

State Show Entry Deadlines

Entries for the Kansas State Fair Grand Drive (4-H/FFA youth livestock show) are currently open and will be due July 15. A complete nomination does not constitute entry; it only makes animals eligible. All exhibitors and animals must be entered directly through the state fair using ShoWorks. Only online entries will be accepted. Families who state nominated livestock will use the exhibitor name and password created for each child during nominations to login and submit their entries. Late entries will be accepted until July 25, with a late fee. No entries will be accepted after July 25. For more information, visit <https://www.kansasstatefair.com/p/competitions/grand-drive-25th-anniversary>. Continuing this year, county agents and ag teachers will login to the ShoWorks system and approve the entries for exhibitors from their county/chapter. The same process will be used as for nominations. The only difference is agents and ag teachers will need to navigate to the entry link for the Grand Drive and login to their Club account using the appropriate password. Entries may be approved between now and July 16. Entries for KJLS will be due by August 15, also using ShoWorks. However, they are separate shows, so families will need to login to each show independently when entering, or use the ShoWorks Passport App. All exhibitors must register online, using the link found on the KJLS website: www.kjls.net. Late entries will be accepted until August 31, but will cost double the listed original entry fee amount. Families who plan to show in both state shows will need to enter through each link and pay the appropriate entry fees. So, after entering, they should have a receipt for their Kansas State Fair Grand Drive entries and one for their KJLS entries. Youth who are only showing registered breeding females will submit their YQCA verification at the time of entry. For more information regarding entries, contact each show directly. Contact information is posted on their websites. Kansas State Fair Grand Drive - <https://www.kansasstatefair.com/p/competitions/grand-drive-25th-anniversary>; KJLS - [https://www.kjls.net](http://www.kjls.net).

KLA/KSU Field Days Scheduled For August

Dates have been set for the 2024 KLA/Kansas State University Ranch Management Field Days. Downey Ranch will host the first event August 15 in Wabaunsee County. The August 22 field day will be held in Gove County at Hoeme Ranch & Cattle.

Each event will begin at 3:30 p.m. and include presentations on the history of the host operation and management practices used today, as well as educational sessions and a complimentary beef dinner. The Farm Credit Associations of Kansas and Huvepharma are sponsoring both events.

Livestock Sweepstakes

Kansas 4-H Livestock Sweepstakes is scheduled for August 17-18 in Manhattan. The 4-H Livestock Sweepstakes event includes the state 4-H livestock judging contest, meat judging contest, livestock skillathon, and livestock quiz bowl. The members who will represent Kansas at the national 4-H contests for each of these events will be selected during the livestock sweepstakes weekend. Registration information is available through local extension units. All entries must be made by the local county extension offices or extension districts using the Qualtrics registration link. The entry deadline is August 1. Contest details, including the rules, are available on the KSU Youth Livestock website, under 4-H Livestock Sweepstakes at https://www.asi.k-state.edu/extension/youth-programs/events/livestock_sweepstakes/. For more information, contact Lexie Hayes (adhayes@ksu.edu or 785-532-1264.)

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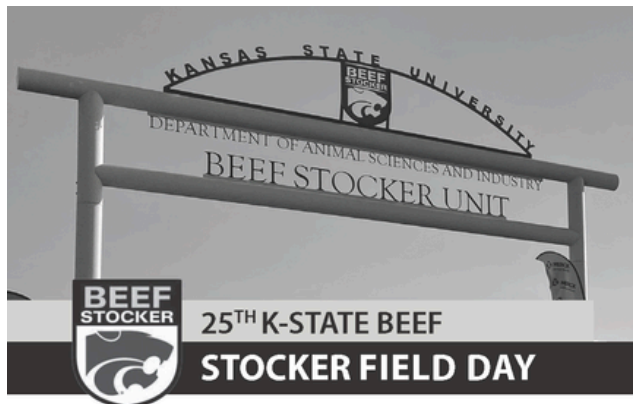


Upcoming Events

- August 15, 2024**
KSU/KLA Ranch Management Field Day
Wabaunsee Co. - Downey Ranch
- August 17-18, 2024**
4-H Livestock Sweepstakes
- August 22**
KSU/KLA Ranch Management Field Day
Gove Co. - Hoeme Ranch & Cattle
- September 6-8, 2024**
KSU College Rodeo
- September 25-27, 2024**
HACCP Workshop - Olathe, KS
- September 26, 2024**
Beef Stocker Field Day
- October 5, 2024**
ASI Family & Friends Reunion
- October 10-11, 2024**
Better Process School for Acidified Foods Online
- November 21, 2024**
Swine Day

Upcoming Events

Save the Date KSU Beef Stocker Field Day



THURSDAY, SEPT. 26, 2024 • 9:30 A.M.
KSU BEEF STOCKER UNIT • MANHATTAN, KS

Join us in celebrating our
25TH ANNIVERSARY
Register at KSUBeef.org or 785-532-1267
REGISTRATION FEE: \$25
After Sept. 13 registration is \$35



Event Sponsored By:



Come help us celebrate the 25th KSU Beef Stocker Field Day which will be hosted on Thursday, September 26, at the KSU Beef Stocker Unit in Manhattan. The day will start at 9:30 a.m. with registration and coffee and will conclude with a good old-fashioned Prairie Oyster Fry and Call Hall ice cream at 4:45 p.m.

The schedule is as follows:

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|----------|--|
| 9:30 am | Registration/Coffee |
| 10:00 am | Introductions |
| 10:15 am | 25 Years: Looking back and moving forward- <i>Dale Blasi, K-State</i> |
| 10:30 am | Beef Cattle Outlook - <i>Glynn Tonsor, K-State</i> |
| 11:15 am | Beef on Dairy - Opportunities and Challenges
<i>David Clawson, High Plains Ponderosa Dairy</i>
<i>Jason Shamburg, Kansas Dairy Development, Inc.</i>
<i>Dr. Tera Barnhardt, Heritage Vet Partners</i>
Moderator: <i>Wes Ishmael, Hereford World Executive Editor</i> |
| 12:30 pm | Barbeque Brisket Lunch - View Posters |
| 1:00 pm | Coccidiosis: The Silent Thief Robbing Profits in your Stocker Operation - <i>Joe Dedrickson, HuvePharma, Inc.</i> |
| 2:00 pm | Recommendations for Managing Calves the First 30 Days on Feed - <i>Dan Thomson, K-State</i> |
| 2:45 pm | Break |
| 3:15 pm | Future Trends in the Kansas Cattle Feeding Industry - <i>Justin Waggoner, K-State</i> |
| 4:00 pm | Rethinking Your Pasture Burning Plans: Save Time, Save Money, and Improve Range Conditions - <i>KC Olson, K-State</i> |
| 4:45 pm | Cutting Bull's Lament 2024 |

Pre-registration is \$25 and due by September 13. For complete details and registration, visit www.KSUBeef.org. For more information, contact Dale Blasi (dblasi@ksu.edu or 785-532-5427) or Katie Smith (katiesmith@ksu.edu or 785-532-1267).

HACCP Workshop Hosted in September

Implementing Your Company's HACCP Plan will be hosted September 25-27, 2024, in Olathe, Kansas. These workshops use 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).

Save the Date- Better Process School for Acidified Foods Online

Online Better Process School for Acidified Foods will be offered in an online format October 10 and 11 from 8 a.m. to 12 p.m. each day. Registration is \$400 and the deadline to register is September 25. The training is for food processors that process and sell acidified foods and/or acid foods. Participants will receive a certificate of completion upon passing two tests. The training meets FDA requirements. More information will be available soon at the following link <https://foodsci.k-state.edu/extension/extension-events.html>. The course is being offered by Kansas State University and University of Missouri. For questions, please contact Kelly Getty, Co-Director of the Kansas Value Added Foods Lab (kgetty@ksu.edu or 785-532-2203).



Management Minute

“Change”

Justin Waggoner, KSU Extension Beef Cattle Specialist, Garden City, KS

“Change is inevitable” and often creates a sense of unease for many individuals and within an organization. As a society, we have changed how we work, how we purchase goods and services and many other things over time. Some of these changes have been small and some have been large. Why do we fear change? Change is not always bad, but experts agree that most employees within an organization express some degree of fear and resistance to change. The reality is that the fear of change within an organization is created because employees simply do not understand why the change is happening. An article in the Harvard Business Review <https://hbr.org/2018/10/dont-just-tell-employees-organizational-changes-are-coming-explain-why> offers suggestions on communicating change in the workplace.

- Keep employees informed with regular communications. Communication is essential to successfully navigating change. Communication should be clear and consistent and focus on the purpose of the change (the why).
- Empower leaders and managers to lead and model the change. Leaders and managers often face more pressure/resistance from employees than administration. Providing managers with additional training or resources equips them to drive and model the change.
- Involve employees in the change. Employees must take ownership of the change for it to be successful. Creating ways for employees to provide feedback and engage them in the process makes employees more likely to support the change.

Feedlot Facts

“Marketing Calves”

Justin Waggoner, KSU Extension Beef Cattle Specialist, Garden City, KS

As we come to the midpoint of the grazing season, it's time to start thinking about our management and marketing strategies for this year's spring calf crop. Margins in the cattle industry and agriculture are often unfortunately narrow (even with projections of record-setting high calf prices). Therefore, I would offer that maximizing calf revenue is important for cow/calf producers every year. Calf revenue from my academic perspective is driven by 3 factors, 1.) the number of calves sold, 2.) sale weight of calves and 3.) price received.

Cow/calf producers to some extent have control over the number of calves sold and sale weight. The number of calves sold is essentially a function of stocking rate, cow fertility and/or reproduction on an operation. The sale weight of calves is more complex but is a multi-factorial combination of genetics, calving distribution, calf age, nutrition, management and technology use (implants). Price received is likely the most influential of the 3 factors that drive calf revenue and is the factor that cow/calf producers often believe they have the least ability to control. Once a set of calves, enters the sale ring, or appears on the video screen their value is determined by what two prospective buyers are willing to pay. Although it is impossible for producers to directly influence what buyers are willing to pay, I would argue that they are not completely helpless. Cow/calf producers directly control what they will sell (weaned calves, value-added calves or feeders), and determine when they will sell. These are difficult, complex decisions, that shouldn't necessarily be made based upon weekly cattle sale reports or the thoughts of your favorite livestock market commentator. I am not saying that keeping informed about current market conditions isn't important. However, that information when used with resources like Beef Basis (www.beefbasis.com) that use data to evaluate different market scenarios, from selling five weight calves the first week of October, to seven weights later, helps producers make the best decision for their operations.

Producers also control what information or data they pass along to the new owner. Data has value, it's that simple. I compare marketing calves to selling a beautifully restored pickup. If you were selling a pickup, you would share with a prospective buyer every bit of information you had and the details of the process, from the atmospheric conditions when the truck was painted to the actual sales invoice from 1972. Why should selling a set of calves be any different? Value added programs and certified sales provide potential buyers with some degree of assurance that cattle were managed within the guidelines of the program. However, if you want to participate in many of those programs planning is required. If you don't participate in a defined program, providing the auctioneer or sales representative with as much information as possible about your cattle only helps them do their job better, which is to get the best price for your cattle.

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

KSU Cow-Calf Checklist - July 2024

Management Considerations for September 2024

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

Cow Herd Management

- For spring-calving cowherds:
 - If not already done, make plans for weaning calves.
 - Test your forages and have feedstuffs on hand prior to weaning.
 - Check and clean waterers and prepare weaning/receiving pens.
 - Evaluate cow BCS at weaning.
 - Record scores with the BCS Record Book from KSRE!
 - Use BCS to guide the fall nutrition program.
 - Female requirements are lowest at weaning so weight and BCS can be added more easily in early fall rather than waiting until closer to calving.
 - Schedule pregnancy checking and fall health work if not already done.
 - How were pregnancy rates relative to last year?
 - Do we need to re-think our fall/winter nutrition program?
 - Evaluate the cost of gain relative to the value of gain when making feeding and marketing decisions for cull cows.
- For fall-calving cowherds:
 - The final 60 days prior to calving represents the last opportunity to add BCS economically.
 - Ensure mature cows are ≥ 5.0 and 2–4-year-old females are ≥ 6.0 at calving.
 - Review your calving health protocols as needed.
 - Have calving equipment cleaned and available to use as needed.
 - Plan to adjust your nutrition program to match needs of lactating cows.
 - Use the estrus synchronization planner (<https://www.iowabeefcenter.org/estrussynch.html>) to help plan fall synchronization protocols.
- Plan your mineral supplementation for this coming fall and winter.
 - Record date and amount offered and calculate herd consumption.
 - If consumption is 2X the target intake, then cost will be too!
 - If using fly control products, continue to use them until recommended times (based on date of first frost) for your area.
 - Risk of grass tetany is greatest for lactating cows. Consider magnesium levels in mineral supplements for cows grazing cool-season forages and winter annuals this fall.
- Schedule breeding soundness exams for bulls used for fall service.
 - Monitor BCS, particularly on young bulls.
 - If bulls are $BCS \leq 5.0$ after summer breeding, consider supplementing to regain BCS going into fall.

Calf Management

- If you are creep feeding spring-born calves, continue to closely monitor intake and calf condition/fleshiness going into the fall until weaning.
- Schedule any pre-weaning vaccination or processing activities if not already done.
- Consider the economic value by implanting nursing fall-born calves and weaned spring-born calves.
- If not already done, schedule your breeding protocols for fall replacement heifers in advance of the breeding season.
 - If synchronizing with MGA, make sure intake is consistent at 0.5 mg of melengestrol acetate per hd per day for 14 days, and remove for 19 days prior to administering prostaglandin.

General Management

- Employ multiple strategies, chemistries for late-season fly/insect control.
- Take inventory of and begin sampling harvested forages for fall feed needs.
 - Use the forage inventory calculator (<https://www.agmanager.info/hay-inventory-calculator>).
 - Balance forage inventories with fall/winter grazing acres.
- If planning to harvest corn or sorghum silage:
 - Prepare your pile/bunker site and equipment.
 - If using a custom harvester, communicate with them well in advance.
 - Closely monitor whole plant moisture levels.
 - Have silage tarps in place and ready to cover once harvest is complete.
- Use the Management Minder tool on KSUBeef.org to plan key management activities for your cowherd for the rest of the year (<https://cowweb.exnet.iastate.edu/CowWeb/faces/Index.jsp>).
- With high feeder calf prices, consider price risk management tools.
- Visit with your local FSA and extension office if you plan to utilize CRP acres for emergency forage use or for information on other assistance programs.

What's New for Beef Producers

Restricting Bunk Space Allotments to 6 or 10 Inches has Minimal Impact on Growth Performance in Limit-Fed Receiving Cattle-

The objective of our experiment was to determine if bunk allotments of 6, 10, 14, or 18 in per head in pens containing 18 to 28 head impacts growth performance of growing calves limit-fed a high-energy diet based on corn and corn co-products. A total of 332 crossbred heifers were blocked by source, stratified by individual arrival weight, and assigned to a pen. Pens were randomly assigned to one of four treatments: 6, 10, 14, and 18 in of bunk space per head. Pens contained 18 to 28 head per pen. Heifers were limit-fed once daily at 2.0% of body weight (BW) [dry matter (DM) basis] for a 56-day period.

Results: Final BW and average daily gains (ADG) following the 56-day period did not differ ($P \geq 0.20$) among treatments. The standard deviation of ADG responded quadratically ($P = 0.05$) where variation in weight gain was greater in calves allotted 14 in of bunk compared with calves allotted 6, 10, or 18 in of bunk.

The Bottom Line: Bunk allotments as low as 6 in per head did not reduce the growth performance of limit-fed growing cattle during a 56-day receiving period. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact Dale Blasi (dblasi@ksu.edu or 785-532-5427.) *(This study conducted by W. Cole Ellis, Zachary M. Duncan, Madeline S. Grant, William R. Hollenbeck, Evan C. Titgemeyer, and Dale A. Blasi.)*

Kansas State University Feedlot Boot Camp and Teaching Program: Growing Student Interest and Engagement in the Feedlot Industry-

Our objectives were to summarize the development and structure of the Kansas State University Feedlot Boot Camp and Teaching Program and examine student interest in careers in the feedlot industry after participation. Since 2019, 95 Kansas State University College of Agriculture undergraduate students participated in the Feedlot Boot Camp Program. The aim was to develop students' knowledge, skills, and professional relationships in feedlot management to help meet the critical need for trained professionals in the industry. Components are a four-day Feedlot Boot Camp, student presentations, animal health day, and an optional feedlot internship. Students who completed all components earned a \$2,500 scholarship.

Results: A total of 163 undergraduate students applied to participate in the program in its first five years. Of those applicants, 95 were selected to participate in the Feedlot Boot Camp Program. In surveys following the completion of the Boot Camp portion of the program, over 96% (91/95) of student participants agreed with the statement, "My interest in pursuing an internship and (or) career in the feedlot industry grew as a result of this Boot Camp." Approximately 45% of participants proceeded to participate in feedlot internships or entered full-time jobs working in a feedlot six months after completing the Boot Camp.

The Bottom Line: The Feedlot Boot Camp program has made progress in growing student interest and awareness of career opportunities in the feedlot industry and fostering communication between employers and prospective employees. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact Karol Fike (karol@ksu.edu or 785-532-1104) or A.J. Tarpoff (tarpoff@ksu.edu or 785-532-1255.) *(This study conducted by Danielle M. Stock, Pete Anderson, and Karol E. Fike.)*

The Effects of Thawing Methods on Trained Sensory Evaluation of Beef Palatability Traits and Instrumental Measurements of Quality-

Using beef strip loins steaks, evaluate six common thawing methods and assess the quality attributes through a trained panelist evaluation and an array of instrumental quality measures. Paired Low Choice strip loins ($n = 15$) were collected from a beef packing facility. The paired loins were fabricated into 1-in steaks and blocked into six blocks of four steaks. Each block was assigned a different thawing method, and each steak within the block a test, then aged 21 days and frozen. Thaw methods consisted of the four USDA-approved thaw methods: refrigerator (REF), cold water (CW), microwave (MIC), cooking from frozen (COOK); and two methods commonly used by consumers: countertop (CT) and hot water (HW). Steaks assigned to REF were thawed in a refrigerator at 34–37°F for 24 hours prior to cooking. Steaks assigned to CW were thawed in individual containers of 34–37°F water for 24 hours prior to cooking. COOK steaks were cooked immediately upon removal from the freezer, while still in a frozen state. CT steaks were thawed at ambient temperature (68°F) for 5 hours. HW steaks were thawed in a sous vide machine set to 104°F for 20 minutes (± 2 minutes). MIC steaks were microwaved at 50% power for 3.5 minutes, flipped, and repeated in a retail microwave. Fifteen trained panels were performed, with eight panelists consuming six samples from the same loin. Each steak was cooked to a peak temperature of 160°F on clamshell style grills. Data were analyzed as a completely randomized block design.

Results: As a whole, thawing method had a minimal impact on palatability. There were no ($P > 0.05$) differences among thawing methods for initial juiciness, sustained juiciness, connective tissue, pressed juice percentage, L^* (lightness), lipid oxidation, Warner-Bratzler shear force and slice shear force. For myofibrillar tenderness, COOK steaks were tougher ($P < 0.05$) than REF and CW. Also, MIC and COOK steaks were lower ($P < 0.05$) than CW and REF steaks for overall tenderness, while all other treatments were similar ($P > 0.05$). The COOK steaks were rated higher ($P < 0.05$) than all other treatments for beef flavor intensity. The MIC steaks had lower ($P < 0.05$) cooked a^* (redness) and b^* (yellowness) values than REF, HW, and CW steaks, while CT samples had higher ($P < 0.05$) values than COOK and MIC. The MIC steaks had the highest ($P < 0.05$) cook loss, followed by COOK ($P < 0.05$), with all other treatments being similar ($\text{MIC} > \text{COOK} > \text{CT} = \text{HN} = \text{CW} = \text{REF}$). MIC and HW had a higher ($P < 0.05$) thaw loss than CW, CT, and REF ($\text{MIC} = \text{HW} > \text{CW} = \text{CT} = \text{REF}$). Moreover, MIC, COOK, and HW steaks had a higher ($P < 0.05$) percent total moisture loss than REF, CW, and CT. This increase in total moisture loss and thaw loss could indicate a total economic loss of steaks thawed using these methods. Lastly, COOK steaks had higher ($P < 0.05$) cooked expressible moisture than CT, CW, and REF.

The Bottom Line: Consumers and food service establishments may use whichever thawing method is the most economical and convenient for them, as thawing method has minimal impact eating quality, although food safety should be the utmost concern. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact Travis O'Quinn (travisquinn@ksu.edu or 785-532-3469) or Liz Boyle (lboyle@ksu.edu or 785-532-1247.) *This study conducted by Lindsey K. Decker, Erin S. Beyer, Michael D. Chao, Morgan D. Zumbaugh, Jessie L. Vipham, and Travis G. O'Quinn.)*

What's New for Swine Producers

Evaluating the Effects of HiPhorius Phytase Added in Diets at or Below the P Requirement on Nursery Pig Growth

Performance and Bone Mineralization-

A total of 297 pigs (DNA 241 × 600; initially 8.64 ± 0.181 kg) were used in a 21-d trial to determine the effects of HiPhorius phytase on growth performance and bone characteristics. Pens of pigs were assigned to 1 of 5 treatments in a randomized complete block design with 5 pigs per pen and 12 replications per treatment. The first three diets were formulated to contain 0.09% aP; without added phytase (control), or the control diet with 600 or 1,000 FYT/kg of added phytase (considering a release of 0.15 or 0.18% aP, respectively). The remaining two diets were formulated to contain 0.27% aP, one without added phytase and the other with 1,000 FYT/kg. From d 0 to 21, pigs fed diets with increasing phytase containing 0.09% aP had increased (linear $P \leq 0.002$) ADG, ADFI, and better F/G but phytase added to the 0.27% aP diet did not impact growth performance. Increasing phytase in diets containing 0.09% aP increased percentage bone ash in metacarpals and 10th ribs (linear, $P < 0.001$; quadratic, $P = 0.004$, respectively), and increased grams of Ca and P in all three bones (linear, $P \leq 0.027$). An increase in percentage bone ash ($P \leq 0.038$) and increased grams of Ca and P in fibulas and 10th ribs ($P \leq 0.023$) was observed when adding 1,000 FYT/kg phytase in diets with 0.27% aP compared with pigs fed 0.27% aP without added phytase. Increasing aP from 0.09% to 0.27% in diets without added phytase increased (P<0.001) ADG, ADFI, and improved F/G. Increasing aP from 0.09% to 0.27% in diets without added phytase increased bone density ($P \leq 0.002$) in fibulas and metacarpals, percentage bone ash in all bones ($P \leq 0.074$), and increased (P<0.05) grams of Ca and P in fibulas and 10th ribs. Pigs fed diets containing 0.27% aP with 1,000 FYT phytase had increased ADFI ($P \leq 0.047$), bone density ($P \leq 0.008$) in fibulas and metacarpals, percentage bone ash in all bones ($P \leq 0.002$), and increased (P<0.05) grams of Ca and P in fibulas and 10th ribs compared to those fed 0.09% aP with 1,000 FYT phytase. For growth performance (average of ADG and F/G), aP release was calculated to be 0.170% for diets with 600 FYT/kg and 0.206% for 1,000 FYT/kg. For the average of all bone measurements (average of 3 bones for bone density and percentage bone ash), aP release was calculated to be 0.120 and 0.125% for diets with 600 and 1,000 FYT/kg, respectively. In conclusion, increasing phytase in diets formulated with less than the pig's phosphorus requirement improved growth performance and bone mineralization. These data help to confirm the efficacy of HiPhorius phytase in making P more available in aP deficient diets, resulting in improved growth performance and bone mineralization. Furthermore, these data show that adding high levels of phytase in diets adequate in aP did not further improve growth performance, but increased bone mineralization. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Macie E. Reeb, Jason C. Woodworth, Joel M. DeRouchey, Mike D. Tokach, Robert D. Goodband, Jordan T. Gebhardt, and Jon R. Bergstrom.)

Summary of Methodology Used in Enterotoxigenic Escherichia coli (ETEC) Challenge Experiments in Weanling Pigs and

Quantitative Assessment of Observed Variability-

Post-weaning diarrhea in pigs can be caused by the F4 or F18 strains of enterotoxigenic Escherichia coli (ETEC). To evaluate interventions for ETEC, experimental infection via a challenge model is critical. To our knowledge, there is a lack of explanation for the variability in responses observed across ETEC challenge studies. Our objective was to quantitatively summarize the responses and variability among recent ETEC challenge studies and develop a tool for sample size calculation. The most widely evaluated response criteria across ETEC challenge studies are growth performance, fecal consistency and bacterial shedding, intestinal morphology, and immune responses. Factors that contribute to the variability seen across studies include the type of ETEC studied, dose and timing of inoculation, and the number of replications. Generally, a reduction in average daily gain (ADG) and average daily feed intake (ADFI) are seen following an ETEC challenge, as well as a rapid increase in diarrhea. Fecal bacterial shedding is a common indicator of ETEC infection, but the responses seen across the literature are not consistent due to differences in bacterial enumeration procedures. Emphasis should also be placed on the piglet's immune response to ETEC, which is commonly assessed by quantifying levels of immunoglobulins and pro-inflammatory cytokines. Again, there is variability in these responses across published work. Small intestinal morphology is drastically altered following infection with ETEC and appears to be a less variable response criterion to evaluate. While there is a large degree of variability across ETEC challenge experiments, we have provided a quantitative summary of these studies, and a Microsoft Excel-based tool was created to help calculate sample sizes for future studies. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Payton L. Dahmer, Joel M. DeRouchey, Jordan T. Gebhardt, Chad B. Paulk, and Cassandra K. Jones.)

A Multi-Trial Analysis Evaluating the Effects of Pharmacological Levels of IntelliBond Copper on Growing-Finishing Pig

Growth Performance and Carcass Characteristics-

A multi-trial analysis was conducted to evaluate the effects of pharmacological levels of added IntelliBond Copper (IBC) on growing-finishing pig growth performance and carcass characteristics compared to pigs fed control diets containing typical additions of copper from a trace mineral premix. Data with 331 observations within 8 trials were included in the final database. Inclusion rates for IBC were either 150 (7 trials), or 200 (1 trial) ppm. Pigs fed IBC throughout the entire grow-finish period had greater (P<0.05) overall ADG, ADFI, and final BW and tended (P= 0.085) to be more efficient than pigs fed control diets. There was no evidence for differences (P>0.10) between dietary treatments for the percentage of pigs marketed. Pigs fed IBC also had (P<0.05) heavier HCW and greater carcass ADG compared to pigs fed a control diet. There were no differences (P>0.10) between pigs fed the control or IBC diets for carcass characteristics, carcass yield, and carcass feed efficiency. In conclusion, the addition of IBC at growth promotion levels throughout the entire growing-finishing period increased final BW, HCW, and ADG on a live and carcass basis. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Hayden R. Kerkaert, Jason C. Woodworth, Joel M. DeRouchey, Steve S. Dritsch, Mike D. Tokach, Robert D. Goodband, and Hilda Calderon Cartagena.)

ASI Faculty Highlight



Erin Beyer (erbeyer@ksu.edu or 832-276-3350)

Assistant Professor - Sustainable Fresh Meat Extension Specialist

Dr. Erin Beyer, originally from Brookshire, Texas, completed her first two degrees at Texas Tech University. Her B.S. focused on Food Science with a minor in Chemistry. As an undergraduate student, she was an integral member of the meat judging team, sparking her interest in meat science. She continued for a M.S. in Animal Science focusing on meat science while evaluating the effect of different protein sources on the functional connectivity in the brain. Upon graduation, Erin moved to the industry working for H-E-B Food Retailers developing new private label products for their Own Brand department.

Erin knew her dream was to work in academia, so she left H-E-B to pursue a Ph.D. in Animal Science from Kansas State University. She evaluated the impacts of cooking and freezing on the palatability of beef steaks while being heavily involved with undergraduate programs such as meat judging, meat science quiz bowl, and meat animal evaluation. She was awarded the Larry Corah Most Outstanding Ph.D. Student award for her efforts in research, teaching, and coaching. After graduating, she became an Assistant Professor of Meat Science

at North Dakota State University. While at NDSU, she oversaw the meat judging program and taught a multitude of classes. Throughout her career at NDSU, Erin continued her research of understanding the impact of freezing on palatability and the intrinsic properties of beef steaks. Additionally, she focused on cooked meat color and the factors that impact the final internal color of a steak.

Erin started back at K-State in July as an Assistant Professor in Sustainable Fresh Meat Industry with a 60% extension and 40% research role. She is passionate about sharing meat science with youth and the general public. She will focus on meat science outreach while providing resources for producers, extension agents, small meat processors, and industry leaders. Her research will continue to be centered around cooked meat color and understanding the factors that impact cooked meat color stability. Erin could not be more excited to be back at K-State and to start her career as a Wildcat.



Bob Goodband (goodband@ksu.edu or 785-532-1228)

University Distinguished Professor/Extension Specialist

Dr. Bob Goodband is originally from Walpole, Massachusetts. He graduated from The Pennsylvania State University in 1984. He obtained his M.S. (1986) and Ph.D. (1989) in Swine Nutrition at Kansas State University, and then joined the Department of Animal Sciences and Industry. Today, Bob is involved with Teaching (40%), Extension (40%) and Research (20%). He is part of a progressive swine extension/nutrition team with programs focused on developing, evaluating and disseminating the latest information to increase the profitability of pork producers. Bob has played an important role in developing an intensive on-farm research program that has conducted numerous on-farm trials in several states across the U.S. His work has resulted in over 400 refereed journal papers, 10 book chapters, over 1,000 research reports and Extension publications.

Bob's current teaching assignment includes ASI 535, Swine Science and ASI 679, Swine Nutrition. The classes cover the basics of modern, sustainable swine production and nutrition. Bob also advises 40 to 50 undergraduate students each year and has helped mentor over 120 M.S. and Ph.D. students.

*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*

Jobs Available - Now Hiring

Animal Technician II Full- (Job #517217) This is a full time, USS Staff position. The Dairy Teaching and Research Center (DTRC) is seeking applicants for a full-time Animal Technician II. This position will be responsible for equipment operation, equipment, and facility maintenance, and, in a smaller portion, general animal care and milking. Duties and job duties and responsibilities are as follows: Equipment operation (60%) – Equipment and Facility Maintenance (20%) General Animal Care and Milking (20%). For the full job description, or to apply go to: <https://careers.k-state.edu/cw/en-us/job/517217/animal-technician-ii>

Animal Technician II (Job #517301)- This is a Part-Time, USS Staff position. This is a relief emergency milking position. Duties include setting up milking equipment, carefully moving cows to and from the milking parlor, prepping cows properly for milking (predipping and cleaning of teats), diagnosing abnormal milk (if mastitis exists then proper milking and disposal of milk must occur), attaching milking machines, and post-dipping teats after milking. The employee sanitizes the equipment before and after each milking shift. In addition, the employee conducts regular inspection of the milk tank compressors, milk line and pump to ensure bulk storage tanks are operating correcting and cooling milk before, during, and after each milking shift. Other miscellaneous animal care duties may be assigned during the milking shift. To apply go to: <https://careers.k-state.edu/cw/en-us/job/517301/animal-technician-ii>

Animal Technician II- (Job #517188)- This is a full-time, USS Staff position. This position exists to operate and maintain the feed mill facility and feed the milk herd at the Dairy Teaching and Research Center. Some of the duties include but are not limited to the following: 65% Grinds hay and mixes all feed ingredients for total mixed rations, records amounts fed, and obtains weigh back data when required by experimental protocol. Delivers total mixed rations to feed weaned replacement heifers, dry and lactating cows. 10% Manages storage and receipt of delivered bedding (sawdust and straw) and feed (hay, straw, silage) and other commodities. 10% Services and maintains, oil, fluid, and filter changes of feeding equipment (skid loaders, tractors, trucks, etc.). 10% Directs daily scraping of pens to remove animal waste. Assists in weekly sand bedding of free stalls and cleaning maternity pen. 5% Works cooperatively and safely with others to assist with any calving problems or animal health issues as directed. One weekend per month may be required in rotation with other middle managers to oversee daily operations. Other duties as assigned. To apply go to: <https://careers.k-state.edu/cw/en-us/job/517188/animal-technician-ii>

Animal Technician Supervisor—Dairy Teaching and Research Center (Job # 515576) -This is a full-time, unclassified professional staff, term contract position. This position is critical to the overall operation of the KSU Dairy Teaching and Research Center. It involves supervision of other employees and the care and comfort of the animals housed at the DTRC at Kansas State University. Incumbent functions as the assistant manager of the Dairy Teaching and Research Center and is responsible for ensuring the safety of the cows and other dairy unit employees. Assumes responsibility for operation of the dairy unit in the manager's absence. Incumbent is responsible for milking cows at least two days each week and for making vital animal observations during the milking process. Incumbent is responsible for collecting sterile samples of milk to be tested for antibiotics or bacteria. To apply, go to <https://careers.k-state.edu/cw/en-us/job/515576/animal-technician-supervisor>.

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asi.ksu.edu/Headlines**