

Kansas 4-H EID Livestock Tag Orders

Kansas 4-H EID Livestock Tag Orders are now open and can be submitted to the KSU Youth Livestock Program. All market animals or commercial females that will be nominated for the 2024 Kansas State Fair Grand Drive and/or Kansas Junior Livestock Show (KJLS) must be tagged with an official Kansas 4-H EID tag. Market beef tag orders are due by December 15, 2023, with small livestock tag orders being due January 15, 2024. This year we are transitioning to an online order submission process, through Qualtrics. The links were distributed to extension units earlier this month. After submitting the order online, offices will need to print a copy of the confirmation email and mail it, along with payment, to the youth livestock program. Those who wish to continue using the paper form may do so in lieu of submitting orders online. The forms are posted on the website. We are hoping the supply chain issues have been resolved for the tag manufacturers and things will go more smoothly this year. Tagging resources and details about the order process may be found on the KSU Youth Livestock Program, under the EID Tags tab. All of the new meat goat tags ordered this year will be the round that were piloted in 2021. If you still have some ribbon tags left, you may still use them, as either type will be accepted for state livestock nomination. The sheep tags used previous to 2023 have also been discontinued. So, the sheep tags will most likely be round, similar to the new meat goat tags, or a new square tag potentially being released by Allflex in 2024. Payment is required to accept any tag orders. Extension Units must designate an agent to be responsible for their tags, as well as keep records of the families and animals in which each tag is applied. For those units who would like to order all of their tags at once, one check reflecting the total amount can be issued. However, orders must be submitted through both the Beef and Small Livestock order links, then a copy of each receipt sent with the check for the total amount. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

IRM Redbooks for Sale

The 2024 IRM Redbooks are here and will be sold on a first-come, first-serve 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).

Swine Profitability Conference date set for 2024

Swine Profitability Conference is scheduled for Tuesday, February 6, 2024, at the Stanley Stout Center, Manhattan, KS. Watch for more details coming soon at www.KSUswine.org.

Save the date for the 2024 Cattlemen's Day

The 2024 Cattlemen's Day date has been set for March 1 in Weber Hall and Arena in Manhattan. More information about the schedule, tradeshow, and registration information will be available soon. Information will be published on KSUBeef.org as it becomes available. If you are interested in having an exhibitor booth please contact Dale Blasi (dblasi@ksu.edu or 785-532-5427) or Katie Smith (katiesmith@ksu.edu or 785-532-1267).

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Upcoming Events

February 6, 2024

**Swine Profitability Conference
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

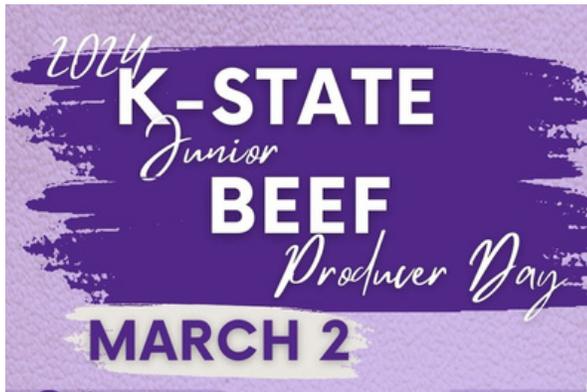
**KSU Junior Beef Producer Day
Manhattan, KS**

March 16, 2024

**KSU Junior Sheep Producer Day
Manhattan, KS**

Upcoming Events

Save the Dates for 2024 K-State Junior Producer Days: March 2 & 16



The 2024 K-State Junior Producer Day dates have been set. We are excited to host families on campus again this spring! The K-State Junior Beef Producer Day will be Saturday, March 2, with K-State Junior Sheep Producer Day scheduled for Saturday, March 16. Both events will be hosted in Weber Hall on 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, to meat science, 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. Junior Beef Producer Day registrations are due February 12, with Junior Sheep 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. More information about the junior day events, including each of the flyers, are available on the @ksuylp Facebook page and the KSU YLP website: 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.

53rd Annual Stockmen's Dinner Planned for Feb. 29

The 53rd Annual Stockmen's Dinner is scheduled for February 29, 2024, at the Stanley Stout Center. Galen and Lori Fink, Randolph, Kansas, will be recognized as the 2024 Stockman of the Year.

Watch for registration to open in early January.

Check out the monthly
ASI headlines at
[https://bit.ly
/KSUASIHeadlines](https://bit.ly/KSUASIHeadlines)



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

Jobs Available - Now Hiring

Professor-(Assistant/Associate/Full)- Job #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>.

Storeroom Manager (Kansas Artificial Breeding Service Unit) Full-time, Unclassified Professional Staff, Term Contract (Job #516247) The Kansas Artificial Breeding Service Unit (KABSU) is a unit within the AS&I department of Kansas State University 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 35-40 customers through in-house direct contact or by telephone, written, or electronic communication. This position will manage approximately 15-20 shipping requests daily pulled from an 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. This position will manage approximately 10-15 stockroom supply requisitions daily. The shipment of an incorrectly identified sample or a sample viability issue compromised by the cryogenics of the shipment will result in liability claims and a substantial loss of revenue to KABSU. To apply, go to <https://careers.k-state.edu/cw/en-us/job/516247/storeroom-manager>.

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>.

Research Technician (Kansas Artificial Breeding Services Unit)

Full-time, Unclassified Professional Staff, Term Contract (Job #516254) The Kansas Artificial Breeding Services Unit (KABSU) is a unit within the Department of Animal Sciences and Industry at Kansas State University 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. This position will perform duties relevant to the daily activities of the Kansas Artificial Breeding Service Unit's Collection, Laboratory and Housing facilities. To apply, go to <https://careers.k-state.edu/cw/en-us/job/516254/research-technician>.

What's New for Beef Cattle Producers

Management Minute

“Define the Culture of Your Organization”

The term “organizational culture” continues to be a popular topic among management and leaders in the business world. Michael Watkins, in an article for the “Harvard Business Review” (<https://hbr.org/2013/05/what-is-organizational-culture>) explains this is the strategy which an organization or business uses to hire, manage, retain, and develop current employees for leadership roles. Many businesses, organizations and even universities lose exceptionally talented employees because their strengths and talents were not recognized. Additionally, an effective talent management strategy provides a mechanism to develop future leaders and managers. Managers play a key role in an organizations talent management strategy, as they must identify talented, exceptional employees. Managers also serve as mentors, providing coaching and feedback to develop employees. Research conducted by the American Society for Training and Development documented that those organizations with the most successful talent management systems, asked managers to discuss the talents and skills of their most talented employees with other managers and leaders. Discussing the organizations most talented employees creates an internal talent pool that various departments can draw from to fill current positions. Do you have exceptional employees in your organization? What is your talent management strategy? Are you at risk of losing your best employees? He suggests that organizational culture is often debated because we know it's important, but there is little consensus on what it actually is. The classical definition of organizational culture is the shared attitudes, values, goals, and practices that characterize an institution or organization. Others define organizational culture more simply as “who we are and how we do things.” Most employees spend more time in the workplace than their homes. Thus, the culture of an organization becomes an important component of a healthy workplace environment. A recent Gallup poll reported that employees who “strongly agree” with the statement “I feel connected to my organizations culture” are 3.7 times as likely to be engaged in their work and 68% less likely to feel “burned out.” Culture is important. So, what is the culture of your organization? Independently and anonymously asking your staff or employees to “Define the culture of your organization in one word” can be great way to capture and define the culture of your organization.

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

Feedlot Facts

“What's it Cost to Produce a Calf”

Previously in this column I have discussed calf revenue, which is principally driven by 1) the number of calves marketed 2) sale weight of calves and 3) price received. Now I would like to examine the other component of the profit equation (Revenue – Expenses = Profit) and discuss production expenses/costs and more specifically “What does it cost to produce a calf (in Kansas)?” The Kansas Farm Management Association (KFMA) Enterprise Reports, which may be accessed at <https://www.agmanager.info/kfma>, are an excellent resource for production cost data in Kansas. This information may be used by cattle producers to benchmark their operations with other comparable enterprises (Spring vs. Fall calving etc.). The total feed and operational costs (total of all non-feed costs) per cow from 2018 to 2022 for all KFMA cow-calf operations is illustrated below.

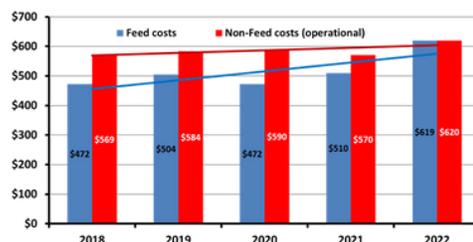


Figure 1. Total feed and non-feed costs (operational) of Kansas cow-calf producers

This figure demonstrates that both feed and non-feed costs have increased over the last five years and that non-feed costs are often greater than or equal to feed costs. The average cost to produce a calf in 2018 was \$1041/cow and was \$1,239/cow in 2022. When expressed as a percentage the total cost to produce a calf in Kansas increased 19% from 2018-2022. Further increases in production costs may be expected in 2023 given current economic conditions and the persistence of drought conditions.

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

KSU Cow-Calf Checklist - November 2023

Management Considerations for January 2024

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

Cow Herd Management

- Body condition score both spring- and fall-calving cows.
 - Target BCS for spring calvers at calving: 5 for mature cows, 6 for young females
 - Adjust nutrition program prior to calving as needed for spring-calvers
 - Ensure fall-calvers maintain BCS through winter if still nursing calves
- Continue grazing crop residues and dormant pastures as they are available but be prepared to move cattle or provide supplemental feed as conditions dictate.
- Be ready to react to severe winter weather effects on cow nutrient requirements by providing additional feed which may be more challenging this year with a tighter supply of forages.
- Review your nutrition program and test harvested forages for the following:
 - Moisture/dry matter
 - Crude protein
 - Energy (NEm, NEg, and/or TDN)
 - Fiber components (ADF, NDF)
 - Macro-minerals (calcium, phosphorus, magnesium, potassium, salt)
 - Nitrates when appropriate
 - Starch for silage crops
- Manage young and mature bulls during the offseason to ensure bulls are BCS \geq 5.0 prior to the next season of use and have adequate winter protection.

Calf Management

- Consider your plans for weaning and marketing fall-born calves.
 - Watch the feeder calf market
 - Evaluate your feed resources and cost of gain
 - Talk to prospective buyers in advance of selling
- Review/update your health protocols as needed for newborn calves.
- Consider either supplementing fall-calving pairs or creep feeding fall-born calves to maintain calf performance on low-quality winter forages.

Monitor replacement heifers to ensure they are adequately growing and developing, take check weights and adjust your plane of nutrition accordingly.

General Management

- Update herd records and use them to assess performance.
- Review your genetic selection strategy to ensure your goals are met.
- Develop and/or revise your risk management plans for the coming year.
- Discuss herd health protocol with your veterinarian.
- Take inventory of supplies and clean equipment prior to spring calving.
- Ensure plans are in place to provide bedding, wind protection, and snow removal.
- Make arrangements to ensure sufficient water is available in freezing conditions.
- Evaluate your short and long-term herd inventory goals with current conditions.
- Renew lease arrangements as necessary.
- Schedule an annual meeting with your lender, insurance agent and extension professional.



What's New for Swine Producers

Evaluation of a Dried Fermentation Product Administered Through Drinking Water in a Commercial Environment on Nursery Pig Mortalities, Antibiotic Injections, and Growth Performance- A total of 34,399 commercial nursery pigs (initially 12.2 lb) were used in 20 nursery barns with 10 barns per treatment to determine the effectiveness of a dried fermentation product (DFP) on nursery pig mortalities, antibiotic injection frequency, and close-out growth performance. The target dosage of the DFP for the first 14 d was 35 mg/kg BW based on the actual dosage of a previous experiment. Following the 14-d supplementation period, pigs continued to be monitored until they were moved from the barn at approximately d 45. The first 6 replicates consisted of the DFP as the sole source of water additive from d 0 to 14, while the last 4 replicates included water-soluble antibiotics with the DFP. During the supplementation period, there was no evidence that the DFP influenced the percentage of pigs that died or total mortality. However, the DFP reduced the percentage of pigs that were euthanized. During the common period, the DFP increased the percentage of pigs euthanized and tended to increase mortality percentage. For the overall experiment, providing the DFP did not influence growth performance. When providing the DFP, there was an increase in the percentage of pigs requiring euthanasia and therefore an increase in overall mortality. For injections, providing the DFP for the first 14 d reduced the number of pigs injected from d 14 to d 45 by the end of the nursery and the overall nursery period. *More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org.* (This study conducted by Alan J. Warner, Brittany Carrender, Mike D. Tokach, Joel M. DeRouchey, Jason C. Woodworth, Robert D. Goodband, Jordan T. Gebhardt, Kyle F. Coble, Alain Labbé, and Walter Heuser.)

Evaluation of a Dried Fermentation Product Administered Through Drinking Water on Nursery Pig Growth Performance, Fecal Consistency, and Antibiotic Injections- A total of 350 barrows (DNA 200 × 400; initially 13.5 ± 0.02 lb) were used in a 42-d study to evaluate the effects of a dried fermentation product administered through drinking water on nursery pig growth performance, antibiotic injection frequency, fecal consistency, and fecal *Escherichia coli* presence. Upon arrival to the nursery research facility, pigs were randomly assigned to pens (5 pigs per pen) and pens were allotted to 1 of 2 water treatments with 35 pens per treatment. Water treatments were provided with or without a fermentation product administered through the water lines at a 1:128 dilution rate from d 0 to 14 after weaning. From d 0 to 14, 14 to 42, and for the overall experiment, there was no evidence ($P > 0.10$) for differences observed for any growth performance criteria. There was evidence ($P < 0.05$) for day effect on diarrhea presence. Diarrhea presence increased on d 4 and 6, then decreased to low levels. There was no evidence for the fermentation product to influence diarrhea incidence. For antibiotic injections, there was no evidence ($P > 0.10$) for differences observed between treatments. Mortalities were low, with no evidence ($P > 0.10$) for differences observed between treatments for removals or mortalities. For fecal dry matter on d 7 and 14, there was no evidence ($P > 0.10$) for differences observed between treatments. In summary, under these experimental conditions, administering a dried fermentation product for the first 14 d in the nursery through the drinking water did not improve growth performance, fecal dry matter, diarrhea presence, antibiotic injections, or removals and mortalities in nursery pigs. Further evaluation of the dried fermentation product in commercial facilities with greater diarrhea and mortality is needed. *More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org.* (This study conducted by Alan J. Warner, Alexandra L. Gerrard, Mike D. Tokach, Raghavendra G. Amachawadi, Alain Labbé, Walter Heuser, Ramya Kalam, Xiaorong Shi, T. G. Nagaraja, Joel M. DeRouchey, Jason C. Woodworth, Robert D. Goodband, and Jordan T. Gebhardt.)

The Effect of Bone and Analytical Methods on the Assessment of Bone Mineralization Response to Dietary Phosphorus, Phytase, and Vitamin D in Nursery Pigs- Three hundred-fifty pigs (initially 26.2 ± 1.23 lb) were used to evaluate the effects of bone and analytical methods on the assessment of bone mineralization response to dietary P and vitamin D in nursery pigs. Pens of pigs (5 or 6 pigs/pen) were randomized to 6 dietary treatments in a randomized complete block design with 10 pens per treatment. Treatments were formulated to have varying levels of P, phytase, and vitamin D to provide differences in bone characteristics. After feeding diets for 28 d, eight pigs per treatment were euthanized for bone, blood, and urine analysis. The response to treatment for bone density and ash was dependent upon the bone analyzed (density × bone interaction, $P = 0.044$; non-defatted bone ash × bone interaction, $P = 0.060$; defatted bone ash × bone interaction, $P = 0.068$). Pigs fed 0.19% STTD P had decreased ($P < 0.05$) bone density and ash (non-defatted and defatted) for all bones compared to 0.44% STTD P, with 0.33% STTD P generally intermediate or similar to 0.44% STTD P. Pigs fed 0.44% STTD P with no vitamin D had greater ($P < 0.05$) non-defatted fibula ash compared to all treatments other than 0.44% STTD P with added HyD. Pigs fed the three diets with 0.44% STTD P had greater ($P < 0.05$) defatted 2nd rib ash compared to pigs fed 0.19% STTD P or 0.33% STTD P with no phytase. In summary, bone density and ash responses varied depending on the bone analyzed. Differences in bone density and ash in response to P and vitamin D were most apparent with fibulas and 2nd ribs. The difference between bone ash procedures was more apparent than the differences between treatments. For histopathology, 10th ribs were more sensitive than 2nd ribs or fibulas for detection of lesions. *More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org.* (This study conducted by Hadley R. Williams, Taylor E. Chin, Jordan T. Gebhardt, Mike D. Tokach, Jason C. Woodworth, Joel M. DeRouchey, Robert D. Goodband, Jon R. Bergstrom, Michael C. Rahe, Christopher L. Siepker, Panchan Sithicharoenchai, Steve M. Ensley.)

What's New for Swine Producers

The Effect of Different Bone and Analytical Methods on the Assessment of Bone Mineralization to Dietary Phosphorus, Phytase, and Vitamin D in Finishing Pigs

Eight hundred eighty-two pigs (initially 73.2 ± 0.7 lb) were used to evaluate the effects of different bones and analytical methods on the assessment of bone mineralization response to dietary P and vitamin D in growing-finishing pigs. Pens of pigs (20 pigs per pen) were randomized to 1 of 5 dietary treatments in a completely randomized design with 9 pens per treatment. Treatments were formulated to have varying levels of P, phytase, and vitamin D to potentially provide wide differences in bone characteristics. After feeding diets for 112 d, nine pigs per treatment were euthanized for bone, blood, and urine analysis. There were no significant differences for final BW, ADG, ADFI, F/G ($P > 0.10$), or bone ash (bone ash \times bone interaction, $P > 0.10$) regardless of the ashing method. The response to treatment for bone density and bone mineral content was dependent upon the bone (density interaction, $P = 0.053$; mineral interaction, $P = 0.078$). There were no treatment differences for bone density and bone mineral content for metacarpals, fibulas, and 2nd rib ($P > 0.05$). For 10th rib bone density, pigs fed industry levels of P and vitamin D had increased ($P < 0.05$) bone density compared to pigs fed NRC levels with phytase, with pigs fed deficient P, NRC levels of P with no phytase, and extra 25(OH)D₃ vitamin D (HyD) intermediate. Pigs fed extra vitamin D from HyD had increased ($P < 0.05$) 10th rib bone mineral content compared to pigs fed deficient P and NRC levels of P with phytase, with pigs fed industry P and vitamin D, and NRC P with monocalcium intermediate. In summary, bone density and bone mineral content responses varied depending on the bone. The difference between bone ash procedures was more apparent than the differences between diets. Differences in bone density and mineral content in response to P and vitamin D were most apparent with the 10th ribs. More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org. (This study conducted by Hadley R. Williams, Jordan T. Gebhardt, Mike D. Tokach, Jason C. Woodworth, Robert D. Goodband, Joel M. DeRouchey, Jon R. Bergstrom, Chad W. Hastad, Zach B. Post, Michael C. Rahe, Christopher L. Siepker, Panchan Sitthicharoenchai, and Steve M. Ensley.)

Effects of Fat Source and Level on Growth Performance, Carcass Characteristics, Carcass Iodine Value and Economics of Finishing Pigs in a Commercial Environment

A total of 2,011 pigs (PIC 1050 \times DNA 600; initially 62.4 ± 4.6 lb) were used in a 113-d finishing trial to evaluate the effects of two different fat sources fed at two different levels on growth performance, carcass characteristics, carcass iodine value, and economics of finishing pigs raised in a commercial environment. Pigs were randomly allotted to 1 of 5 dietary treatments with 21 to 27 pigs per pen and 16 pens per treatment. Dietary treatments were arranged in a $2 \times 2 + 1$ factorial with main effects of fat source and fat inclusion level. Dietary treatments included a control diet containing no added fat. The other 4 dietary treatments included two different fat sources, choice white grease or corn oil, included at either 1 or 3% of the diet. Experimental diets were fed based on a feed budget from d 0 to 113 in 6 phases. For overall growth performance, pigs fed increasing dietary fat from 0 to 3% had increased (linear, $P < 0.001$) ADG and decreased (linear, $P = 0.013$) ADFI, which led to an improvement (linear, $P < 0.001$) in F/G. There was no difference in growth performance between pigs fed choice white grease or corn oil. For carcass characteristics, increasing fat increased (linear, $P \leq 0.017$) HCW, carcass yield, and backfat. For carcass fat iodine value, there was a fat source \times level interaction ($P < 0.001$) where iodine value increased linearly as corn oil increased in the diet with only a small increase in iodine value when diets with choice white grease were fed. For economics, increasing fat, regardless of fat source, increased feed cost (linear, $P < 0.001$) and revenue (linear, $P = 0.003$). Increasing fat reduced (linear, $P < 0.001$) IOFC in the high feed cost, low revenue scenario, and tended to increase ($P = 0.060$) IOFC in the low feed cost, high revenue scenario. In conclusion, increasing fat from 0 to 3% of the diet, regardless of fat source, increased overall ADG, reduced ADFI, and improved F/G. Increasing fat also increased HCW, carcass yield, and backfat, while pigs fed diets containing corn oil had higher carcass fat iodine values. When feed costs are high and revenue is low, the improvement in growth performance does not justify the extra diet cost from increasing added fat from 0 to 3% in the diet. However, adding fat in the diet is justifiable when feed costs are low and revenue is high, regardless of fat source used. *More information is available on this experiment and others in the KSU Swine Day report at KSUSwine.org.* (This study conducted by Jenna J. Bromm, Joel M. DeRouchey, Mike D. Tokach, Kiah M. Berg, Jon A. De Jong, Courtney L. Pohlen, Jason C. Woodworth, Robert D. Goodband, and Jordan T. Gebhardt.)



ASI Faculty Highlight



KC Olson (kcolson@ksu.edu or 785-532-1254)
Professor- Range Beef Cattle Nutrition and Management

KC is a professor of range beef cattle nutrition and management and the W.M. and F.A. Lewis Distinguished Chair in the Department of Animal Sciences & Industry at Kansas State University. He teaches a number of courses at KSU and takes great pride in helping train the next generation of Great Plains ranchers and farmers. KC's research program addresses questions that affect profitability of the cow-calf and stocker segments of the Kansas beef industry. Specific areas of research include management of invasive range plants; nutritional management of cattle grazing native range; fire ecology; and factors influencing grazing behavior.

KC holds advanced degrees from Kansas State University and North Dakota State University. KC is active in the American Society of Animal Science, the Society for Range Management, the American Registry of Professional Animal Scientists, the American College of Animal Nutrition, the Weed Science Society of America, and the Tallgrass Legacy Alliance. He was the 2019 winner of the Animal Management Award bestowed by the American Society of Animal Science.

KC, his wife, Karli, and sons Charles and Theodore live on a beautiful ranch in North Lyon County. In his off time, KC enjoys spending time with his family, being active in his church, and being one of the most highly leveraged ranchers in the Flint Hills. He has a very close relationship with his banker.



Liz Boyle (lboyle@ksu.edu or 785-532-1247)
Professor/Extension Specialist- HACCP, Meat Safety and Quality and Processed Meats

Dr. Liz Boyle is a Professor in Meat Science in the Department of Animal Sciences and Industry at Kansas State University. She received her B.S. in Wildlife Biology from the University of Minnesota, her M.S. in Food Science and Nutrition and Ph.D. in Food Science with a meats emphasis from Colorado State University followed by post-doctorate work in meat science at the University of Kentucky and the University of Minnesota.

Dr. Boyle's focus is to provide scientific and technical assistance to meat processors and trade associations and researching quality and safety of meat products. She is a Lead Instructor with the International HACCP Alliance and the Food Safety Preventive Controls Alliance. Dr. Boyle teaches HACCP workshops nationally and teaches undergraduate and graduate courses in meat processing, HACCP and Preventive Controls, and Advanced HACCP.

In 2016, Dr. Boyle was named a Fellow by the American Meat Science Association and was a recipient of the 2016 AMSA Signal Service Award. Boyle is an internationally known expert in HACCP systems and has dedicated her career to assisting meat companies with improving processed meat quality and safety, HACCP systems, and food safety plans.

*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*