

Market Beef Nominations Due May 1

The 2024 state livestock nomination season is upon us! Market beef nominations are due by May 1, 2024. This includes market steers and market heifers. The deadline is a postmark and online submission deadline, but families need to plan ahead and get them submitted as soon as possible. We have transitioned to an online nomination system, so families will need to order DNA envelopes in advance, as well as complete their YQCA certification and the Declaration Form before submitting their nominations. The nomination fee is now paid through purchasing DNA envelopes, which means no payment will be included when the completed and signed DNA envelopes are postmarked. The deadline to order official DNA envelopes is April 20. Additionally, no paper forms will be mailed. Families will only mail in their completed DNA samples and a copy of the receipt from their online nomination entry submissions (list of animals/tag numbers). Extension agents and FFA advisors will approve nominations online. Nomination information for all species may be found on the KSU Youth Livestock Program website, including the link to the online system: <https://www.asi.k-state.edu/extension/youth-programs/nominated-livestock/>. The website includes an overview of the process, as well as the resources available. No paper forms or old DNA envelopes will be accepted. Families should use the checklist, make sure the DNA envelopes are signed by all exhibitors within the family, as well as a parent, and cross reference the information submitted online with the DNA envelopes (most importantly the Tag ID). For more information, contact Lexie Hayes via email at adhayes@ksu.edu or 785-532-1264.

2024 Wildcat Showdown

This year's Wildcat Showdown, a sheep and goat show, will be hosted on Saturday, April 27 at the Riley County Fairgrounds. Pre-entry is \$25, and the day of show \$35. Generators are recommended. Showing off trailer is strongly encouraged as there will be limited number of pens at \$10/pen. Health papers are required. For more information or the full schedule, contact Payton Dahmer (dahmerp@ksu.edu or 417-448-4934).

Midwest Meat Processing Workshop

Plan to attend the 46th Annual Midwest Meat Processing Workshop on Friday, April 26, 2024, in Weber Hall room 111 on the K-State Campus. Join us at the workshop and see, hear and ask questions as state award winners share their expertise and demonstrate the manufacture and techniques used to make award winning products. Dr. Jonathan Campbell from Penn State will present a demonstration and discuss fermented sausages. Sara Hene, KSU, will discuss alpha-gal syndrome, commonly known as tick bite meat allergy. John Wolf, KSU Meat Lab Manager, will demonstrate how to prepare pork bellies to make award winning bacon. Ashton McGinn, KSU, will discuss recent research assessing how using tumbling or marination affects finished whole muscle beef jerky quality attributes. Jessie Vipham, KSU, will share recent data on Salmonella in meat and how this is important to your business. Abbey Davidson from AAMP will discuss how to appeal an NR. Mark your calendar and come to this workshop to learn techniques to improve business strategies, product quality, and safety that could result in tastier product, longer shelf life, and greater sales and business opportunities. We invite you back to the longest running series of seminars/workshops of this type for meat processors anywhere in the world. We're sure you will learn something new for your business and we look forward to seeing you at the workshop. Registration is \$100 per plant and includes lunch for two people and a parking permit for one vehicle. For more information or to register visit asi.k-state.edu/midwestprocessingworkshop or contact Dr. Liz Boyle (lboyle@ksu.edu or 785-532-1247).

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SAT | APRIL 27 | 2024



Upcoming Events

- April 15 & 18, 2024**
Livestock County Fair
Management Clinic
- April 26, 2024**
Midwest Meat Processing Workshop
- April 27, 2024**
K-State Wildcat Showdown
- June 3-5, 2024**
Champions Livestock Judging - Camp 1
- June 4-6, 2024**
HACCP Course
Manhattan, KS
- June 5-8, 2024**
K-State Animal Science
Leadership Academy
- June 10-12, 2024**
Champions Livestock Judging - Camp 2
- June 13, 2024**
KSU Horse Judging Advanced Camp
- July 12-13, 2024**
Dr. Bob Hines Kansas Swine Classic
- September 26, 2024**
Beef Stocker Field Day
- October 5, 2024**
ASI Family & Friends Reunion

Upcoming Events

2024 Champions Livestock Judging Camps

Registration is now open for this year's Champion Livestock Judging Camps hosted June 3-5 and June 10-12 in Manhattan, Kansas. This camp is designed for 4-H and FFA members (ages 14-18), who are seriously interested in enhancing their livestock judging and oral communication skills. Both sessions will include one-on-one coaching with the current coaches and students on the K-State Livestock Judging Team with a heavy focus on reasons! Registration is \$350 and opened April 1. This is filled on a first-come, first-serve basis. For more information or to register, visit asi.k-state.edu/judgingcamps or contact Rachael Stadel (rmkstadel@ksu.edu or 785-532-2996).

The graphic features the K-State Livestock Judging Team logo on the left, which includes a large 'K' and the text 'KANSAS STATE UNIVERSITY Livestock Judging Team'. To the right, the text reads '2024 CHAMPIONS LIVESTOCK JUDGING CAMPS'. Below this, it specifies 'CAMP ONE: JUNE 3-5 | CAMP TWO: JUNE 10-12'. Three key details are highlighted in separate boxes: '\$350 HOUSING & MEALS INCLUDED', '3 DAY CAMP WITH AN EMPHASIS ON ORAL REASONS', and 'APRIL 1 REGISTRATION OPENS'. At the bottom, it says 'Learn more at: asi.k-state.edu/judgingcamps'.

YQCA Certification Information

All youth who plan to exhibit at 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. The YQCA staff has created resources to help guide families in registering for training and printing their completion certificates. They include Help Docs, as well as videos, which are posted on the YQCA Program website and linked to the KSU Youth Livestock Program page. Those completing the web-based course are encouraged to use Google Chrome to reduce the potential of technical difficulties. For more information about YQCA certification, please visit yqcaprogram.org, contact your local extension office or Lexie Hayes at adhayes@ksu.edu.

39th Annual Dr. Bob Hines Swine Classic

The 2024 Dr. Bob Hines Kansas Swine Classic is scheduled for July 12-13 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, 2024. Entries must be submitted online by 5 pm on June 24, with payment postmarked the same day. The flyer will be available at KSUswine.org or asi.ksu.edu/swineclassic. For more information, contact Joel DeRouchey (785-532-2280 or jderouch@ksu.edu) or Lexie Hayes (785-532-1264 or adhayes@ksu.edu).

HACCP Workshop Hosted in June

Implementing Your Company's HACCP Plan will be hosted June 4-6, 2024, in Manhattan, 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).

KSU Horse Judging Team One Day Advanced Camp

Save the date for this year's KSU Horse Judging Team One Day Advanced Camp, hosted on June 13 at the Stanley Stout Center. This is for 4-H and FFA youth with experience in giving reasons or participating in horse judging competitions who are looking to seriously enhance their knowledge. The day begins with registration at 8 a.m., followed by a seminar from 8:30 a.m. to 5 p.m. Registration is \$100 for new participants, \$75 for returning participants, or \$50 for auditors. This fee does include lunch, a judging notebook and a t-shirt. Registration opens on April 17 and will close on May 24. This is filled on a first-come, first-serve basis and pre-registration is required. For more information visit asi.k-state.edu/judgingcamps or contact Celsey Crabtree (celseyb@ksu.edu).

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. Information on the site will be updated as approved 2024 opportunities are received directly from extension units. Events, activities, and shows must be submitted by local KSRE professionals to be included on the website.

ASI Family & Friends Reunion

Save the date for this year's K-State ASI Family & Friends Reunion to be hosted Saturday, October 5. Plan now to join us as we recognize Dr. Dell Allen and his wife, Joyce, as the 2024 Don L. Good Impact Award Winner. Watch for more details at asi.ksu.edu/familyandfriends and on social media.

Jobs Available - Now Hiring

Professor-(Assistant/Associate) Animal Nutrition- (Job #516477)- We are seeking applicants for a 12-month, tenure- track faculty position (60% Teaching, 40% Research) that will be located in Manhattan, KS. The position will be available for either an Assistant or Associate Professor of Animal Nutrition with a preference for ruminant nutrition as the sub-discipline. The successful individual will contribute primarily to the department's land-grant missions in teaching and research. Teaching responsibilities will be consistent with the successful individual's training, interests, and needs of the Department, and expectations include teaching and advising both graduate and undergraduate students. The successful individual is expected to lead a productive research program in animal nutrition and participate in relevant interdisciplinary activities. The department is home to the full array of animal facilities dedicated to research and teaching that are all located in close proximity to campus. To read more details and apply go to <https://careers.k-state.edu/cw/en-us/job/516477/assistantassociate-professor-animal-nutrition>.

KSU Beef Cattle Research Center- Research Assistant (Job # 516431)- This is a full-time unclassified professional staff, term contract position. This position will function as part of the KSU Beef Cattle Research Center by conducting research and basic maintenance operations with undergraduate and graduate students related to growing and finishing cattle health and nutrition management. This position must be able to independently conduct and direct subordinates on specific tasks and ensure that all cattle are fed and water is available. All cattle are evaluated for potential illness, removed if necessary, appropriately treated as per protocol and returned to the correct pen. This position will ensure that all research data are correctly collected, entered into a spreadsheet and submitted for analysis. This position will ensure that the unit is in compliance with Institutional Care and Use Requirements and oversee the daily care of esophageal, ruminally and/or intestinally fistulated cattle located at the facility. This position will be able to communicate with cattle owners as needed and generate invoices in a timely manner. This position will order feed supplies and process hay in a timely manner. The incumbent may be expected to recruit and interview undergraduate students for labor and mentor their development in skills. To read more details and to apply, go to <https://careers.k-state.edu/cw/en-us/job/516431/research-assistant>

Dairy Teaching and Research Center Manager (Job #515771) – This is a full-time, unclassified professional staff, Term Contract. The DTRC Manager is responsible for the day-to-day management of personnel, animals, and unit facilities at the DTRC. The incumbent will also work closely with faculty and students to facilitate research trials at the DTRC. Animal care – The DTRC Manager oversees the routine care (feeding, milking, reproductive management, herd health, waste management, etc.) of the mature cows and young stock. The incumbent will work with herd veterinarians and faculty supervisors to establish, execute, and evaluate standard operating protocols for maintaining optimum animal care, herd production, and research study outcomes. Operational management – The DTRC Manager will oversee and conduct routine daily operational management of the facility. Supervision – The DTRC Manager will lead a talented team of employees to ensure adequate care of livestock and daily operations of the DTRC. To read more details and to apply, go to <https://careers.k-state.edu/cw/en-us/job/515771/dairy-teaching-and-research-center-manager>.

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>.

Check out the monthly ASI
headlines at
<https://bit.ly/KSUASIHeadlines>



What's New for Beef Cattle Producers

Management Minute

"It's Not Always About the Money"

If you have an employee who seems to continually be bothering you about not being paid enough, there are usually two possibilities. 1) You're a tightwad and you're not paying them enough; or 2) the person is disgruntled about their role in the organization. To find out if the answer is #1, make a few phone calls to managers you trust in your general geography and find out what your neighbors are paying for similar jobs in your industry. If you're within 50¢ or so per hour, then move on to answer #2. Some people are just better employees than others. If this person is worth more than the 'scale', you'd better pay more to keep them.

But "pay" can come in many forms. You can "buy" an employee's loyalty and general job satisfaction with many perks other than another few cents or bucks per hour. Make sure your insurance, savings investment, and/or profit sharing plans are at least in line with the industry. This is especially important if this person has a family to look after. Non-monetary benefits include things like flexible time off. Those early mornings and long days are a lot easier to take if a person knows they can take Thursday afternoons off for a child's ballgame or whatever.

What about goals? Have you asked your employee what they want out of this position? They may want to move up in the organization or have opportunities for a management role elsewhere. You can be selfish about this or you can take on the role of mentor and teacher. By taking care of your employee and training them for a leadership role they will most certainly be a better employee, and will have a harder time leaving for a different job. And even if they do leave for a different opportunity, they will give such a glowing report on your leadership and team approach, you can be certain to find a good, young person to replace them.

The question you need to ask yourself is "Do you really want this person around for the long haul?" If you DO, take some time to privately evaluate your plans, then take some more time one-on-one with this employee to find out their long-term needs and goals. If you DON'T want this person to remain in the organization, you still need to get your plans in order because after you inform this person they are not what your organization needs, you'd better have a pretty good plan set up to attract a quality person to replace them.

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

Feedlot Facts

"Mineral Supplement Selection Tips"

One of the challenges cattle producers face is determining which mineral supplement they will use during the upcoming grazing season. Often this decision is based on the information provided on the mineral tag and price sheet. Although, price is an important consideration, other factors such as the concentrations of the minerals in the mix relative to the animals' requirements and sources of minerals used should be considered.

The first step in selecting a mineral supplement is to know what you are shopping for. Mineral mixes are often categorized based on the concentration of phosphorous in the mineral mix. Phosphorous is often deficient in cattle consuming forage-based diets and is our first priority in developing mineral supplements for grazing cattle. The amount of phosphorous required in a mineral mix to meet the requirements of a cowherd is a function of forage phosphorous content (determined via forage mineral analysis) and animal requirements, which are driven by mature body weight and production stage. A mineral mix that contains 6 to 10% Phosphorous would be adequate in many situations.

The next step is to spend some time reading the mineral tag. The guaranteed analysis section of the tag guarantees the concentration of the minerals listed. In general, the more guarantees the better, and if a mineral is not listed then it is not guaranteed to be in the mineral. The sources of the minerals used in the mix also warrant consideration as mineral sources differ in bio-availability (Table 1). For example copper sulfate is 100% available to the animal, whereas copper oxide is unavailable.

Relative bioavailability of trace mineral sources (adapted from Green et al., 1998)

Mineral	Sulfate	Oxide	Carbonate	Chloride
Cobalt	100	31	110	---
Copper	100	0	60	105
Iron	100	0	0-75	---
Manganese	100	58	28	---
Zinc	100	60-80	60	40

For more information about mineral supplementation, see "Questions and Answers on Beef Cattle Nutrition (<http://www.oznet.ksu.edu/library/lvstk2/c733.pdf>).

KSU Cow-Calf Checklist - April 2024

Management Considerations for June 2024

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

Cow Herd Management

- For spring-calving cow herds:
 - Monitor BCS relative to feed/forage availability.
 - Formulate your plan if you anticipate early-weaning or supplementing on grass.
 - Schedule early pregnancy checking activities with your vet if not already done.
- For late-summer and early-fall calving cow herds:
 - Ensure mature cows are ≥ 5.0 and 2-4 year old females are ≥ 6.0 at calving.
 - Review your calving health protocols as needed.
- For free-choice salt and mineral programs:
 - Record date and amount of product offered, calculate herd or pasture consumption.
 - Adjust how you are offering product to cattle if they over- or under-consume.
 - If consumption is 2X the target intake, then cost will be too!
 - Properly store bags and pallets to avoid damage and product loss.
- For bulls at the start of the breeding season:
 - Watch for injury so you can intervene and treat bulls promptly if needed.
 - Ensure they are aggressively covering cows.
 - Monitor BCS, particularly on young bulls.
 - If pulling bulls from cows to manage the length of the breeding season, schedule those dates and have them on the calendar in advance.

Calf Management

- If considering creep feeding calves, make sure you understand what your objective is by doing so and calculate the value of gain relative to cost of gain.
- Monitor calves for summer respiratory illness.
- Schedule any pre-weaning vaccination or processing activities.

General Management

- Visit KSUBeef.org for info and events!
- Evaluate early-summer grass growth and adjust your grazing plan as needed.
- Make concerted efforts to control invasive species in pastures.
- Take inventory of remaining forages and feedstuffs carried over to this fall.
- Use the Management Minder tool on KSUBeef.org to plan key management activities for your cow herd for the rest of the year <https://cowweb.exnet.iastate.edu/CowWeb/faces/Index.jsp>.
- Employ multiple strategies and chemistries for controlling flies and insects.
- With high feeder calf prices, consider price risk management tools.
- Make and evaluate important production calculations (always a good time for this):
 - 1) Calving distribution (% 1st cycle, % 2nd cycle, % 3rd cycle)
 - 2) Calving interval
 - 3) % calf crop (# calves weaned/# cows exposed for breeding).



What's New for Beef Producers

The Effects of Seasonal Prescribed Burning on Flint Hills Dung Beetle (Scarabaeinae) Populations-This study aimed to determine if the season of prescribed burning impacted dung beetle communities on pastures grazed by cattle in the Flint Hills. Dung beetle populations at the Kansas State University Beef Stocker unit were sampled biweekly for three months over the summer grazing period to determine if beetle populations varied between spring, summer, or fall burned pastures.

Results: At least eight species of dung beetles were identified with a total of 8,646 dung beetles collected. Dung beetle populations were not different ($P > 0.05$) between spring, summer, and fall burned pastures although peak beetle populations were observed two weeks earlier in the spring burned pastures than summer and fall.

The Bottom Line: Dung beetle populations were not impacted by the season of the burn and producers can select a burn season which best suits their needs without impacting dung beetle diversity or population density. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact Cassandra Olds (colds@ksu.edu or 785-706-8599) or Jaymelynn Farney (jkj@ksu.edu or 620-820-6125.) (This study conducted by Herman Griese, Andrea Salazar, Victoria Pickens, and Cassandra Olds).

Supplementation of Methionine or Choline Did Not Improve Health or Growth Performance in High-Risk, Newly Received Beef Heifers- This study was conducted to determine if supplemental methionine or choline improves health or growth performance in high-risk, newly received beef heifers. In a 3-year experiment, 1,440 beef heifers (480 per year; 493 lb initial weight; Tennessee origin) were received in 15 truckloads (five per year) in October of 2020, 2021, and 2022. Heifers were limit-fed in 60-day receiving trials to evaluate the effects of supplemental methionine or choline on health and growth performance. Cattle received one of five treatments: control (no added methionine or choline); 5 or 15 g/day available methionine (8.33 or 25 g/day Smartamine M; Adisseo USA Inc., Alpharetta, GA; ruminally protected methionine); or 1.17 or 3.5 g/day available choline (26 or 78 g/day ReaShure; Balchem Corp., Montvale, NJ; ruminally protected choline).

Results: Small differences among treatments were observed for final body weight, average daily gain, and gain:feed ($P \leq 0.10$), but none of the treatments differed from the control. No differences among treatments were observed for respiratory morbidity or mortality ($P \geq 0.30$).

The Bottom Line: Supplemental methionine or choline did not affect health or growth performance of high-risk, newly received heifers. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact Evan Titgemeyer (etitgeme@ksu.edu or 785-532-1220) or Dale Blasi (dblasi@ksu.edu or 785-532-5427.) (This study conducted by Madeline S. Grant, Dale A. Blasi, and Evan C. Titgemeyer).

The Effects of Thawing Method on Consumer Palatability Ratings of Beef Strip Loin Steaks- The objective of this study was to determine palatability differences in beef strip loin steaks among various U.S. Department of Agriculture approved thawing methods and those commonly utilized by consumers. Paired Low Choice beef strip loins ($n = 15$) were collected and fabricated into six sections, each section was fabricated into 1-in steaks and assigned one of six thawing methods including: countertop, cook from frozen, cold water, hot water, microwave, and refrigerator. Steaks were cooked to an internal peak temperature of 160°F and consumers were given samples which they evaluated for juiciness, tenderness, flavor liking, overall liking, attribute acceptability, and perceived level of quality. Samples were rated on a 100-point scale with 0 indicating dry, tough, or dislike extremely, and 100 indicating extremely juicy, extremely tender, or like extremely.

Results: For beef demographic data, consumers reported that the most important beef palatability trait was flavor with 56.7% of consumers indicating it as the most important. Tenderness was rated as the most important by 33.3% of consumers. Additionally, consumers reported the trait they experienced the most variability with was tenderness. Results of consumer sensory evaluation indicated that there were no differences ($P > 0.05$) among the six thaw methods for juiciness, tenderness, flavor, and overall liking. However, all treatments had an average rating of at least 57 for overall liking, indicating a high level of eating satisfaction. For all thaw methods, at least 82% of steaks were rated as overall acceptable. Additionally, for all thaw methods, consumers rated at least 79.1% of steaks acceptable for juiciness, tenderness, and flavor liking. Furthermore, thaw method did not have an impact ($P > 0.05$) on the perceived level of quality of samples.

The Bottom Line: Beef strip loin steak palatability was not impacted by thawing method, and therefore consumers should use whichever thawing method is most convenient, or best suits their needs. 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 Stephanie L. Witberler, Lindsey K. Decker, Erin S. Beyer, Morgan D. Zumbaugh, Michael D. Chao, Jessie L. Vipham, and Travis G. O'Quinn).

What's New for Swine Producers

Effects of Standardized Ileal Digestible Threonine to Lysine Ratio on Growth Performance of PIC Line 337 × 1050 Pigs-

The objective of this research was to evaluate the impact of varying SID Thr:Lys ratios on growth performance, removals, and mortality rates of late-nursery, grower, and finishing PIC 337 × 1050 pigs. In each experiment, pens of pigs were blocked by BW and randomly assigned to 1 of 5 dietary treatments in a randomized complete block design with 19 to 27 pigs per pen and 8, 7, and 7 replications per treatment in Exp. 1, 2, and 3, respectively. In Exp. 1, 987 pigs (initially 26.0 ± 0.70 lb) were used from 26 to 54 lb. In Exp. 2, 875 pigs (initially 95.5 ± 1.17 lb) were used from 95 to 155 lb. In Exp. 3, 824 pigs (initially 224.4 ± 1.85 lb) were used from 224 to 297 lb. Pens were randomly assigned to 1 of 5 dietary treatments with increasing SID Thr:Lys ratios at 53, 58, 62, 65, and 68% in Exp. 1 and 2, and 56.5, 60, 64, 68, and 72.5% in Exp. 3. Diets were corn-soybean meal-based. Diets with the lowest and highest Thr:Lys ratios were blended to achieve the target SID Thr:Lys treatments in each experiment.

Between experiments, all pens of pigs were placed on a common diet for 23 (Exp. 1 and 2) and 32 d (Exp. 2 and 3) to provide opportunity for compensatory growth prior to initiation of the next experiment. In Exp. 1 (26 to 54 lb), ADG and final BW increased linearly ($P \leq 0.006$) while ADFI, Thr intake/d, and Thr intake/kg of gain increased quadratically ($P \leq 0.001$). Overall, F/G improved (quadratic, $P \leq 0.001$) as Thr:Lys ratio increased. Additionally, Lys intake/d increased (quadratic, $P < 0.001$) while Lys intake/kg of gain decreased (quadratic, $P < 0.001$) with increasing Thr:Lys ratio. The quadratic polynomial (QP) model predicted greater than 68% SID Thr:Lys was required for ADG from 26 to 54 lb, while a QP model suggested that minimum F/G was achieved at 62.1% SID Thr:Lys. In Exp. 2 (95 to 155 lb), ADG, final BW, Thr intake/d, and Thr intake/kg of gain increased (linear, $P \leq 0.05$) and F/G improved (linear, $P = 0.030$) as dietary Thr:Lys increased. Moreover, Lys intake/kg of gain decreased (linear, $P = 0.023$) with increasing Thr:Lys ratio. For model analysis, QP models suggested optimum ADG and F/G were achieved at levels greater than 68% SID Thr:Lys. However, similar fitting broken-line quadratic (BLQ) and broken-line linear (BLL) models predicted no further improvement to F/G and ADG beyond 61 and 67% SID Thr:Lys, respectively. In Exp. 3 (224 to 297 lb), increasing SID Thr:Lys increased (linear, $P \leq 0.001$) Thr intake/d and Thr intake/kg of gain. In addition, increasing SID Thr:Lys ratios tended ($P \leq 0.086$) to quadratically increase ($P \leq 0.086$) ADFI and BW of pigs at the second marketing event. However, no other response criteria were impacted ($P \geq 0.10$) by dietary Thr:Lys. Due to a lack of ADG and F/G responses, prediction models were not developed. In summary, these results suggest the optimal SID Thr:Lys level for 26- to 54-lb pigs is 62.1% for feed efficiency and greater than 68% for ADG. From 95 to 155 lb, the requirement was predicted at or above 61 and 67% SID Thr:Lys for F/G and ADG, respectively. However, with the variation in response criteria in Exp. 3 (224 to 297 lb), we were unable to statistically define a requirement estimate. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Rafe Q. Royall, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouchey, Robert D. Goodband, Jordan T. Gebhardt, Carine M. Vier, Matthew Spindler, Uislei Orlando, Luis Zaragoza, Ning Lu, Wayne Cast, Danielle F. Wilson-Wells, Julia P. Holen, and Alyssa M. Betlach).

Effects of Increasing Alpha-Linolenic Acid on Growth Performance and Mortality Rate in PRRS-Virus Challenged Nursery Pigs-

A total of 91,140 weaned pigs, (DNA 600 × PIC 1050; initially 11.33 ± 0.62 lb) originating from PRRSV-positive sow farms, were used across 8 nursery sites to evaluate growth performance, total removal and mortality rate, and medication usage of nursery pigs fed diets containing 0 or 3% O3 Trial Feed (NBO3 Technologies LLC, Manhattan, KS), a source of omega-3 fatty acids. Each of the 8 sites contained 5 barns with 2 rooms in each barn. Rooms of pigs were blocked by nursery site and allocated by sow source to 1 of 2 dietary treatments. Thus, there were 40 groups (rooms) per treatment with approximately 1,100 pigs per room. The first treatment was a standard nursery diet specific to the production system. The second treatment was the same standard nursery diet with the addition of 3% O3 Trial Feed. At placement, pigs were fed a pre-starter and then fed experimental diets across 3 phases with all diets fed in pelleted form. Overall, there were no significant differences ($P > 0.10$) observed in growth performance between pigs fed diets containing 0 or 3% O3 Trial Feed. Pigs fed control diets had reduced ($P < 0.001$) total removals and mortality percentage compared to pigs fed diets containing 3% O3 Trial Feed. When evaluating medication usage, there were no significant differences ($P > 0.10$) observed in the total number of injections given per 1,000 pig days. However, pigs fed diets containing 3% O3 Trial Feed had a reduced ($P < 0.001$) number of total injections per pig placed. In summary, the increase in alpha-linolenic acid in the diet, through the inclusion of 3% O3 Trial Feed, did not impact growth performance during the duration of this trial. There was an increase in total removals and mortality in pigs fed diets containing O3 Trial Feed. However, there was a reduction in total injections given per pig placed in pigs fed diets containing O3 Trial Feed. We hypothesize that because of the high prevalence of PRRS at entry, O3 Trial Feed may not have had sufficient time to impact the immune system before the PRRS challenge. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Jenna J. Bromm, Mike D. Tokach, Jason C. Woodworth, Robert D. Goodband, Joel M. DeRouchey, Josh R. Flohr, Raymond A. M. Schmitt, Jordan T. Gebhardt, and Felipe Zarate).



ASI Faculty Highlight



Mike Brouk (mbrouk@ksu.edu or 785-532-1207)

Professor/Extension Specialist - Dairy Science

Micheal J. Brouk was born November 15, 1962, in Franklin County, Missouri. He attended Linn R-2 Schools graduating in May 1981. Following high school graduation, he attended the University of Missouri-Columbia majoring in agronomy and dairy science and received the Bachelor of Science degree in Agriculture in May 1985. From 1976 to 1984, he was also an active partner in the family grain farm located in Osage County, Missouri. The University of Missouri-Columbia employed Mike as a Research Specialist for two years after he completed his undergraduate program. The research projects involved the utilization of dairy processing plant waste as a fertilizer for forage crops and as a protein and mineral supplement for livestock. He then began a Master of Science degree program under Dr. Ron Belyea at the University of Missouri-Columbia. The title of his thesis was "Chewing Behavior and Digestion of Alfalfa Forage." Following completion of his M.S. degree, Mike accepted a position with Cenex/Land O'Lakes in southwestern Minnesota. He worked as a Livestock Production Specialist developing nutrition and management programs for dairy and beef producers. After two years with LOL, he entered a doctoral program under the direction of Dr. David Schingoethe at South Dakota State University. His dissertation topic was "Net Energy of Lactation and Ruminant Degradability of Wet Corn Distillers Grains." Following completion of the Ph.D. in Animal

Sciences he joined the teaching and research staff of South Dakota State University in January 1994. Mike was responsible for teaching undergraduate dairy management, nutrition, breeding and cattle evaluation courses as well as developing a dairy cattle nutrition research project.

Mike returned to the University of Missouri-Columbia in August of 1996 as an Extension Specialist with Commercial Agriculture Program. He was responsible for developing state wide extension programs in the areas of dairy cattle nutrition, forage systems, replacement heifer development and dairy cattle management. He joined the faculty of Kansas State University in December of 1998 as a State Dairy Extension Specialist where he holds a 30% teaching and 70% extension appointment. His current responsibilities include development of programs in dairy cattle nutrition, management, cow comfort, replacement heifer development, dairy expansion and heat stress abatement. He is currently involved in several research projects evaluating various heat stress abatement methods in commercial dairy herds.



Kelly Getty (kgetty@ksu.edu or 785-532-2203)

Associate Professor - Food Science

Kelly J.K. Getty, Ph.D., originally from Emporia, KS, received her B.S. (1988) and Ph.D. (1999) in Food Science from Kansas State University and M.S. (1994) from Pennsylvania State University in Food Science.

Dr. Getty started at Kansas State University with the Food Science Institute in 2001. In 2012, Dr. Getty was fully appointed to ASI with an 80% Teaching/20% Research appointment.

Currently, Dr. Getty serves as the Co-Director of the Kansas Value Added Foods where she provides food safety support to food processors in Kansas. In addition, Dr. Getty teaches Fundamentals of Food Processing (on-campus and online) and team-teaches Research and Development of Food Products (on-campus and online). Her research efforts involve ingredient functionality in food products and development of new food products.

Prior to Kansas State University, Getty was an assistant professor at Clemson University where she taught meat science courses and conducted meat and food safety research. Getty also worked at Pizza Hut, Inc. and the American Meat Institute. Dr. Getty and her husband, Chris, reside in Manhattan with their two children.

*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*