

Register for Swine Profitability Conference by Jan. 25

Registration is now open for the K-State Swine Profitability Conference happening on Tuesday, February 4, 2025, at the Stanley Stout Center in Manhattan, KS.



The schedule includes:

- 9:15 a.m. Registration
- 9:30 a.m. Welcome
- 9:45 a.m. Current Profitability Situation and Insights into Pork Demand - *Dr. Glynn Tonsor, K-State professor in Agriculture Economics*
- 10:30 a.m. 10 Habits of Highly Productive Pork Producers - *Dr. Lisa Tokach, Abilene Animal Hospital*
- 11:15 a.m. Our Generational Legacy Story - *Michele Walter and Family, Keesecker AG and 3MK Pork LLC*
- Noon Lunch
- 1:15 p.m. Macroeconomics of Global and US Grain and Oilseed Dynamics for 2025 - *Brian Burke, president, John Stewart and Associates*
- 2:15 p.m. Key Competencies that Enable Success of a Live-Hog Production System - *Dr. Bradley Wolter, Windy Hill Meadows and former CEO of The Maschhoffs*
- 3 p.m. Adjourn

Pre-registration is \$25 per participant by January 24. Registration on/after January 25, or at the door is \$50 per participant. The complete schedule and online registration information can be found at asi.ksu.edu/SwineProfit. For more information contact Katie Smith (katiesmith@ksu.edu or 785-532-1267.)

Small Livestock EID Tag Order Deadline January 15

Small Livestock EID tag orders are due by January 15. These tags are required in market swine, commercial breeding gilts, market lambs, commercial breeding ewes, and all meat goats that will be nominated for the Kansas State Fair or KJLS. The order form is posted on the EID Tags page of the youth livestock program website. A signed and completed form, as well as payment, must be received by the deadline for the order to be accepted. Additional information regarding EID tags may be found on the youth livestock program website: www.asi.k-state.edu/extension/youth-programs/nominations/kansas-4-h-eid-tags.html.

McPherson County Cow-Calf Clinic to be Hosted February 13

The McPherson County Annual Cow Calf School is scheduled for Feb 13, 2025 hosted in McPherson, KS at the 4-H building. Registration is \$15 to attend and includes a K.C. Strip Dinner. The event starts at 6 p.m. with a program to follow. Dr. Dan Thomson Veterinarian & Managing Partner- Production Animal Consultation will be the Keynote speaker. For more information or to register contact Shad Marston (smarston@ksu.edu) or Terra Regehr (tregehr@ksu.edu) or call 620-241-1523.

IRM Redbooks for Sale

A limited supply of the 2025 IRM Redbooks are still available. These are sold on a first-come, first-serve basis. The price is \$7.50 per book for orders of 10 or more and \$8.00 per book for orders of less than 10, which includes postage. To order your supply of Redbooks, please contact Katie Smith (katiesmith@ksu.edu or 785-532-1267).

YQCA Scholarship Program

The national youth livestock quality assurance program, Youth for the Quality Care of Animals (YQCA), has launched a scholarship program. Applications are now open and close on February 17. High school seniors through college students who are 21 years of age are encouraged to apply. For more information, visit the [YQCA program](http://YQCAprogram) website.

Department of Animal Sciences and Industry
Kansas State University
 218 Weber Hall, 1424 Claflin Road
 Manhattan, KS 66506
 785-532-6533 | asi@ksu.edu



Upcoming Events

- February 4, 2025**
Swine Profitability Conference
- February 13, 2025**
McPherson County Cow Calf School
- March 1, 2025**
K-State Junior Swine Producer Day
- March 6, 2025**
Stockmen's Dinner
- March 7, 2025**
Cattlemen's Day
- March 7, 2025**
Legacy Bull Sale
- March 22, 2025**
K-State Junior Meat Goat Producer Day

Upcoming Events

K-State Junior Producer Days Registration is Open

Registration is now open for the 2025 K-State Junior Producer Days! Junior Swine Producer Day will be Saturday, March 1, with Junior Meat Goat Producer Day scheduled for Saturday, March 22. Both events will be hosted at the Stanley Stout Center, north of the K-State campus in Manhattan. These events are one-day educational events for families to learn more about the selection and management of a specific specie. Youth, adults, extension agents, project leaders, and volunteers of all ages and skill levels are invited to attend! Presentations will be provided by K-State faculty, staff, students, extension agents, former exhibitors, and guest speakers. Topics range from selection, to nutrition, reproduction, health, clipping and grooming, and showmanship. This is a family learning event! Everyone who plans to attend must register, including both youth and adults. The cost is \$20/person by the deadline, or \$25 after the deadline for both events. Only those who register by the appropriate deadline will receive a t-shirt. Both events will also be capped at 400 participants. Junior Swine Producer Day registrations are due February 5, with Junior Meat Goat being due February 26. Registration is open now and can be completed online using this link: <http://bit.ly/ksuasiregister>. Junior Producer Day event registrations are non-refundable.

An optional YQCA instructor-led training and state livestock nomination session will be offered at the end of each program. Specific details about the YQCA certification will be shared with those who indicate on their registration that they plan to stay for the additional class. The K-State Sheep & Meat Goat Center is also offering an opportunity to tour their facility the night before the program, or following the event on Saturday. More information about the junior day events, including each of the flyers, are available on the @ksuylp Facebook page and the KSU YLP website: <https://www.asi.k-state.edu/extension/youth-programs/events/ks-jr-producer/>. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

Register Today for Cattlemen's Day



Registration is now open for the 112th Cattlemen's Day to be hosted on Friday, March 7, 2025, at The National Guard Armory located at 721 Levee Dr. Manhattan, KS.

The schedule includes:

- 8:00 a.m. Tradeshow and Educational Exhibits
*Morning refreshments sponsored by Lallemand
Animal Nutrition*
- 9:00 a.m. Program Begins
Genetic Modifications in Livestock - *Alison Van Enennaam, UC Davis Extension Specialist*
Beef Industry Economic Outlook - *Glynn Tonsor, K-State*
- Noon Lunch
*Smoked brisket compliments of U.S. Premium Beef.
Following lunch, enjoy Call Hall Ice Cream sponsored
by Huvepharma in the Trade Show.*
- 1:00 p.m. Yield Grade Technology - *Dale Woerner, Texas Tech University*
ASI Research Update - *K-State ASI Graduate Students*
- 4:00 p.m. Legacy Sale - Stanley Stout Center

Registration will be \$25 if registered by February 21, or \$35 if registered on/after February 22 or at the door. Morning refreshments and lunch are included with registration. To register or view the complete schedule visit asi.ksu.edu/cattlemensday. If you are interested in exhibiting at Cattlemen's Day or have any questions, please contact Katie Smith (katiesmith@ksu.edu or 785-532-1267.)

SowBridge Educational Series for Swine Producers

If you work in or with breeding and gestation units, gilt development systems, or farrowing barns, the SowBridge program is for you. This program helps improve your understanding of important topics and increase productivity in your breeding herds and farrowing systems. Since 2007, the series has reached producers and industry professionals across the U.S. and around the world. Sessions are recorded and the audio is provided to subscribers as it becomes available.

SowBridge 2025-2026 runs from February 2025 through January 2026. Registrations are accepted anytime during the year. SowBridge is provided via 12 monthly electronic presentation sessions by swine industry experts. Session recordings ensure subscribers don't miss a thing.

The SowBridge Series' \$200 fee includes all 12 sessions and supporting materials. Additional subscriptions from the same operation are half that cost. The registration deadline is Jan. 20, 2025, to ensure participants will receive materials for the first session on Feb. 5. For a complete schedule and registration form, visit KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

54th Annual Stockmen's Dinner

The 54th annual Stockmen's Dinner is scheduled for March 6, 2025, at the Stanley Stout Center in Manhattan, KS. Plan now to join us as we honor Richard Porter as the 2025 Stockman of the Year. Registration is \$50 per person and the deadline to register is February 20. To register, visit asi.ksu.edu/stockmensdinner. For questions, contact Katie Smith (katiesmith@ksu.edu or 785-532-1267.)

What's New

Management Minute

“Stay Safe Out There”

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

January and February are some of the coldest months of the year and often bring extreme weather conditions that can be challenging for agricultural workers who work in the elements. Falls, slips, and trips continue to be one of the leading causes of workplace injuries (U.S. Bureau of Labor Statistics, 2019) and although falls and slips can occur anytime, extra precautions are required during the winter months. Hypothermia is real, especially for those who work outside for extended periods. Safety experts suggest that clothing be worn in layers to retain body heat. However, how and what type of layers those clothes are made of is important. At least three layers is recommended, cotton or other breathable synthetic fiber should be the first or base layer. Wool or down is suggested for the middle layer, and the third or outer layer should be composed of material that will block the wind such as the nylon outer shell found on many ski-jackets.

Portable heaters are often used as heat sources in many shops and barns. Portable heaters are one of the most common causes of carbon monoxide poisoning and structural fires. If heaters are used in confined spaces, always remember that ventilation is required to avoid carbon monoxide poisoning. Additionally, the areas where heaters are used should be checked for combustible materials and heaters should never be left unattended.

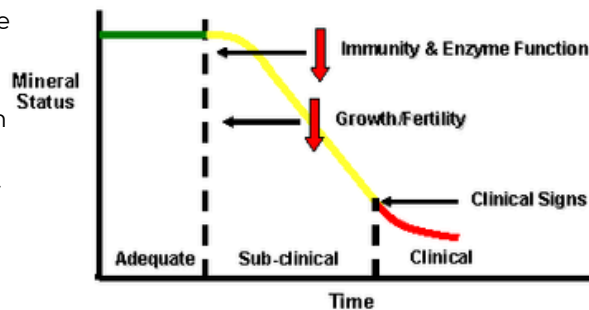
The U. S. Department of labor, OSHA website offers other tips and resources for working outside in the winter and may be accessed at <https://www.osha.gov/winter-weather/preparedness>.

Feedlot Facts

“Mineral Nutrition”

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

Most beef cattle producers recognize that mineral nutrition is important. However, a mineral program is only one component of an operation's nutrition and management plan. An exceptional mineral program will not compensate for deficiencies in energy, protein or management. Additionally, the classical signs associated with clinical deficiency of a particular mineral (wasting, hair loss, discoloration of hair coat, diarrhea, bone abnormalities etc.) are not often or are rarely observed in production settings. The production and economic losses attributed to mineral nutrition in many situations are the result of sub-clinical deficiencies, toxicities and antagonisms between minerals which are often less obvious (reduced immune function, vaccine response, and sub-optimal fertility). The figure below, adapted from Wikse (1992), illustrates the effect of trace mineral deficiency on health and performance and the margin between adequate mineral status and clinical deficiency.



Many producers erroneously assume that the science of mineral nutrition is relatively complete. However, mineral nutrition is complicated and our knowledge of mineral nutrition is actually relatively incomplete. There are 17 minerals required in the diets of beef cattle. However, no requirements have been established for several minerals that are considered essential (Chlorine, Chromium, Molybdenum, and Nickel). Minerals may be broken down into two categories. 1. The macrominerals whose requirements are expressed as a percent of the total diet (calcium, phosphorous, magnesium, potassium, sodium, chlorine and sulfur). 2. The microminerals or trace minerals (required in trace amounts) whose requirements are expressed as parts per million (ppm) or milligrams per kilogram of dry matter consumed (chromium, cobalt, copper, iodine, iron, manganese, molybdenum, nickel, selenium and zinc).

Mineral status of an animal is a function of the total diet (both water and feed) and stored mineral reserves within the body. Water may be a substantial source of mineral; however, the variation in water consumption, makes estimating the contribution of mineral from water sources difficult. Mineral content of forages is influenced by several factors including plant species, soil, maturity, and growing conditions. These factors, and others not mentioned, makes estimating the dietary mineral content of grazing cattle challenging. Most commercial mineral supplements are formulated to meet or exceed the requirements for a given stage of production. This ensures that deficiencies are unlikely, but providing supra-optimal levels of minerals may be unnecessary unless specific production problems exist. A mineral program does not have to be complex or expensive to be successful. Minerals are important component of beef cattle nutrition that should not be over-looked as sub-clinical deficiencies of minerals likely contribute to more production and economic losses than we realize.

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

KSU Cow-Calf Checklist - January 2025

Management Considerations for March 2025

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

Cow Herd Management

- Start post-calving nutrition programs for spring-calving females.
 - Begin lactation rations once first calving cycle is complete.
 - Make sure thin (BCS \leq 4.0) females are on an increasing plane of nutrition going into breeding.
- Pregnancy check and wean fall-calving cows if not already done.
- Evaluate your mineral program for the coming spring and summer seasons.
 - What was your average consumption last year?
 - Do you need to make changes this year to achieve targeted consumption?
- Consider magnesium supplementation levels, particularly for lactating cows grazing wheat, rye, or triticale in the spring.
- If synchronizing females for breeding, schedule your protocols now well in advance of the breeding season and mark your calendars.
 - Use the estrus synchronization planner available to you.
 - <https://www.iowabeefcenter.org/estrussynch.html>
 - Inventory your A.I. supplies and check your semen tanks.
- Evaluate herd bulls for BCS and adjust as needed prior to breeding.
 - Bulls need to be in a BCS \geq 5.0 prior to the next season of use.
- Schedule breeding soundness examinations with your veterinarian.

Calf Management

- Market your fall-born calves if not already done.
- Schedule your spring calf working activities and visit with your veterinarian to discuss your calf health protocols.
- Monitor growth and pubertal development of replacement heifers.
 - Heifers should be having active estrous cycles prior to breeding.

General Management

- Make sure you complete your spring calving records!
 - Don't forget late-calving females as you focus on other spring projects.
- Rethink your turn-out dates if pastures were stressed from drought last year.
 - Plan/adjust your feeding dates accordingly.
- Take inventory of any feed/forage that will be left over from winter.
- Cover piles or close bags if silage is left over and won't be fed until fall.
- Clean up any soiled bedding or unused/wasted feed to reduce the breeding and development of stable flies as the weather warms up.
- Finish pasture management projects started last year:
 - Repair or replace fences as needed.
 - Burn if conditions allow, cut and pile trees, particularly Cedar trees!
 - Clean and repair tanks and equipment as needed so watering sources are working properly when cattle are turned out to pasture.
- If making bull selection decisions:
 - Review your herd performance relative to your marketing and genetic goals.
 - Study EPDs impacting your marketing and genetic goals and do your homework well before sale day.



What's New for Swine Producers

Effects of Standardized Ileal Digestible Threonine to Lysine Ratio on Finishing Pig Growth Performance- The objective of these experiments was to evaluate the effect of varying SID Thr:Lys ratios on growth performance of growing and finishing pigs. In each experiment, pens of pigs were blocked by BW and barn, and randomly assigned to one of six dietary treatments in a randomized complete block design with nine or 10 pigs per pen and 11 or 12 replications per treatment. A similar number of barrows and gilts were placed in each pen. In exp. 1, 684 pigs (DNA 600 × 241; initially 82.5 ± 2.99 lb) were used in two separate studies, lasting 35 and 28 d, respectively. In exp. 2, 662 pigs (600 × 241, DNA; initially 212.1 ± 2.29 lb) were used in two separate 28-d studies. Dietary treatments were corn-soybean meal-based and formulated with increasing SID Thr:Lys ratios of 53, 58, 63, 68, 73, and 78%. Diets with the lowest and highest Thr:Lys ratios were blended to achieve the target SID Thr:Lys treatments. The same set of pigs was used for the early and late trials and between experiments, all pens of pigs were fed a common diet for 28 d. In exp. 1, ADG and final BW increased (quadratic, $P \leq 0.025$) with increasing SID Thr:Lys ratio with little improvement beyond the 63% SID Thr:Lys. Increasing Thr:Lys ratio improved (quadratic, $P = 0.041$) F/G ratio, appearing to have little improvement beyond 58% SID Thr:Lys. The quadratic polynomial (QP) model suggested that ADG was maximized at 69.0% SID Thr:Lys, while a similar fitting broken-line linear (BLL) model predicted no further improvement beyond 60.9%. For F/G, the QP model suggested minimum F/G was achieved at 74.3% SID Thr:Lys, while similar fitting BLL and BLQ models predicted no further improvement to F/G beyond 55.3 and 63.9%, respectively. In exp. 2, final BW tended to increase (quadratic, $P = 0.061$) with increasing SID Thr:Lys ratio and ADG increased (linear, $P = 0.035$; quadratic, $P = 0.063$), with the greatest numeric response between 63 and 68% SID Thr:Lys. Increasing SID Thr:Lys ratio improved (quadratic, $P = 0.048$) F/G up to 58 to 68% SID Thr:Lys ratio. Additionally, serum urea N decreased (linear, $P = 0.016$) with increasing SID Thr:Lys ratio. The QP model suggested that ADG was maximized at 70.3% SID Thr:Lys, while a similar fitting BLL model predicted no further improvement to ADG beyond 61.2%. For F/G, the QP model suggested minimum F/G was achieved at 68.7% SID Thr:Lys, while a similar fitting BLL model predicted no further improvement to F/G beyond 57%, respectively. In conclusion, the statistical models predict a wide range of SID Thr:Lys ratios to establish a requirement estimate for the different response criteria. However, for 82 to 154 lb pigs, there was little improvement in growth performance beyond a Thr:Lys ratio of 63%. For 212 to 265 lb pigs, the requirement estimate appeared to be between 63 and 68% Thr:Lys ratio. These results would suggest a similar requirement compared to our previous work in a commercial setting, based on SID Thr intake/d and SID Thr intake/kg of gain (Royall et al., 2023). More information is available on this experiment and others in the KSU Swine Day report at [KSUSwine.org](https://ksuswine.org). (This study conducted by Rafe Q. Royall, Hilario M. Cordoba, Robert D. Goodband, Mike D. Tokach, Joel M. DeRouche, Jordan T. Gebhardt, and Jason C. Woodworth).

An Industry Survey of the Composition and Variability of Soybean Gums and Soapstocks Across US Soybean Processing Plants- Depending on the soybean processing plant, gums and soapstocks may be added back to soybean meal during soybean processing. Despite the potential effects on soybean meal quality, there is limited information on the composition and variation in soybean by-products and the resulting soybean meal if by-products are added back during processing. A total of 36 soybean by-product samples from 14 plants across eight different companies were used in an industry survey evaluating the composition and variation of soybean gums and soapstocks across the US. All soybean processing plants within the study produced at least one of the two by-products: soybean gums or soybean soapstocks. Soybean by-product and soybean meal samples were collected at two different timepoints: May to July 2023 and October to November 2023. The individual plants surveyed constitute approximately 30% of total US soybean meal production, with the eight participating companies representing 80% of the total US soybean meal production. By-products were analyzed for lipid quality criteria including moisture, fat by acid hydrolysis, fatty acid analysis, and oxidation markers. Furthermore, soybean meal samples were submitted for analysis of proximate composition, neutral detergent fiber, Ca, P, and trypsin inhibitor activity. Soybean gums had a greater ($P \leq 0.05$) percentage of acid hydrolyzed fat and p-Anisidine value compared to soybean soapstocks. Soybean soapstocks tended to have a greater ($P = 0.085$) percentage of moisture and volatile matter, as well as an increased ($P = 0.052$) concentration of insoluble impurities compared with soybean gums. Most notably, there was considerable variation in the composition of by-product samples between processing plants indicating differences in processing procedures or incoming soybean quality. Soybean meal containing added soybean by-products had 61% greater ($P < 0.05$) ether extract than soybean meal samples not containing added soybean by-products on a dry matter basis, but there was no difference ($P < 0.10$) in crude protein. Furthermore, trypsin inhibitor activity varied considerably between plants with values ranging from 1.45 to 9.26 TIU/mg of seed powder, regardless of by-product inclusion. These results provide information on the composition and variation in soybean by-products across various processing plants; however, further information is still needed to evaluate their subsequent effects on livestock diets. More information is available on this experiment and others in the KSU Swine Day report at [KSUSwine.org](https://ksuswine.org). (This study conducted by Katelyn N. Gaffield, Robert D. Goodband, Joel M. DeRouche, Mike D. Tokach, Jason C. Woodworth, Gordon Denny, Paul Smolen, Carmen Slipher, Hari B. Krishnan, and Jordan T. Gebhardt).

ASI Faculty Highlight



Mike Day (mlday@ksu.edu or 785-532-7624)

Department Head/Professor

Dr. Mike Day was raised in central Missouri on a farm that included swine, beef and hay production. Growing up, cattle were of greatest interest to him and reproductive management always sparked his curiosity.

A husband and father of two, Day has prioritized his career by focusing on the three things that he enjoys most — animals, science and people. He explains these three interests stemmed from his time growing up on the family farm and through his education and now his career. "I am involved in higher education because this is the place where these three can come together," he explains.

After obtaining his bachelor's degree in animal husbandry from the University of Missouri, Day went on to earn his master's and doctorate from the University of Nebraska in animal science with an emphasis in reproductive physiology.

Post-secondary education is not uncommon in Day's family as his father, Billy Day, was a leading swine reproductive physiologist at the University of Missouri. Upon completion of his doctorate, Day was hired at The Ohio State University (OSU). He was on faculty in the department of animal sciences for 30 years (1985-2015), holding a research and teaching appointment focused on reproductive physiology of beef cattle.

His teaching responsibilities stretched from introductory classes, through various reproductive classes and the capstone beef production class for seniors. His research at OSU was a continuation of his graduate work in replacement heifer development and also included research in estrous synchronization and gene expression during early pregnancy in cattle.

While at OSU, he took a sabbatical in New Zealand where he worked on early development of the CIDR (controlled internal drug release) device. He was also able to travel to Brazil, Japan and Australia for research and educational programs during his time at OSU.

For the four years prior to joining KSU ASI, Day served as the University of Wyoming Animal Science department head. At Wyoming he led a department with approximately 15 faculty and 280 undergraduate students. Day joined the KSU ASI department in 2019.

Mike and Toni live near Olsburg, KS. Toni is active in the Pottowatomie County Extension Board, their son Travis, daughter in law Amanda, and grandson Mason live a few miles down the road. Travis is a mechanic at Prairieland Partners and Amanda works for VBRC. Their daughter Leslie is a post-doc at Dartmouth in molecular microbiology.



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

Extension Assistant - Youth Livestock Program Coordinator

Lexie Hayes was raised in southeast Kansas and was actively involved in 4-H and FFA. She graduated with a B.S. in Animal Sciences & Industry from Kansas State University before earning a M.S. in Animal Science at Texas A&M University. After completing her Master's degree, Lexie served as a 4-H Youth Development Educator with the Oklahoma Cooperative Extension Service. As a Kansas native and faithful Wildcat, Lexie was excited to return to Kansas State in 2015 as the Youth Livestock Program Coordinator. In this role, her responsibilities include managing the state youth livestock nomination process, coordinating the state 4-H livestock contests and sweepstakes, developing the junior producer day events, managing 4-H EID tag distribution, coordinating the youth livestock educational programs associated with the department, serving as a liaison with the Kansas State Fair and KJLS, and partnering with other departments to enhance opportunities available to Kansas youth.

*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 - Agricultural Research Center Hays (Job #518567) - This position is responsible for the management and care of up to 200 replacement heifers, 350 cows and their calves, and 200 stocker cattle both locally and at distant sites. The incumbent also provides leadership to a research program in cow/calf production. For more information or to apply go to <https://careers.k-state.edu/jobs/animal-technician-ii-other-kansas-united-states>

**Be sure to check out the new
Voices of #KSUASI podcast
asi.ksu.edu/voices**