium selenite or selenium yeast treatments. There was no difference in antioxidant status as measured by serum GSH-Px or TBARS assay between treatments. In summary, compared to sodium selenite and selenium yeast, OH-SeMet had greater bioavailability as indicated by increased serum and tissue selenium concentration; however, antioxidant status was similar between treatments, and OH-SeMet tended to reduce growth performance compared with pigs fed sodium selenite. More information is available on this experiment in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Zhong-Xing Rao, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouchey, Robert D. Goodband, Michele De Marco, Steven Moreland, and Jordan T. Gebhardt.)
- ☞ **Evaluation of a Dried Fermentation Product Administered Through Drinking Water on Nursery Pig Growth Performance, Fecal Consistency, and Antibiotic Injections** - A total of 350 barrows were used in a 42-d study to evaluate the effects of a dried fermentation product administered through drinking water on nursery pig growth performance, antibiotic injection frequency, fecal consistency, and fecal *E. coli* presence. Upon arrival to the nursery research facility, pigs were randomly assigned to pens and pens were allotted to one of two water treatments with thirty-five pens per treatment. Water treatments were provided with or without a fermentation product administered through the water lines at a 1:128 dilution rate from d 0 to 14 after weaning. From d 0 to 14, 14 to 42, and for the overall experiment, there was no evidence for differences observed for any growth performance criteria. There was evidence for day effect on diarrhea presence. Diarrhea presence increased on d 4 and 6, then decreased to low levels. There was no evidence for the fermentation product to influence diarrhea incidence. For antibiotic injections, there was no evidence for differences observed between treatments. Mortalities were low, with no evidence for differences observed between treatments for removals or mortalities. For fecal dry matter on d 7 and 14, there was no evidence for differences observed between treatments. In summary, under these experimental conditions, administering a dried fermentation product for the first 14 d in the nursery through the drinking water did not improve growth performance, fecal dry matter, diarrhea presence, antibiotic injections, or removals and mortalities in nursery pigs. Further evaluation of the dried fermentation product in commercial facilities with greater diarrhea and mortality is needed. More information is available on this experiment at www.KSUSwine.org. (This study conducted by Alan Warner, Alexandra Gerrard, Mike Tokach, Raghavendra Amachawadi, Alain Labbé, Walter Heuser, Ramya Kalam, Xiaorong Shi, T. G. Nagaraja, Joel DeRouchey, Jason Woodworth, Robert Goodband, and Jordan Gebhardt.)

ASI FACULTY SPOTLIGHT...



Sara Gragg (saragragg@k-state.edu; 785-532-1306)
Associate Professor, Food Safety and Food Microbiology

Dr. Gragg earned her B.S. from University of Nebraska-Lincoln, M.S. from Texas Tech University, and her Ph.D. in Animal Science from Texas Tech University. Her interest in food science and animal science began during her service in FFA, Ag education, and showing horses. Sara has enjoyed being closer to her Nebraska roots since joining the K-State Department of Animal Sciences and Industry in 2013. She has more than 18 years of experience in food safety research. Her research program investigates pre-harvest and post-harvest issues affecting the meat and poultry industry, with specific interests addressing the manner by which pathogens contaminate products and the application of interventions to prevent and/or reduce pathogen presence. She is particularly interested in studying the pre-harvest transmission of foodborne pathogens in food animals, as well as, investigating interventions to reduce foodborne pathogens in live animals. As an affiliated faculty member with the Center for Food Safety in Child Nutrition Programs at K-State, she also contributes to food safety research for school foodservice programs. Dr. Gragg teaches courses in food microbiology, global food systems leadership, and food policy at K-State.

Sara's husband, J.D., is an enrollment services consultant for Encoura. Together they have two children, Barrett (age 12) and Brendan (age 8).



Jessie Vipham (jessiev@k-state.edu; 785-532-3486)
Associate Professor, Food Safety and Food Security

Jessie was raised on a registered Angus ranch in Northeastern Nevada. Growing up in a rural part of the country, Jessie was highly active in 4-H and FFA and held several offices at the local, county, and state level for both organizations. Jessie graduated from Kansas State University with a B.S. in Agricultural Business in 2009. She received her M.S. (2011; Meat Science) and PhD (2015; Animal Science) from Texas Tech University.

Jessie is an Associate Professor in Food Safety and Food Security. Her research focuses on improving the global understanding of food safety and foodborne disease and their impact on public health, particularly for vulnerable populations. Jessie's research seeks to provide adoptable and applicable solutions for reducing foodborne pathogen contamination in various food value-chains around the world.

Jessie has been involved in food safety and food security research in the United States, Central America, South America, Africa, and Southeast Asia.

Jessie is a country girl at heart and enjoys spending time on her family's ranch as much as possible. She maintains her own small herd of registered Angus mother cows there as well. She also enjoys traveling both internationally and domestically, cooking, and spending time with her adorable dogs, Gus and Newt.

WHAT PRODUCERS SHOULD BE THINKING ABOUT

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN AUGUST...

BEEF -- *Tips by Dale Blasi, Extension Beef Specialist*

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions.

Breeding Season

- Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.
 - Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers.
- These methods contribute to a more uniform calf crop, makes winter feed management easier, and increases the success rate of next year's breeding season.

Cow Herd Nutrition

- Provide ample amounts of clean, fresh drinking water.
- Conduct an inventory of forage needs for the winter feeding period.
- Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical seasonal price increases.

Herd Health

- If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures.

Preventive:

- ◆ Make sure the herd is receiving adequate vitamins and trace minerals in their diet.
- ◆ Consider vaccination for pinkeye and IBR (consult your local veterinarian).
- ◆ Control face flies.
- ◆ Clip pastures with tall, coarse grasses that may irritate eyes.

Therapy:

- ◆ Administer an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
 - ◆ Shut out irritating sunlight by patching eyes, shade, etc.
 - ◆ Control flies.
 - ◆ Consult your veterinarian.
- Consider revaccinating for the respiratory diseases in any animals that will be taken to livestock shows.
 - Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least three weeks prior to weaning.
 - Revaccinate all calves for blackleg.
 - Vaccinate replacement heifers for brucellosis (4 to 10 months of age).
 - Monitor and treat footrot.

Forage/Pasture Management

- Enhance grazing distribution with mineral mixture placement away from water sources.
- Observe pasture weed problems to aid in planning control methods needed next spring.
- Monitor grazing conditions and rotate pastures if possible and(or) practical.
- If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- Harvest and store forages properly. Minimize waste by reducing spoilage.
- Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- Plan for sufficient standing pasture for winter grazing needs.
- For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) type supplement.

General Management

- Avoid unnecessary heat stress - Don't handle and/or truck cattle during the heat of the day.
- Repair, replace, and improve facilities needed for fall processing.
- Order supplies, vaccines, tags, and other products needed at weaning time.
- Consider earlier than normal weaning, but have a marketing plan in place.

*We need your input! If you have any suggestions or comments on **News from KSU Animal Sciences**, please let us know by e-mail to lschrein@ksu.edu or phone 785-532-1267.*