

Order DNA Envelopes for Hogs, Sheep, Meat Goats, Commercial Heifers by June 5

The state livestock nomination process transitioned to an online system in 2022. The payment of nomination fees is now paid through purchasing official DNA envelopes in advance. Families will need one DNA envelope per nominated animal. At least one exhibitor in the family must have a YQCA number to order DNA envelopes. The DNA envelopes must be purchased through the online system by June 5. Families are encouraged to order them as early as possible to provide enough time to receive them in the mail, pull their samples, enter the animal information online, and return the signed envelopes. After June 5, the only way to get DNA Envelopes is to pick them up in person, or pay the \$50 expedited shipping fee.

Families may use DNA envelopes purchased in 2022 and 2023, as long as they were ordered through the online system and have an official serial number in the corner.

State Nominations for hogs, sheep, meat goats, and commercial heifers must be submitted through the online system by 5 pm on June 15. This includes entering each animal's information (tag number, breed, secondary ID, etc.) in the online system, under every exhibitor in the family, uploading documents, and checking out. A signed and completed DNA envelope for each animal must also be postmarked by June 15 to be accepted. Families should include a copy of their receipt listing the animals entered in the online system with their DNA envelopes. Returning exhibitors need use their existing account from last year, while new exhibitors will need to create an account. The nomination deadline of June 15 is firm and will be enforced. Late nominations are not accepted.

For more information on the state livestock nomination process visit the "Nomination Information" tab of the KSU youth livestock program website: <https://www.asi.k-state.edu/extension/youth-programs/nominated-livestock/>. The link to submit state livestock nominations and order DNA envelopes is <https://kansasnom.fairwire.com/>.

2024 Champions Livestock Judging Camps

This three day, intense judging 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. Prior livestock judging experience is necessary for this camp. Workouts will be conducted similar to those at a collegiate level. K-State Livestock Judging Coach, Payton Dahmer, will conduct the training for each camp. The camp will focus primarily on the proper format, terminology, and presentation of oral reasons. Camp participants will also be exposed to livestock evaluation skills and incorporating performance records in the decision-making process. The 2024 camp sessions will be June 3-5 and June 10-12 in Manhattan on K-State campus. The cost to register is \$350 for a camper and \$100 for a chaperone. The camp is filled on a first -come, first-served basis. The deadline to register for any camp is Friday, May 24. For more information or to register, visit asi.k-state.edu/judgingcamps or contact Rachael Stadel (rmkstadel@ksu.edu or 785-532-2996).

State Livestock Nominations Due June 15

All small livestock and commercial breeding heifer state nominations are due June 15. This includes commercial breeding heifers, market swine, commercial breeding gilts, market lambs, commercial breeding ewes, and ALL meat goats. Animals must be submitted online through ShoWorks 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 and tag numbers that were entered in the system under each child 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. Otherwise, when it is time to enter, the animal will not be available to the exhibitor during the online entry process. All youth must also sign the DNA envelope for each animal. (Continued on Page 2)

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Upcoming Events

- June 3-5, 2024**
Champions Livestock Judging - Camp 1
- June 4-6, 2024**
HACCP Course- Manhattan, KS
- June 5-8, 2024**
KASLA
- June 10-12, 2024**
Champions Livestock Judging - Camp 2
- June 13, 2024**
KSU Horse Judging Advanced Camp
- June 25, 2024**
Cattle U
- 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

State Livestock Nominations Due June 15 Continued

There is a red “auto-fill from previous” button that will allow animals already nominated under one child to quickly be added to the exhibitor account for other siblings. If you don’t have a receipt showing a specific tag number under a child, that animal has not been submitted online and the child will not be eligible to show it. Enter all animals under all kids in the system and have all kids sign the DNA envelopes to have the most flexibility with your family’s livestock projects. For example, if you have two kids and four animals, all four animals should be entered in the system under each exhibitor. This does mean you will have eight total entries for your family on the receipt. Families must also designate the market or commercial breeding division for each animal. Females can be dual nominated in both divisions. However, they must be nominated under the market division and then the “Dual Nominate” checkbox slid to “Yes”. Doing this allows nominated gilts, ewes, and does to be eligible for either the market division or the commercial breeding division when it is time to submit show entries this summer.

The 2024 state livestock information is available from the KSU Youth Livestock Program website (<https://www.asi.k-state.edu/extension/youth-programs/>). No paper forms will be accepted, all nominations must be submitted online. Several resources are available to guide families in successfully completing their nominations, including the Rookie Guide, specie checklists, and Zoom session recordings. Families must plan ahead.

The general process includes these steps:

- 1) Exhibitors complete YQCA training and download certificate. Must be valid through 10/1/24 to be accepted.
- 2) Locate KSU Family Name & Nomination #. Returning families can be found on the [list](#) posted on the website. New families nominating for the first time need to request one [here](#).
- 3) Complete [Declaration Form](#) representing entire family and all species that will be exhibited.
- 4) Login to [online nomination system](#) account (ShoWorks).
Returning exhibitors – login to ShoWorks account using last year’s credentials.
New exhibitors – create a new account for each child who will be showing.
- 5) Enter animal data and exhibitor information as “entries” through the online nomination system.
This includes tag numbers, breeds, secondary ID for animals and uploading the two (2) required documents for each child:
Current YQCA certificate (valid through 10/1/24)
Declaration Form (representing the entire family)
- 6) Purchase official DNA envelopes in advance through the online system, under “3 – Items”. One (1) envelope/animal.
May [skip ahead](#) in system to order DNA envelopes before entering animals, using the instructions.
Must return to link before June 15 to enter animals in system.
- 7) Mail completed DNA envelopes and copy of online submission receipt (with list of animals) by June 15 (postmark deadline).
Send certified, or via a tracking method that provides a receipt as proof of mailing.
- 8) Nominations will be approved online by Extension Agents and FFA Advisors.
- 9) Review confirmation letter received after signed DNA envelopes are processed.
- 10) Enter [Kansas State Fair Grand Drive](#) and [KJLS](#) using entry links provided by each show. Each step in the process has their own unique link. Exhibitors will use account and password created for nominations to login, enter, and pay fees for each show.

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. There should NOT be a single exhibitor signature on 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. Both forms must be uploaded at the same time. The system accepts PDF documents or image files. YQCA certification must be completed at the time of nomination. Once any form is uploaded, the system does not allow families to edit their forms.

Ear notches are also required for swine nominations and full scrapie tag numbers are required for sheep and meat 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 2-3 times/week. It will take about two weeks to open and process all mail received. For more information, visit the “[Nomination Information](#)” page of the youth livestock program website or contact Lexie Hayes (adhayes@ksu.edu or 785-532-1264).

Upcoming Events

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. [Online entries](https://www.asi.k-state.edu/extension/youth-programs/events/swineclassic.html) are required at <https://www.asi.k-state.edu/extension/youth-programs/events/swineclassic.html>. Checks to accompany entry receipt must be postmarked by June 24, 2024. Outlined below is a schedule of this year's program.



Friday, July 12

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. Skillathon in the show ring
4 p.m. Ice cream party by the show ring
5:30 p.m. Showmanship contests

Saturday, July 13

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 or jderouch@ksu.edu) or Lexie Hayes (785-532-1264 or adhayes@ksu.edu).

KSU Horse Judging Team One-Day Advanced Camp

Calling all Youth Horse Judges! Do you want to enhance your evaluation and oral reasons skills? Then make sure to attend the KSU Youth Horse Judging Camp where you will work one-on-one with coaches and members of the KSU Intercollegiate Horse Judging Team. 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. This one one-day advanced camp will be hosted on June 13 at the Stanley Stout Center. 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 includes lunch, a judging notebook and a t-shirt. This camp is filled on a first-come, first serve basis and pre-registration is required. The registration deadline is May 24. For more information visit asi.k-state.edu/judgingcamps or contact Celsey Crabtree (celseyb@ksu.edu).

K-State Animal Science Leadership Academy

K-State Animal Science Leadership Academy (KASLA) Program will offer one session on June 5-8. 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 (sbreiner@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).

CattleU One Day Conference in June

Cattle U registration is now open! Mark your calendar for June 25, 2024 at the Manhattan Hilton Garden Inn, Manhattan, KS. This one-day event is free to attend and provides timely, practical information for High Plains cattlemen and women. For event details and to register, visit cattleu.net or contact Kylie Reiss at kreiss@hpj.com.

What's New

Management Minute

“Cultivating Better Conversations”

In today's fast-paced culture everyone is busy and all those distractions can make it difficult to connect with co-workers, clients and even family members. We have all had those conversations where we weren't really listening to the person speaking or where you got the distinct impression that you were not really being heard. So, what can you do to become a better listener and cultivate better conversations? One of the suggestions I recently came across regarding “active listening” and building connections is the use of open-ended, emotion-based questions. For example, when meeting new people, we often ask simple fact-based questions such as “When did you come to work for company X?” However, what if you posed the question “Why did you come to work for company X?” The latter question likely leads to much deeper answer than the first and then follow-up with “What do you like most about your current position?” We have numerous opportunities to practice asking deeper questions throughout our day. It's common to ask our children “How was school today?” which typically results in a simple answer of “fine” or “good.” However, if the question becomes “What was the best thing about school today?” the standard one-word answer no longer applies and the conversation now has more depth. Cultivating better conversations isn't difficult but it does require increased awareness of the questions we ask and practice.

Feedlot Facts

“Focus on Feedlots: Cattle Performance in 2023”

The K-State Focus on Feedlots is a monthly publication that summarizes feedlot performance and closeout data from cooperating commercial cattle feeding operations in Kansas. Each year, I summarize the data from the monthly reports, in an effort to document annual fed cattle performance and cost of gain. The tables below summarize the average performance and closeout data reported for steers and heifers in 2023.

Annual Closeout Summary: Steers

Year	Total Head	Final Weight	Days on Feed	Avg. Daily Gain	Feed/Gain (Dry Basis)	% Death Loss	Cost of Gain/Cwt
2023	304728	1425 (1400-1496)	190 (177-197)	3.43 (3.31-3.68)	6.38 (6.15-6.46)	2.00 (1.24-2.41)	\$140.31 (123.33-149.02)

Annual Closeout Summary: Heifers

Year	Total Head	Final Weight	Days on Feed	Avg. Daily Gain	Feed/Gain (Dry Basis)	% Death Loss	Cost of Gain/Cwt
2023	222627	1292 (1268-1331)	184 (170-198)	3.07 (2.90-3.23)	6.73 (6.49-6.87)	2.31 (1.71-3.01)	\$150.82 (133.57-160.25)

The monthly reports from the K-State Focus on Feedlots may be accessed at <https://www.asi.k-state.edu/about/newsletters/focus-on-feedlots/> or if you wish to subscribe to the monthly email distribution list please email jwaggon@ksu.edu.

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



KSU Cow-Calf Checklist - May 2024

Management Considerations for July 2024

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

Cow Herd Management

- For spring-calving cow herds:
 - Score cows for BCS concurrent with grass growth.
 - 2-4 year old females and thin females will respond most to early-weaning.
 - If you plan to early-wean:
 - Develop your plan for feeding and marketing calves.
 - Prepare weaning/receiving pens and waterers in advance.
 - If feeding early-weaned calves, test your forages and have your ration plan and ingredients in place 2-3 weeks prior to weaning.
 - Schedule early pregnancy checking activities if not already done.
- For late-summer and early-fall calving cow herds:
 - Evaluate cows for BCS and adjust your plan to ensure mature cows are ≥ 5.0 and 2-4 year old females are ≥ 6.0 at calving.
 - The final 60 days prior to calving represents the last opportunity to add BCS economically.
 - Review your calving health protocols as needed.
- Closely manage free-choice salt and mineral programs.
 - Record date and amount of salt and mineral offered and calculate herd consumption on a pasture or group basis.
 - Adjust how you are offering product to cattle if needed to achieve target intake.
 - If consumption is 2X the target intake, then cost will be too!
 - Properly store bags and pallets to avoid damage and product loss.
- Continue to monitor bulls and their activity throughout the breeding season.
 - 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.
 - If bulls are BCS ≤ 5.0 after breeding, consider supplementing to regain BCS going into fall.

Calf Management

- If creep feeding calves, closely monitor intake and calf condition/fleshiness.
- Monitor calves for summer respiratory illness.
- Schedule any pre-weaning vaccination or processing activities.

General Management

- Visit [KSUBeef.org](https://ksubeef.org) for info and events!
- Evaluate grass growth and adjust your grazing plan as needed.
- Continue efforts to control invasive species in pastures.
- Employ multiple strategies, chemistries for late-season fly/insect control.
- Begin taking inventory of harvested forages for fall feed needs.
- If planning to harvest corn silage, prepare your pile/bunker site and equipment.
- Use the Management Minder tool on [KSUBeef.org](https://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 other assistance programs.

What's New for Beef Producers

Effects of Dietary Energy Concentration and Feed Intake on Growth Performance of Newly Received Growing Cattle Fed Diets Based on Corn and Corn Co-Products

This study's focus was to evaluate if feeding equal amounts of energy from a high-energy limit-fed diet has an effect on growth performance of growing beef cattle when compared to traditional high-roughage ad libitum diets.

Study Description: A total of 392 crossbred heifers were fed one of four experimental diets for a 70-day receiving period. Treatments included a high-roughage diet formulated to provide 45 Mcal of net energy for gain (NE_g) per 100 lb of dry matter (DM) and fed *ad libitum* intake (AL) or a high-energy diet formulated to provide 60 Mcal of NE_g per 100 lb of DM and fed at 75% (LIM-75), 80% (LIM-80), or 85% (LIM-85) of *ad libitum* intake. Treatments were designed to equalize for energy intake between calves assigned to AL and LIM-75.

The Bottom Line: Restricting feed intake while maintaining energy intake does not negatively influence growth performance of newly received growing beef cattle. In times of high forage cost or shortened growing periods producers could program gains based on their own financial and personal needs. 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 Colton D. Weir, Zachary M. Duncan, William R. Hollenbeck, Sean P. Montgomery, Tyler J. Spore, and Dale A. Blasi).

GreatO+ Supplementation Leads to Greater Proportions of Omega-3 Fatty Acids in the Small Intestines of Holstein Steers

This study aimed to determine if supplementation of GreatO+, an extruded blend of flaxseed and microalgae (NBO3, Manhattan, KS), in Holstein steers would lead to greater amounts of fatty acids, particularly omega-3s, in the small intestines.

Study Description: This study utilized 12 cannulated Holstein steers assigned to two treatments: with or without supplementation of GreatO+ as a source of omega-3 fatty acids. Two periods were utilized, consisting of a 15-day adaptation interval and a four-day collection interval. After the end of the collection period, each steer was transitioned to the other treatment for the second period. This study was conducted at the Kansas State Intake Facility, equipped with automated feed and water troughs.

The Bottom Line: Cattle supplemented with GreatO+ have greater amounts of omega-3 fatty acid available for absorption in the small intestines. More information is available on this experiment and others in the KSU Cattlemen's Day report at KSUBeef.org. For more information contact James Drouillard (jdrouill@ksu.edu or 785-532-1204) or Dale Blasi (dblasi@ksu.edu or 785-532-5427). (This study conducted by Ross L. Thorn and James S. Drouillard).

Evaluation of Thawing Curves of Beef Strip Loin Steaks Using Various Thawing Methods- The objective of this study was to evaluate and determine thaw rate and time of strip steaks thawed using methods that are recommended by the U.S. Department of Agriculture and those commonly used by consumers.

Study Description: Strip steaks collected from a beef packing facility were randomly assigned a thaw method. Initially, steaks were vacuum packaged and then frozen at -40°F until thawed. Two thawing methods were USDA-approved: thawing in a refrigerator (REF) and in cold water (CW); while the other two methods evaluated are commonly used by consumers: thawing on the countertop (CT) and in hot water (HW). The thawing temperatures were: REF at 35.6–37.4°F in the refrigerator; CW maintained at 35.6–37.4°F in water; CT at 68°F; and HW at 104°F. Temperatures of the steaks were recorded every 30 minutes for CW and REF, every 10 minutes for CT, and every thirty seconds for HW to determine the thaw time and rate.

Results: Thawing time differed ($P < 0.05$) among treatments in this study ($HWP < 0.05$) among treatments with a similar trend ($HWP < 0.05$) from REF until 5 hours prior to thaw point, at which point the temperatures were similar ($P > 0.05$) for the remaining thawing period. Moreover, REF steaks were warmer ($P < 0.05$) than CW steaks from 13 to 5 hours prior to thaw point. In the final 5 hours, CW and REF steaks were similar ($P > 0.05$) in temperature. Furthermore, among all treatments, CT steaks were the coldest ($P < 0.05$) from 5 to 2 hours prior to thaw point. However, in the final 2 hours, CT steaks were at similar ($P > 0.05$) temperatures as CW and REF. Due to the short period of thawing time and the observed rapid thawing rate, HW samples were the coldest ($P < 0.05$) in the final 10 minutes prior to thaw point.

The Bottom Line: Of the four thaw methods utilized in this study, the safest methods are those approved by the USDA (CW and REF). Thawing meat on the countertop or in hot water may be efficient and convenient methods for consumers, but it is important to take the extra time to thaw meat properly for safety. 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 Lauren M. Frink, 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

Effects of Increasing Energy or Lysine in Soybean Meal-Based Diets on Early and Late Finishing Pig Performance- A total of 2,265 finishing pigs (337 × 1050 PIC; initially 110.7 ± 6.14 lb) were used in two 28-d trials to determine the effect of increasing energy or lysine in soybean meal-based diets on early and late finishing pig performance. Pigs were housed in mixed gender pens with 27 pigs per pen and 21 pens per treatment. Soybean meal (SBM) NE values used in diet formulation were either 946 kcal/lb (78% NE of corn; NRC) or 1,212 kcal/lb (100% NE of corn). The treatments were structured as a completely randomized design. Treatments consisted of: 1) a diet containing a high level of SBM which was estimated at 100% NE of corn (High SBM); 2) a diet containing a low level of SBM which was estimated at 100% NE of corn with added feed-grade amino acids (Low SBM); 3) a diet containing a low level of SBM which was estimated at 78% NE of corn with added fat (Low SBM w/fat) to equal the NE in diets 1 and 2; and 4) a diet containing a low level of SBM which was estimated at 100% NE of corn with increased feed-grade AA and increased Lys:NE (Low SBM w/AA). Following the 28-d growth trial in the early finishing phase, pigs were fed a common diet for approximately 30 d. Pens were then randomly allotted to 1 of the same 4 treatments for the late finishing phase (initially 251.5 ± 7.40 lb BW). For both experiments, pigs were weighed and feed disappearance was measured every 14 d to determine ADG, ADFI, F/G, and caloric efficiency (CE). In the early finishing study, there were no differences in ADG (P>0.10), but pigs fed a low level of SBM with increased feed-grade AA and increased Lys:NE (Low SBM w/AA) had increased (P<0.05) ADFI compared to pigs fed a high level of SBM (High SBM). The increased ADFI without increased ADG resulted in poorer F/G (P<0.05) in pigs fed a low level of SBM with increased feed-grade AA and increased Lys:NE (Low SBM w/AA) compared to pigs fed a low level of SBM with added fat (Low SBM w/fat). For CE, pigs fed a low level of SBM with added fat (Low SBM w/fat) had improved (P<0.05) CE compared to pigs fed a low level of SBM with increased feed-grade AA and increased Lys:NE (Low SBM w/AA). In the late finishing study, there was a tendency (P= 0.092) for a treatment effect on F/G where pigs fed the High SBM diet had the best F/G, but there was not a significant difference between any two treatments when using a Tukey multiple comparison adjustment (P>0.05). There was no evidence (P>0.10) for a difference in ADG, ADFI, or CE. Based on the performance of pigs fed the low level of SBM with increased AA and increased Lys:NE (Low SBM w/AA), the lost performance of low SBM diets is not due to a lower Lys:Cal ratio that results when NE is underestimated. Using caloric efficiency, SBM is estimated to contain 94% of the NE of corn based on results of the early finishing study and 125% of the NE of corn based on results of the late finishing study. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Ty H. Kim, Jamil E. G. Faccin, Robert D. Goodband, Mike D. Tokach, Joel M. DeRouchey, Jason C. Woodworth, and Jordan T. Gebhardt).

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

The objective of these experiments was to evaluate the impact of varying SID Trp:Lys ratios on growth performance, removals, and mortality rates of PIC 337 × 1050 finishing 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 22 to 27 pigs per pen and 6 or 7 replications per treatment. In Exp. 1, 840 pigs (initially 101.2 ± 2.08 lb) were used from 101 to 161 lb. In Exp. 2, 801 pigs (initially 219.8 ± 3.44 lb) were used from 220 to 281 lb. Dietary treatments were corn-soybean meal-based with 30 or 20% DDGS (Exp. 1 and 2, respectively) and contained increasing SID Trp:Lys ratios at 15, 17.5, 19, 21, and 23%. Diets containing low and high Trp:Lys ratios were blended to achieve the target SID Trp:Lys treatment levels in Exp. 1, while diets containing low, medium, and high Trp:Lys ratios were blended to achieve the target SID Trp:Lys treatment levels in Exp. 2. Between experiments, all pens of pigs were placed on a common diet for 27 d and pens were reallocated to dietary treatment at the start of Exp. 2. In Exp. 1, increasing the SID Trp:Lys ratio increased (quadratic, P ≤ 0.008) ADG, ADFI, and final BW and improved (quadratic, P = 0.007) F/G. As expected, increasing SID Trp:Lys increased (linear, P < 0.001) Trp intake, g/d. In addition, Trp intake per kg of gain and Lys intake/d increased (quadratic, P ≤ 0.009), while Lys intake per kg of gain decreased (quadratic, P = 0.008) with increasing SID Trp:Lys ratio. There was no difference between Trp:Lys ratios on the percentage of removals, mortalities, or total removals (P > 0.10). For model analysis in 101- to 161-lb pigs, the developed broken-line linear models suggested no further improvement to ADG and F/G beyond 19.0 and 19.3% SID Trp:Lys, respectively. Meanwhile, a similar fitting quadratic polynomial (QP) model suggested minimum F/G was achieved at 21.5% SID Trp:Lys. In Exp. 2, increasing the SID Trp:Lys ratio increased (linear, P ≤ 0.001) Trp intake and Trp intake per kg of gain (quadratic, P = 0.050). However, no other observed response criteria were significantly impacted (P ≥ 0.10). Models to predict optimal Trp:Lys ratios were not analyzed for 220- to 281-lb pigs due to the lack of observed differences for ADG and F/G. In summary, these results suggest the optimal SID Trp:Lys level for 101- to 161-lb pigs was predicted at or above 19.0 and 19.3% SID Trp:Lys for ADG and F/G, respectively. With the variation in response criteria observed in Exp. 2 (220 to 281 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).



ASI Faculty Highlight



Evan Titgemeyer (etitgeme@ksu.edu or 785-532-1220)
Professor & Graduate Program Director

Evan Titgemeyer grew up on a small family farm in northwest Ohio. Following completion of a B.S. degree at The Ohio State University (1984), he completed both M.S. (1986) and Ph.D. (1989) degrees at the University of Illinois. His graduate work was under the direction of Dr. Neal Merchen and focused on determining amino acid requirements of growing cattle; this is an area of research where he is still active. Following post-doctoral training with Dr. George Fahey, Jr. in the area of fiber chemistry, he was hired as a faculty member at Kansas State University in 1992, and he is currently a professor in the Department of Animal Sciences and Industry, with specialization in the area of ruminant nutrition. His current appointment is 70% research and 30% teaching.

Dr. Titgemeyer's research program focuses on protein and amino acid utilization by beef and dairy cattle. Recent research projects have evaluated amino acid utilization by growing cattle, with special interest in the role that methionine plays in methylation reactions. Some nutritional compounds of interest include: choline, betaine, homocysteine, creatine, and guanidinoacetic acid.

In contrast to the current beef model published by NASEM, Dr. Titgemeyer's research has demonstrated that there are differences among the amino acids in terms of how efficiently they are used for growth by cattle. Data from his research would suggest that maintenance requirements of cattle for amino acids are much less than predicted by NASEM model, whereas the efficiency of amino acid use above maintenance is less than predicted by NASEM.

Current teaching commitments are primarily in graduate nutrition courses. Currently, Dr. Titgemeyer serves as instructor for Nutritional Physiology (ASI 826), Protein Nutrition (ASI 921, team taught with Dr. Bob Goodband), and Analytical Techniques (ASI 860, 861, and 862). Nutritional Physiology covers basic mechanism related to digestion and absorption of nutrients, with a focus on the small intestinal epithelium. Protein Nutrition discusses both basic and applied aspects of protein and amino acid utilization by livestock species. The Analytical Techniques courses are designed to provide beginning graduate students in nutrition with the basic laboratory skills required to successfully complete their graduate research.



Jessie Vipham (jessiev@ksu.edu or 785-532-3486)
Associate Professor - Food Science

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 Assistant 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 international and domestic, cooking, and spending time with her adorable dogs, Gus and Newt.

*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>

Laboratory Client Services Assistant/KABSU. (Job #517265)- This is a Full-Time, USS Staff position. The Kansas Artificial Breeding Service Unit (KABSU) is looking to fill a fulltime, benefits eligible position for a Laboratory Client Services Assistant. KABSU is a unit within the Dept of Animal Sciences and Industry that provides reproductive resources to livestock, equine and canine customers throughout Kansas and neighboring states. It is a self-funded fee-for-service business unit that serves a clientele profile of over 800 customers. KABSU interacts daily with approximately 35-40 customers through in-house direct contact or by telephone, written, or electronic communication. This position will receive and catalog over 300 cryogenic samples daily of livestock, equine and canine breeding semen as well as maintain a catalog inventory of over 2 million animal breeding samples cryogenically stored in the KABSU facility. The wholesale value of the maintained inventory is over 20 million dollars. For more information or to apply, go to <https://careers.k-state.edu/cw/en-us/job/517265/laboratory-client-services-assistant>

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>

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 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>

Be sure to check out the monthly KSU ASI Headlines
asi.ksu.edu/Headlines
