

Register Now for the Swine Profitability Conference

Registration is now open for Swine Profitability Conference happening on Tuesday, February 6 at the Stanley Stout Center in Manhattan, KS. The schedule includes:

- 9:15 a.m. Coffee and Donuts
- 9:30 a.m. Welcome
- 9:45 a.m. U.S. Pork/Meat Outlook
Dr. Steve Meyer, Partners in Production Agriculture
- 10:30 a.m. The National Bio & Agro-Defense Facility Capabilities
Dr. Chad Mire, National Bio and Agro-Defense Facility
- 11:15 a.m. Recent Trends in Swine Health Diagnostic Cases
Dr. Marcelo Almeida, Iowa State University
- Noon Lunch
- 1:15 p.m. U.S. Pork Industry Update
Bryan Humphreys, National Pork Producers Council
- 2:00 p.m. J-Six Farms: Our Story and Continuing a Legacy
Dan Gerety, J-Six Farms
- 3:00 p.m. Adjourn

Pre-Registration Fee is \$25 per participant by January 26; registration at the door is \$50 per participant. The complete schedule and online registration information can be found at KSUSwine.org. For more information contact Katie Smith (katiesmith@ksu.edu or 785-532-1267).



Small Livestock Kansas 4-H EID Tag Orders Due

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. Orders may be submitted online, or via the form posted on the [EID Tags](#) page of the youth livestock program website. Extension Units need to include a signed copy of the confirmation email receipt with their check, made payable to Kansas State University. Additional information regarding EID tags for youth livestock projects may be found on the youth livestock program www.asi.k-state.edu/extension/youth-programs/nominations/kansas-4-h-eid-tags.html.

KSU Calving School

Kansas State University Animal Sciences and Industry and K-State Research and Extension are hosting a calving school on Thursday, January 18 at West Elk School in Howard, Kansas. The program will outline overall calving management that includes stages of the normal calving process as well as tips to handle difficult calving situations. The school will also share tips on when and how to intervene to assist the cow or heifer. Presenters will also demonstrate proper use of calving equipment on a life-size cow and calf model. RSVP to Rolling Prairie Extension Office at 620-374-2174, or email rfechter@ksu.edu.

Updated details about the Calving Schools is available at KSUBeef.org.

Department of Animal Sciences and Industry

Kansas State University
218 Weber Hall, 1424 Claflin Road
Manhattan, KS 66506
785-532-6533 | asi@ksu.edu

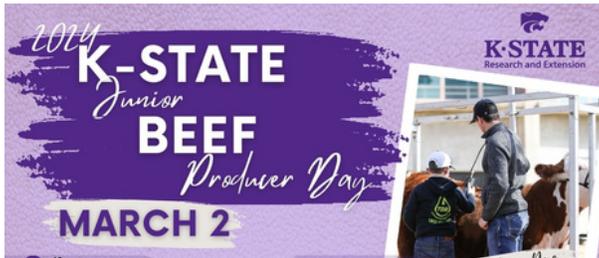


Upcoming Events

- January 18, 2024**
Calving School
Howard KS
- January 19-21, 2024**
Bull Riding Clinic
Manhattan, KS
- January 26-27, 2024**
Wildcat Ranch Rodeo
Manhattan, KS
- February 3, 2024**
Iron Woman All-Girl Jackpot Rodeo
Manhattan, KS
- February 6, 2024**
Swine Profitability Conference
Manhattan, KS
- February 9-10, 2024**
Miss Rodeo K-State Pageant
Manhattan, KS
- February 15-18, 2024**
Annual K-State NIRA College Rodeo
Manhattan, KS
- February 29, 2024**
Stockmen's Dinner
Manhattan, KS
- March 1, 2024**
Cattlemen's Day
Manhattan, KS
- March 1, 2024**
Legacy Sale
Manhattan, KS
- March 2, 2024**
K-State Junior Beef Producer Day
Manhattan, KS
- March 16, 2024**
K-State Junior Sheep Producer Day
Manhattan, KS
- March 27-29, 2024**
HACCP Course
Columbia, MO
- April 5-6, 2024**
Livestock County Fair
Management Clinic

Upcoming Events

K-State Junior Beef Producer Day



K-State Junior Beef Producer Day is scheduled for Saturday, March 2, 2024, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth beef projects. All ages and knowledge levels are invited! K-State faculty members, the K-State Livestock Judging Team, graduate students, former exhibitors, and guest speakers will cover topics including selection, meat science, reproduction, health, nutrition, hair care, grooming, fitting, and showmanship. An optional instructor led YQCA session will be offered at the conclusion of the program. A session over the state livestock nomination process will also be provided at the end of the day, concurrently with the YQCA training. The cost for junior beef producer day is \$20 per person, if registration is submitted by February 12, 2024, or \$25 per person after that date. All attendees, including youth and adults, must register. Only participants who register by February 12 will receive a t-shirt. Families may register online at <http://bit.ly/ksuasiregister>. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

K-State Junior Sheep Producer Day



K-State Junior Sheep Producer Day will be hosted on Saturday, March 16, 2024, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth sheep projects. All ages and knowledge levels are invited! K-State faculty members, graduate students, undergraduate students, former exhibitors, and guest speakers will cover topics including selection, meat science, nutrition, reproduction, the starter flock program, wool, health and wellness, facilities and equipment, clipping and grooming, and showmanship. An optional instructor led YQCA session will also be offered at the conclusion of the program. A session over the state livestock nomination process will also be provided at the end of the day, concurrently with the youth YQCA training. The cost for junior sheep producer day is \$20 per person, if registration is submitted by February 26, 2024, or \$25 per person after the early deadline. All attendees, including youth and adults, must register. Only those who register by February 26 will receive a t-shirt. Families may register online at <http://bit.ly/ksuasiregister>. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

SowBridge Educational Series Registration Open 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 2024-2025 runs from February 2024 through January 2025. 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 to be included in the first session is Jan. 20, 2024, to ensure participants will receive materials for the first session on Feb. 7. For a complete schedule and registration form, visit www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280 or jderouch@ksu.edu).

IRM Redbooks For Sale

The 2024 IRM Redbooks are here and a limited supply remains. These are sold on a first-come, first-served basis. The price is \$7.50 per book for orders of 10 or more and \$7.75 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).

HACCP Workshop Hosted in March

Implementing Your Company's HACCP Plan will be March 27-29, 2024, in Columbia, Missouri. This workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors. The registration fee is \$450 per person and is available online at <http://bit.ly/HACCPCourse>. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu or 785-532-1247).

Upcoming Events

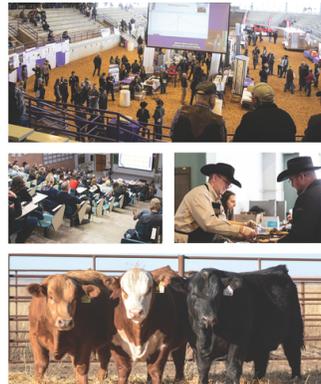
Register Now for 2024 Cattlemen's Day

Registration is now open for the 111th Cattlemen's Day to be hosted on Friday, March 1 in Weber Hall and Arena in Manhattan, KS.

The schedule includes:

- 8:00 a.m. Trade Show and Educational Exhibits
Morning refreshments sponsored by DSM-Firmenich
- 10:00 a.m. Welcome
K-State Strategy for the Future
Richard Linton, K-State President
ASI Embraces Past, Looks to the Future
Mike Day, K-State ASI department head
Beef Industry Economic Outlook
Glynn Tonsor, K-State agriculture economics professor
- Noon Lunch- Weber Arena
Smoked brisket compliments of U.S. Premium Beef.
Following lunch, enjoy Call Hall Ice Cream sponsored by Huvepharma in the Trade Show.
- 1:30 p.m. K-State ASI Beef Research Update
ASI Beef Team
- 2:30 p.m. Breakout Sessions
Beef Cuts that Add Value
Michael Chao, K-State ASI associate professor
Reproduction Update
Sandy Johnson, K-State ASI extension beef specialist and Nicholas Dias, K-State ASI assistant professor
Wildlife & Ranching
Drew Ricketts, K-State extension wildlife management and control specialist
- 3:00 p.m. Repeat of 2:30 p.m. sessions

Pre-registration is \$25 in advance or \$35 per person at the door. Morning refreshments and lunch are included with registration. For more information or to register visit www.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).



Register Now for 53rd Annual Stockmen's Dinner

The 53rd Annual Stockmen's Dinner will be Thursday, February 29, 2024, at the Stanley Stout Center. Galen and Lori Fink, Randolph, Kansas, will be recognized as the 2024 Stockman of the Year. Register now at asi.ksu.edu/stockmensdinner. For registration questions contact Katie Smith (katiesmith@ksu.edu or 785-532-1267).

47th Annual Legacy Bull Sale

The 47th Legacy Sale will be Friday, March 1, 2024, at the Stanley Stout Center. This year's offering will include Angus, Simmental and Hereford bulls, a group of bred cows and commercial heifers. For more information and to find the catalog after Feb. 10 visit asi.ksu.edu/legacysale.

Livestock County Fair Management Clinic

The biennial Livestock County Fair Management Clinic will be hosted virtually April 15 & 18, 2024. This clinic is designed for county fair board members, Extension agents, and volunteers involved in local livestock fair management and leadership. The program consists of a forum of open communication for individuals working with livestock at their local fairs. Although some of the topics can be applied generally to the county fair, this program focuses on the livestock perspective. K-State faculty, staff, fair board members, and extension agents will facilitate discussion directly related to livestock activities at local fairs in Kansas. The program is geared towards the input and participation of county fair board members, superintendents, and extension agents, so fair board members and superintendents are highly encouraged to attend! The program has been divided over two evenings, scheduled for 7-9 p.m., with different topics being covered each night. This year, each evening will open with a general session, followed by concurrent round table discussions. It would be advantageous for counties to have several individuals attend to cover all the breakout sessions. The sessions will be recorded and available to attendees after the program. The program is free, but participants need to [register online](#) at by April 8. For more information, contact Joel DeRouchey (jderouch@ksu.edu or 785-532-2280), Lexie Hayes (adhayes@ksu.edu or 785-532-1264), or Kelsey Nordyke (klNordyke@ksu.edu or 620-222-1311).

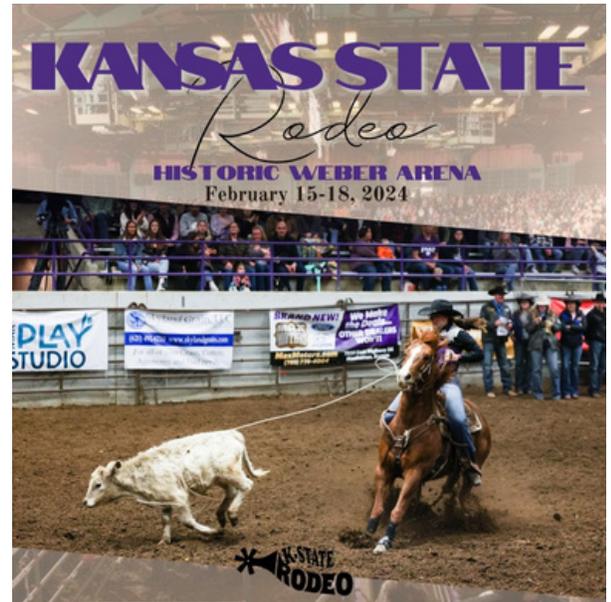
Upcoming Events

Final College Rodeo in Weber Arena to be Hosted in February

With completion of the new Billbrey Family Event Center expected in the fall of 2025, the 50th and last college rodeo in historic Weber Arena will be hosted February 15-18. Performances will take place Thursday night, Friday night, Saturday afternoon and Saturday night, with the short-go held Sunday afternoon. Slack will be Friday and Saturday at 9 a.m.

The Thursday, Friday and Saturday night performances will start at 7:30 p.m., with the Saturday and Sunday afternoon sessions beginning at 1 p.m. Thursday will be Student and Alumni Night. Friday is Tough Enough to Wear Pink Night, in a show of support for those who have or are fighting cancer. Saturday afternoon is Kids' Day, when those 10 and under will be admitted free with a donation at the door to the local food bank and one paid adult. Saturday evening is Purple Night. Sunday is the traditional military appreciation performance.

There will be no tickets sold at the door, so buy them in advance at the following Manhattan locations: Call Hall Dairy Bar, Tractor Supply, Yee-Haw Outfitters and Outpost Western Store. Tickets are available in Topeka at R Bar B Saddle and Tack. Thursday night tickets are \$15 for adults and \$10 for students, military and K-State alumni. Friday and Saturday night tickets are \$20 for adults and \$15 for students, military and alumni. Saturday and Sunday afternoon performances are \$15 for adults and \$12 for students. For more information contact K-State rodeo coach, Casy Winn (435-681-0201 or ccwinn@ksu.edu).



Events Hosted by K-State Rodeo Club

Additional upcoming events hosted by K-State Rodeo start January 19-21 with a bull riding clinic in Weber Arena featuring past National Finals Rodeo qualifier Dave Samsel and World Champion bull rider Cody Custer. Cowboys from around the region will take part in the Wildcat Ranch Rodeo, January 26-27 in Weber. The annual Iron Woman Contest, featuring ladies competing in breakaway roping, team roping, goat tying and barrel racing, will take place February 3 in Weber. Contestants will vie for the title of Miss Rodeo K-State during the annual pageant February 9-10 in Manhattan. For more information on any of these events, contact K-State Rodeo Coach Casy Winn (435-681-0201 or ccwinn@ksu.edu).

IRON WOMAN

K-STATE RODEO CLUB AND TEAM
Saturday
February, 3rd 2024 9:00 AM

3S Custom Equine Saddle Pad and
\$500 Cash to HIGH POINT Cowgirl!

Exhibitions 9:00-10:30, Start @11



Event Order: Barrels, Goats, Break-Away, Team Roping

Events: Barrels, Goats, Break-Away, Heading, Heeling

Online entries open Jan. 18- Feb 3 (link on social accounts)

Contact Coach Winn @435-681-0201 ccwinn@ksu.edu

Goats will be same used at KSU Rodeo

Event rules will be posted on KSU Rodeo Facebook page

Iron Woman runs must be declared at time of entry

Iron Horse must be entered in 4 of 5 events

Jackpots are 1 head

*Pre-enter or enter day of

Each Event \$40

Prize Fee \$20

Iron Horse Fee \$25

Office Charge \$10

(day of entries)

*70% Payout per event

Barrel Jackpot is 4D

NIRA Rules

Western Attire

May enter on multiple horses



Kansas State Rodeo's
7th Annual Wildcat Ranch Rodeo
January 26th & 27th, 2024 @ Weber Arena
(Indoor heated arena in Manhattan KS)

The action will start at 6:30 PM on the 26th & 5:30 PM on the 27th
Rules meeting 30 minutes prior to start time
TICKETS sold at the door

Tell your Neighbors and Friends!!

Events:
Sorting
Mugging
Trailer Loading
Wild Cow Milking
(top 5 teams)

Concessions will be available!

Entry Info:
Contact Mike @ 785-565-8477
(texting is preferred)

\$400 per team CASH
\$500 per team CHECK
(4 man teams)
to reserve your team's spot - team name and members due by Jan 21st -
Limited number of teams



**** NOT RESPONSIBLE FOR ACCIDENTS/ INJURY**

Jobs Available - Now Hiring

Professor-Assistant/Associate, Dairy Foods Processing and Innovation (Job #515982)- We are seeking applicants for a 12-month, tenure-track position (40% Teaching, 60% Research) at the rank of Assistant or Associate Professor (commensurate with experience) that will contribute primarily to our teaching and research missions in dairy foods processing within the Animal Sciences and Industry Department (ASI). The ASI Department is a national leader in teaching, research and outreach focused on animal and food sciences. ASI is home to the undergraduate Food Science & Industry degree program, which is accredited through the Institute of Food Technologists. The successful individual will be expected to develop a nationally recognized, externally funded research program in dairy food processing that is linked with a dynamic graduate research program. Teaching responsibilities will include Dairy Foods Processing & Technology (ASI 608) and other coursework consistent with the program's needs and the selected individual's interests. K-State is also home to the cross-disciplinary Food Science Institute (FSI) which provides many opportunities to participate in world-class interdisciplinary research, graduate training and teaching activities. Some of these opportunities involve agricultural security and sustainability, functional and healthy food systems, and the K-State Global Food Systems Initiative (<https://www.k-state.edu/research/global-food/>). Major facility construction and renovations are underway in the food/animal/grain science areas at K-State, including renovation of the K-State dairy processing plant, Call Hall Dairy Bar and research laboratories. Experience in creamery operations, fluid milk processing, and/or manufacture of dairy ingredients is desirable as the successful applicant will supervise the managers of these dairy foods facilities and use them in support of their program. To apply, go to <https://careers.k-state.edu/cw/en-us/job/515982/assistant-or-associate-professor>.

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>.

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>.

Professor- Assistant/Associate, Sustainable Fresh Meat Industry (Job # 516491)- We are seeking applicants for a 12-month, tenure-track faculty position (60% extension, 40% research). The position will be at the rank of Assistant or Associate Professor and located in Manhattan, KS. The successful individual is expected to develop an innovative extension and research program addressing issues facing the Kansas and U.S. meat industry in addition to contributing to the core missions of the Department. Support and collaboration with an interdisciplinary team with efforts related to sustainability research and extension programming consistent with team, ASI, COA, and K-State goals is expected. Research efforts will be consistent with the successful individual's expertise, interests, and needs of the Department. To read more details and to apply, go to <https://careers.k-state.edu/cw/en-us/job/516491/assistantassociate-professor-sustainable-fresh-meat-industry>.

Professor-Assistant/Associate, Sustainable Small Ruminant Production- (Job #516476)- We are seeking applications for a 12-month, tenure-track position (60% Extension, 40% Research, 15% Teaching). The position will be at the rank of Assistant or Associate Professor and located in Manhattan, KS. The successful individual is expected to develop an innovative and impactful extension program addressing issues facing the Kansas and U.S. small ruminant industry. The research focus will be consistent with the successful individual's expertise in small ruminants, and may include nutrition, physiology, meat science, genetics or other related disciplines. Teaching efforts will primarily focus on direct leadership for the 'Sheep and Meat Goat Science' undergraduate class, with the potential for development of other relevant courses of interest. To read more details and apply go to <https://careers.k-state.edu/cw/en-us/job/516476/assistantassociate-professor-sustainable-small-ruminant-production>.



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

What's New for Beef Cattle Producers

Management Minute

“Safe Work Practices for Working in the Cold”

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. Although there are no specific standards or regulations regarding what employers must provide to employees that are required to work in winter conditions. Employers do have an obligation to provide workers with employment and a work place that are free from recognized hazards (Section 5a 1 OSHA, 1970). Thus, employers have an obligation to train employees and ensure that they are aware of the risks of cold stress and safe work practices for working in the cold. The U. S. Department of labor, OSHA website offers the following suggestions for preventing cold stress <https://www.osha.gov/emergency-preparedness/guides/cold-stress>.

Safe work practices to prevent cold stress.

- If possible, schedule heavy work during the warmer part of the day.
- Assign workers to tasks in pairs (buddy system), so that they can monitor each other for signs of cold stress.
- Reduce the physical demands of workers (for example, use relief workers or rotate extra workers in and out of work for long, demanding jobs).
- Workers can be allowed to interrupt their work, if they are extremely uncomfortable.
- Employers should give workers frequent breaks in warm areas.
- Acclimatize new workers and those returning after time away from work, by gradually increasing their workload, and allowing more frequent breaks in warm areas, as they build up a tolerance for working in the cold environment.

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

Feedlot Facts

“Cold Stress Impacts and Resources”

The New Year often brings with it some of the coldest months of the year.

Cattle are most comfortable within the thermonuetral zone when temperatures are neither too warm nor cold. During the winter months cattle experience cold stress anytime the effective ambient temperature, which takes into account wind chill, humidity, etc., drops below the lower critical temperature. The lower critical temperature is influenced by both environmental and animal factors including hair coat and tissue insulation (body condition). The table below lists the estimated lower critical temperatures of cattle in good body condition with different hair coats. In wet conditions cattle can begin experiencing cold stress at 59°F, which would be a relatively mild winter day. However, if cattle have time to develop a sufficient winter coat the estimated lower critical temperature under dry conditions is 18°F. Cold stress increases maintenance energy approximately 1% for each degree below the lower critical temperature, but does not impact protein, mineral or vitamin requirements. Thus, maintenance energy requirements of cattle may increase by 15-20% on those exceptionally cold and windy days that commonly occur in January and February. Increased maintenance energy requirements essentially means that less energy is available for production (gain), which translates to lower ADG, increased Feed:Gain, and greater Days on Feed.

Estimated lower critical temperatures for beef cattle	
Coat Condition	Critical Temperature
Wet or summer coat	59°F
Dry fall coat	45°F
Dry winter coat	32°F
Dry heavy winter coat	18°F

The Kansas State University Mesonet now has an animal comfort feature that provides an index of animal comfort (heat and cold stress) for current condition as well as 7-day forecast. The Mesonet allows users to see both statewide maps and select specific weather stations across the state. The animal comfort page of the Kansas Mesonet may be accessed at <https://mesonet.k-state.edu/agriculture/animal/current/>.

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

KSU Cow-Calf Checklist - January 2024

Management Considerations for March 2024

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 Altering Dietary Acid-Binding Capacity-4 with Specialty Soy Protein Sources or Acidifiers on Nursery Pig Performance and Fecal Dry Matter

A total of 300 pigs (241 × 600 DNA; initially 13.2 lb) were used to evaluate the effects of altering the dietary acid-binding capacity-4 (ABC-4) with specialty soy protein sources or acidifiers on nursery pig performance and fecal dry matter (DM). At weaning, pigs were allotted to 1 of 5 dietary treatments. There were 5 pigs per pen and 12 replications per treatment. Pigs were fed experimental diets in two phases with phase 1 fed from d 0 to 10 post-weaning followed by phase 2 from d 10 to 24. Diets were formulated with increasing ABC-4. A single low ABC-4 diet was formulated to 200 and 250 meq/kg in phase 1 and 2, respectively. The low ABC-4 diet utilized 0.38% fumaric acid, 0.36% formic acid, and specialty soybean meal (AX3 Digest; Protekta; Newport Beach, CA) at 9.38 and 7.50% of the diet in phase 1 and 2, respectively. Two medium ABC-4 diets were formulated utilizing two different strategies. In the first medium ABC-4 diet, specialty soybean meal was replaced with enzymatically treated soybean meal on an SID Lys-basis and resulted in an ABC-4 level of 290 and 322 meq/kg for phase 1 and 2, respectively. In the second medium ABC-4 diet, acidifiers were removed resulting in an ABC-4 level of 271 and 321 meq/kg for phase 1 and 2, respectively. In the high ABC-4 diet, specialty soybean meal was replaced with enzymatically treated soybean meal and the acidifiers were removed, resulting in ABC-4 values of 362 and 394 meq/kg for phase 1 and 2, respectively. In addition, the high ABC-4 diet, but with added pharmacological levels of Zn from ZnO served as a control diet. Following phase 2, all pigs were fed a common diet until d 38 of the study. Increasing ABC-4 levels tended to decrease (linear, $P = 0.062$) the ADG during the experimental period. Pigs fed increasing ABC-4 diets had poorer (linear, $P \leq 0.043$) F/G during the experimental period (d 0 to 24) and overall (d 0 to 38). Increasing ABC-4 levels also decreased (linear, $P \leq 0.005$) fecal DM on d 10 and 24. Pigs fed diets containing pharmacological levels of Zn from ZnO had improved ($P \leq 0.047$) BW, ADG, ADFI, and F/G during the experimental period (d 0 to 24) but poorer ($P = 0.005$) ADG and F/G during the common period (d 24 to 38), compared to pigs fed diets not containing ZnO. Ultimately, this resulted in no benefit from ZnO for the overall study (d 0 to 38). There were no differences between the two medium ABC-4 levels for the growth performance. However, pigs fed the medium ABC-4 diet based on specialty soy protein replacement had increased ($P = 0.003$) fecal DM on d 10 compared to the medium ABC-4 diet where acidifiers were removed. In conclusion, as dietary ABC-4 increased from 200 to 362 meq/kg in phase 1 and 250 to 294 meq/kg in phase 2, pigs had linearly decreased growth performance and fecal DM. The results of this study suggest a low ABC-4 diet can be utilized to improve growth performance and fecal consistency in diets without pharmacological Zn. Additionally, there were no differences between the medium ABC-4 diets for growth performance, suggesting the decreased performance was due to an increase in ABC-4 level and not a change in ingredients. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Ethan B. Stas, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouchey, Robert D. Goodband, and Jordan T. Gebhardt.)

Evaluation of Specialty Soybean Products and Organic Acids to Alter Nursery Dietary Acid-Binding Capacity-4 on Pig Performance and Fecal Dry Matter

A total of 300 pigs (241 × 600, DNA; initially 12.4 lb) were used to evaluate specialty soybean products and organic acids to alter the acid-binding capacity-4 (ABC-4) level of the diet on nursery pig performance and fecal dry matter (DM). At weaning, pigs were allotted to 1 of 6 dietary treatments. Diet 1 was formulated with 12.0% specialty soy protein concentrate (AX3 Digest; Protekta; Plainfield, IN), 1.06% citric acid, and 0.5% fumaric acid to achieve an ABC-4 of 223 meq/kg. Diets 2 and 3 were the same as diet 1 except citric and fumaric acid were reduced by 50 and 100% to achieve an ABC-4 of 280 or 338 meq/kg, respectively. Diets 4 and 5 were formulated with 50 and 100% replacement of specialty soy protein concentrate with enzymatically treated soybean meal (HP 300; Hamlet Protein; Findlay, OH) on a SID Lys basis with 1.06% citric acid and 0.5% fumaric acid to achieve 280 and 338 meq/kg, respectively. Diet 6 was a positive control with the same formulation as diet 5 except for the addition of 2,500 ppm of Zn from ZnO to achieve a diet ABC-4 of 410 meq/kg. The dietary treatment structure facilitated the comparison of an increase in the ABC-4 level (223 to 338 meq/kg), and the method achieve the change (decreasing acidifier vs. specialty soy protein concentrate replacement diets) as well as their interactions. Pigs were fed the experimental diet for 24 d postweaning (d 0 to 24) followed by a common diet for an additional 18 d. There were no significant ($P > 0.05$) ABC-4 method × level interactions through the duration of the study. From d 0 to 10, pigs fed increasing ABC-4 had poorer (linear, $P = 0.046$) F/G. Pigs fed the decreasing acidifier diets had increased ($P = 0.038$) fecal percentage DM on d 17 than pigs fed the soy source replacement diets. During the experimental period (d 0 to 24), pigs fed the diet with ZnO had improved ($P < 0.05$) BW, ADG, ADFI, and F/G compared to pigs fed diets without ZnO. In summary, ZnO was able to improve nursery pig performance when experimental diets were fed. Increasing the ABC-4 level and the method to do so had minimal effects on nursery pig performance. However, further investigation is warranted to determine if a lower ABC-4 level would provide more benefit. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Ethan B. Stas, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouchey, Robert D. Goodband, and Jordan T. Gebhardt.)

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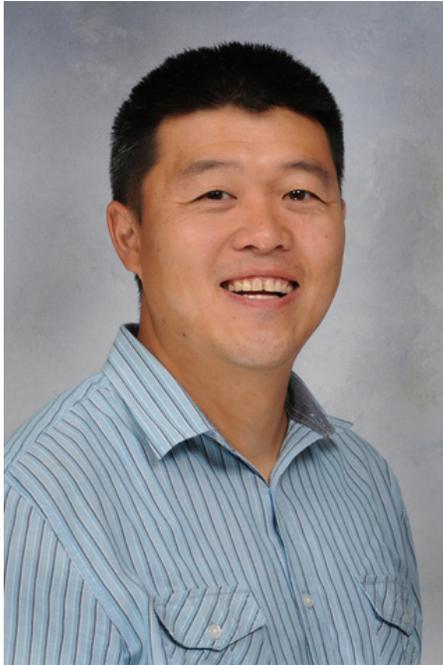
Effects of Increasing Soybean Meal Levels on Growth Performance and Carcass Characteristics of Pigs in Grower and Late-Finishing Phases

Four experiments were conducted to determine the effects of increasing soybean meal (SBM) on grower and late-finishing pig performance. In Exp. 1, a total of 615 pigs (initially 95.2 ± 1.51 lb) were used in a 28-d trial with 14 replicate pens per treatment and 8 to 10 pigs per pen. Pens of pigs were randomly assigned to 1 of 5 dietary treatments which were corn-based with soybean meal levels of 19.1, 22.6, 26.3, 29.9, or 33.5%. In Exp. 2, a total of 615 pigs (initially 225.5 ± 3.42 lb) were used in a 30-d trial with 14 replicate pens per treatment and 8 to 10 pigs per pen. Pens of pigs were randomly assigned to 1 of 5 dietary treatments which were corn-based with soybean meal levels of 11.2, 14.2, 17.2, 20.2, or 23.2%. In both experiments, treatments were assigned in a completely randomized design and soybean meal inclusion was increased, replacing feed grade amino acids to form the treatments. For Exp. 1, increasing SBM increased (linear, $P = 0.038$) ADG and improved ($P < 0.001$) feed efficiency, with the greatest change from increasing SBM from 19.1 to 22.6%. For late-finishing pigs (Exp. 2), no differences ($P > 0.10$) were observed for any growth performance or carcass criteria. Experiments conducted in a second series were conducted with the same basic procedures as Exp. 1 and 2, but all diets contained DDGS, and were conducted in a commercial facility. In Exp. 3, a total of 1,080 pigs (initially 86.1 ± 1.72 lb) were used in a 28-d trial with 10 replicate pens per treatment and 27 pigs per pen. Pens of pigs were assigned to 1 of 4 dietary treatments which were corn-20% DDGS-based and soybean meal was added at 18.2, 23.5, 28.9, or 34.3%. For Exp. 4, a total of 1,080 pigs (initially 225.2 ± 2.50 lb) were used in a 33-d trial with 10 replicate pens per treatment and 27 pigs per pen. Pens of pigs were assigned to 1 of 4 dietary treatments which were corn-10% DDGS-based with soybean meal levels of 9.5, 13.5, 17.5, or 21.5%. When DDGS was included in the diet, no differences ($P > 0.10$) were observed for any growth performance criteria for early- or late-finishing pigs. In conclusion, increasing levels of SBM (up to 33.5% of the diet) in grower pig diets linearly improved ADG and feed efficiency in corn-soybean meal-based diets. However, when DDGS was included in the diet, pig performance was not affected when SBM ranged from 18.2 to 34.3%. For late-finishing pig diets, increasing the SBM from approximately 10 to 23% in diets with or without DDGS did not result in any changes in growth and carcass parameters. These results suggest that high levels of SBM in the diet (no feed-grade amino acids) are well tolerated and do not negatively affect pig growth. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Jamil E. G. Faccin, Mike D. Tokach, Joel M. DeRouche, Jordan T. Gebhardt, Robert D. Goodband, and Jason C. Woodworth.)

Partial Replacement of Vitamin E with Polyphenol in Nursery Pig Diets-A total of 300 pigs (241 × 600 DNA; initially 13.1 lb) were used in a 42-d trial to determine the effects of vitamin E levels and partially replacing vitamin E with a polyphenol (Cabanin CSD; R2 Agro, Denmark) on growth performance, complete blood count (CBC), serum thiobarbituric acid reactive substances (TBARS), superoxide dismutase (SOD), and cytokine panel. Sixty pens of pigs were weighed and allotted to 1 of 5 dietary treatments in a completely randomized design with 12 pens per treatment. A control treatment was formulated to provide 15 IU/kg of vitamin E equivalence from vitamin E. This control treatment was then used as a base for 3 replacement strategy diets to determine the effects of replacing an additional 60 IU/kg of vitamin E with Cabanin CSD in diets containing a basal level of vitamin E requirement estimate (15 IU/kg). First, an additional 60 IU/kg of vitamin E was added for a total of 75 IU/kg of vitamin E equivalence. Second, 50% of the additional vitamin E (30 IU/kg) was replaced with the equivalency of Cabanin CSD. Third, all 60 IU/kg of the additional vitamin E was replaced with the equivalency of Cabanin CSD. To evaluate whether there are negative effects of feeding nursery pigs a high level of Cabanin CSD, a fifth treatment was formulated to provide 575 IU/kg of vitamin E equivalence with 75 IU/kg from vitamin E and 500 IU/kg from Cabanin CSD. Whole blood and serum samples were collected on d 10 and 42. For growth performance, increasing vitamin E equivalence tended to improve (quadratic, $P < 0.10$) F/G from d 10 to 21, and tended to improve (linear, $P < 0.10$) F/G from d 21 to 42 and 0 to 42. For antioxidant status, increasing vitamin E equivalence improved (linear, $P < 0.05$) d 42 SOD. For cytokine, there was no evidence of differences ($P > 0.10$) between treatments and vitamin E equivalence. Moreover, there was no evidence of differences ($P > 0.10$) in all response variables between the 3 replacement strategies throughout the entire period. In summary, increasing vitamin E equivalence tended to improve F/G, which may be related to the improved SOD activity. Furthermore, Cabanin CSD can effectively replace vitamin E provided above the vitamin E requirement to provide similar benefits from increasing vitamin E equivalence. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Zhong-Xing Rao, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouche, Apoorva S. Shah, Brandon H. Foley, Karsten C. Kjeldsen, Grete Brunsgaard, Robert D. Goodband, and Jordan T. Gebhardt.)



ASI Faculty Highlight



Michael Chao (mdchao@ksu.edu or 785-532-1230)

Associate Professor

Dr. Michael Chao is a meat scientist with research interests in meat lipidomic and developing niche meat processing techniques to serve the needs of domestic-ethnic and international markets.

Michael grew up in Taiwan until the age of 15, when his family moved to the Los Angeles suburb of San Marino. A desire to be a veterinarian led him to UC Davis to major in animal science. The introduction to animal science class his freshman year opened his eyes to the opportunities in livestock production. He earned both his bachelor's (2007) and master's (2011) degrees from UC Davis and then his PhD in animal science with a specialization in meat science and muscle biology from University of Nebraska-Lincoln in 2015.

At K-State, Michael's appointment will be 60% research and 40% teaching. In his role, he will teach advanced meat science and is in process of developing a fresh meat-based class. He has worked for the US Meat Export Federation, both as an intern based in the organization's Denver headquarters and Taiwan office, and later on a contract basis to lead Taiwanese and Chinese auditing and business teams through beef and lamb processing plants in the United States.

An avid outdoorsman, Michael says, "I look forward to the vast fishing and hunting opportunities in Kansas."

Michael and his wife, Ying, have two sons — Luke and Hans.



Jaymelynn Farney (jkj@ksu.edu or 620-820-6125)

Associate Professor/Extension Specialist

Jaymelynn Farney grew up in Fort Sumner, New Mexico, where her family had a cow-calf operation. Jaymelynn was very active in 4-H and FFA and because of this after graduating high school she went to El Dorado, KS, to be a member of the livestock judging team at Butler Community College. She completed her A.S. in agriculture degree and then continued her education at Kansas State University in Animal Science. Jaymelynn then went to Oklahoma State University to complete her M.S. in Ruminant Nutrition with an emphasis on receiving calf management. She then returned to Kansas State University to complete her PhD in Ruminant Nutrition, using the dairy cow as the model for how inflammation impacts production.

Jaymelynn is focusing her applied research programs on dealing with issues pertaining to cattle producers. She works in the areas of forage management (perennial and annual forages), heifer development programs, stocker management systems, and nutrition. Jaymelynn is using her extension appointment to provide producers with knowledge of new technologies, feeds, and management strategies to improve efficiency of production in beef production systems.

Jaymelynn lives in Southeast Kansas with her husband, Garet and three daughters, and works at the Southeast Agricultural Research Center in Parsons.

*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*