



WEBER HALL  
ANIMAL SCIENCE & INDUSTRY



# K News from KSU Animal Sciences

- ✦ Plan to attend the **45th Annual Midwest Meat Processing Workshop** on April 28 at K-State. Join us at the workshop and see, hear, taste, and ask questions as state award winners share their expertise and demonstrate the manufacture and techniques used to make award winning products. Adam Comeau from Brant's Market will demonstrate production of his award-winning snack sticks, and Jason Callahan and Jeremy Sheffler from Peabody Sausage House will demonstrate production of their award-winning fresh specialty bratwurst. Paul Maness from the KS Department of Labor will discuss industrial safety and health for meat processing environments. Valentina Trinetta, KSU, will go back to basics to describe what should be done for effective cleaning and sanitation in your facility. John Wolf, KSU Meat Lab Manager, will demonstrate using an injector and tumbler for making injected products. Liz Boyle, KSU, will discuss upcoming changes to meat and poultry nutrition facts labels. Arthur Fink, KSU, will address pollution control consideration for meat processors. Bob Danler, NBO3, will discuss ingredient functionality and the use of non-traditional nitrite delivery systems. Mark your calendar and come to this workshop to learn techniques to improve business strategies, product quality, and safety that could result in tastier product, longer shelf life, and greater sales and business opportunities. We invite you back to the longest running series of seminars/workshops of this type for meat processors anywhere in the world. We're sure you will learn something new for your business and we look forward to seeing you at the workshop. Registration is \$100 per plant and includes lunch for two people and a parking permit for one vehicle. This year you can register online at <https://www.asi.k-state.edu/midwestprocessingworkshop>. For more information, contact Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu) or 785-532-1247.)
- ✦ **Market Beef Nominations Due May 1** - The 2023 state livestock nomination season has arrived! Market beef nominations are due by May 1, 2023. This includes market steers and market heifers. The deadline is a postmark and online submission deadline, but families need to plan ahead and get them submitted as soon as possible. We have transitioned to an online nomination system, so families will need to order DNA envelopes in advance, as well as complete their YQCA certification and the Declaration Form before submitting their nominations. The nomination fee is now paid through purchasing DNA envelopes, which means no payment will be included when the completed and signed DNA envelopes are postmarked. The deadline to order official DNA envelopes is April 20. Additionally, no paper forms will be mailed. Families will only send in their completed DNA samples and a copy of the receipt from their online nomination entry submissions (list of animals/tag numbers). Extension agents and FFA advisors will approve nominations online. Nomination information for all species may be found on the KSU Youth Livestock Program website, including the link to the online portal: <https://www.asi.k-state.edu/extension/youth-programs/nominated-livestock/>. The website includes an overview of the four-step nomination process. No paper forms or old DNA envelopes will be accepted. Families should use the checklist, make sure the DNA envelopes are signed by all exhibitors within the family, as well as a parent, and cross reference the information submitted online with the DNA envelopes. For more information, contact Lexie Hayes via email at [adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264.
- ✦ **The 2023 K-State "Wildcat Showdown" will be Sunday, May 7 in Weber Arena.** This will be a sheep and goat livestock show with education and information on sheep and goat production for youth. For more information, contact Payton Dahmer at [dahmerp@ksu.edu](mailto:dahmerp@ksu.edu) or 417-448-4934.
- ✦ The **2023 Dr. Bob Hines Kansas Swine Classic** is scheduled for June 30-July 1 at the Riley County Fairgrounds in CiCo Park in Manhattan. This two-day event includes an educational swine skillathon, photography contest, showmanship, and a prospect and market hog show. It is open to all Kansas youth ages 7-18 as of January 1, 2023. Entries must be submitted online by 5 pm on June 15, with payment postmarked the same day. Brochures are available on our website at [www.KSUswine.org](http://www.KSUswine.org) or [www.asi.ksu.edu/swineclassic](http://www.asi.ksu.edu/swineclassic). For more information, contact Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)) or Lexie Hayes (785-532-1264; [adhayes@ksu.edu](mailto:adhayes@ksu.edu)).

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April 2023



# UPCOMING EVENTS...

- ↪ **YQCA Requirement for 2023 State Shows** - Youth for the Quality Care of Animals (YQCA) is a national, multi-species youth livestock quality assurance program that focuses on food safety, animal well-being, and life skill development, through age-appropriate educational curriculum for youth 7-21 years of age. This program is an annual certification that grows with a young person, so the learning modules are different every year. ALL exhibitors are required to be YQCA certified in order to participate in the 2023 Kansas State Fair Grand Drive and/or Kansas Junior Livestock Show (KJLS). This includes youth who will be showing market animals, commercial breeding females, and/or registered purebred breeding females. Families should contact their local extension office to see what options are available in their local area. The YQCA program transitioned to a new platform in March of 2022, so families will need to create an account using the new website: <https://yqcaprogram.org/>. Families will be prompted to upload their YQCA certificates into the online system while submitting their state livestock nominations. The system will only ask once, so families need to be prepared to upload it, as well as their family's completed Declaration Form, upon entering their first animal. More information may be found on the K-State Youth Livestock website (<https://www.asi.k-state.edu/extension/youth-programs/>) under YQCA, by contacting the local extension office, or via Lexie Hayes at [adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264.
- ↪ **Champions Livestock Judging Camp** – The K-State Livestock Judging Team recently released its annual “Champions” livestock judging camp dates for this summer. Camp sessions will be hosted June 5-7, 12-14, and 15-17. In addition to evaluating livestock, this camp focuses on reason development and presentation. It is open to youth 14-18 years old and participation is filled on a first-come, first-served basis. For more information visit [www.asi.ksu.edu/championscamp](http://www.asi.ksu.edu/championscamp) or contact Chris Mullinix ([cmullinix@ksu.edu](mailto:cmullinix@ksu.edu))
- ↪ **KSU Youth Horse Judging Camps**- The K-State Horse Judging Team will be hosting two camps this summer. The Beginner Camp will be June 14, with the Advanced Camp offered June 13-14. This year, the Kansas 4-H State Horse Judging Contest will be hosted in Salina after the camps on June 15. Additional details and registration information will be released soon and will be located on the webpage at [www.asi.ksu.edu/horsejudging](http://www.asi.ksu.edu/horsejudging). For more information contact Celsey Crabtree at ([celseyb@ksu.edu](mailto:celseyb@ksu.edu) or 785-532-1193.)
- ↪ **Educational Resources** - There are several livestock project resources available on the KSU YLP website [www.asi.ksu.edu/youthlivestock](http://www.asi.ksu.edu/youthlivestock), including digital versions of the show guides, videos, and graphics. They may be found under the “Educational Resources” tab. Additionally, shows and activities that are open to participation from outside the local unit are being updated under the “Spring Shows” tab. If you have an opportunity to share, please email it to Lexie Hayes at [adhayes@ksu.edu](mailto:adhayes@ksu.edu) to be added. Information needs to be submitted directly from the local extension unit to be included on the page.
- ↪ **Save the date:** 2023 K-State Animal Sciences and Industry Family & Friends Reunion Saturday, October 7. Plan now to join us at the Stanley Stout Center as we recognize Dr. Larry Corah as the 2023 Don L. Good Impact Award Winner. Watch for more details at [asi.ksu.edu/familyandfriends](http://asi.ksu.edu/familyandfriends) and on social media.

## CALENDAR OF UPCOMING EVENTS

Date	Event	Location
April 28, 2023	Midwest Meat Processing Workshop	Manhattan
May 7, 2023	K-State Wildcat Showdown	Manhattan
June 5-7, 2023	Champions Livestock Judging Camp A	Manhattan
June 6-8, 2023	HACCP Workshop	Manhattan
June 12-14, 2023	Champions Livestock Judging Camp B	Manhattan
June 13-14, 2023	KSU Youth Horse Judging Camp- Advanced Section	Manhattan
June 14, 2023	KSU Youth Horse Judging Camp- Beginning Section	Manhattan
June 15, 2023	Kansas State 4-H Horse Judging Contest	Salina, KS
June 15-17, 2023	Champions Livestock Judging Camp C	Manhattan
June 21-24, 2023	K-State Animal Science Leadership Academy	Manhattan
June 30-July 1, 2023	Dr. Bob Hines Kansas Swine Classic	Manhattan

# What's New...

- ☞ **Office Specialist III/Travel and Student Hiring Associate- Business Office (Job # 514260)**- This is a full-time, unclassified professional staff, term contract position. This position processes payment documents, primarily travel-related documents (authorizations and reimbursements) for the department. Manages undergraduate hiring processes with support provided by the Budget/Fiscal Coordinator and Human Capital Representative as needed. Supports Meat Lab, Call Hall Dairy Bar, Dairy Plant, KABSU, other earnings units and FSI (as needed) for ASI, inclusive of deposits processing. Screening of applicants begins immediately and will continue until the position is filled. For more information, contact Morgan Zumbaugh, Search Committee Chair, at [mdzumbaugh@ksu.edu](mailto:mdzumbaugh@ksu.edu) or 785-532-1253. To apply go to <https://careers.k-state.edu/cw/en-us/job/514260/travel-and-student-hiring-associate>.
- ☞ **Farm Manager- Beef Cattle Research Center (Job # 514869)**- This is a full-time, unclassified professional staff, term contract position. This position takes care of the daily operations of the Beef Cattle Research Center at KSU within the Department of Animal Sciences & Industry. This position will maintain appropriate inventories of feed, pharmaceuticals, and livestock as dictated by teaching and research functions of Research Center. Purchase feedstuffs (forage and special feedstuffs) and schedule delivery of grains and supplements from ASI and GRSCI feed mills. Incumbent will assist with coordination of basic and applied research activities at the Beef Cattle Research Center. Responsibilities include; execution, documentation, and auditing of research projects, as well as statistical analysis of data and preparation of final research reports. This position is responsible for oversight and completion of daily feeding and health management of all animals on the premises, as well as maintenance and improvement of research facilities. Screening of applicants begins immediately and continues until suitable candidate is identified. For more information, contact James Drouillard, Search Committee Chair, at [jdrouill@ksu.edu](mailto:jdrouill@ksu.edu) or 785-532-1204. To apply go to <https://careers.k-state.edu/cw/en-us/job/514869/farm-manager>.
- ☞ **Farm Manager – Dairy Unit (Job # 512167)** – This is a full-time, unclassified professional staff, term contract position. The KSU Dairy Teaching and Research Center (DTRC) exists to support the dairy teaching, research, and extension missions of the Department of Animal Sciences and Industry. The Farm Manager is responsible for the day-to-day management of the personnel, animals, and unit facilities and equipment in a manner that properly supports the teaching, research, and extension missions. Incumbent functions as the manager of the Dairy Teaching and Research Center and is responsible for ensuring the safety of the cows and other dairy unit employees. Incumbent is responsible for 260 mature cows, 260 replacement animals, 8 full-time employees, and 15-20 undergraduate student employees. Incumbent is responsible for purchasing feed and supplies for the unit. Review of applications begins immediately and continues until the position is filled. For more information, contact Mike Brouk, Search Committee Chair, at [mbrouk@ksu.edu](mailto:mbrouk@ksu.edu) or 785-532-1207. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/512167/farm-manager>.
- ☞ **Animal Technician II - Dairy Unit (Job # 512403)**- This is a full-time, University Support Staff (USS) position. This position exists to operate and maintain the feed mill facility and feed the milk herd at the Dairy Teaching and Research Center. Review of applicants begins immediately and continues until the position is filled. For more information, contact Mike Brouk, Search Committee Chair, at [mbrouk@ksu.edu](mailto:mbrouk@ksu.edu) or 785-532-1207. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/512403/animal-technician-ii>
- ☞ **Animal Technician II – Dairy Unit (Job #510744)** – This is a full-time, University Support Staff (USS) position. This position exists to milk, feed, and provide care of Dairy Teaching and Research Center (DTRC) dairy herd, which is used for teaching and research purposes. Review of applications begins immediately and continues until the position is filled. For more information, contact Mike Brouk, Search Committee Chair, at [mbrouk@ksu.edu](mailto:mbrouk@ksu.edu) or 785-532-1207. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/510744/animal-technician-ii>.
- ☞ **Animal Technician II – Dairy Unit (Job # 513849)** – This is a part-time, University Support Staff (USS) position. This position exists to milk, feed, and provide care of Dairy Teaching and Research Center (DTRC) dairy herd, which is used for teaching and research purposes. This is an **AS NEEDED** position. The incumbent could be called to fill in for Emergency situations, 24 hours a day 7 days a week. Review of applications begins immediately and continues until the position is filled. For more information, contact Mike Brouk, Search Committee Chair, at [mbrouk@ksu.edu](mailto:mbrouk@ksu.edu) or 785-532-1207. To apply, go to <https://careers.k-state.edu/cw/en-us/job/513849/animal-technician-ii>.

# What's New for Beef Cattle Producers

**Management Minute-** Justin Waggoner, Ph.D., Beef Systems Specialist

## *“Customer service... Wow that was great”*

Good customer service is essential to any business or organization, having staff members who leave customers or anyone that encounters your business with that “wow that was great” feeling directly influences the bottom line. Customer service has become more important than ever as more consumers are purchasing goods without ever crossing the threshold of a traditional storefront. So how do we generate those feelings with someone on the phone or in a chat box? Let us start with the basics. What is customer service? Customer service is simply defined as the assistance provided by a company to those who purchase the goods or services it provides. Now on to the tough part, how do we as business or organization provide that assistance?

Susan Ward ([www.thebalancesmb.com](http://www.thebalancesmb.com)) offers a few simple things that businesses can do to improve their customer service experiences. First, answer the phone. Potential customers want to talk to a person and don't want to leave a message. Second, don't make promises you can't keep. As the old saying goes “say what you are going to do and do what you said you were going to.” Third, listen. Simply listening to what a potential customer needs is important, there is nothing worse than listening to sales pitch for something you don't want. Fourth, be helpful even if you don't make the sale today. The service provided today has the potential to turn in to something much larger in the future. Fifth, train your staff to go the extra mile, by providing additional information about the product or other items commonly purchased with said goods. Lastly, empower your staff to offer something extra without asking permission, especially in those circumstances where the “customer is always right.”

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu)

**Feedlot Facts-** Justin Waggoner, Ph.D., Beef Systems Specialist

## *“Cow Herd Mineral Supplement Selection Tips: Phosphorous”*

It can be challenging to select a mineral program, as there are many different products and mineral formulations currently available. When evaluating mineral supplements the phosphorous concentration may be used as guide to determine if the mineral fits the production stage of the herd and forage base. Phosphorous is one of the most common mineral deficiencies in grazing systems around the world and is one of the primary reasons we provide mineral supplements to grazing beef cattle. The table below illustrates the amount of phosphorous required in a mineral supplement required for cattle at various production stages consuming forages with different phosphorous concentrations. Forage phosphorous concentrations vary and are typically greatest during the spring and lowest in the winter. In Kansas, phosphorous content of native range in the spring is typically between 0.15 and 0.20%. Thus, the maintenance requirements of lactating cow (20 lbs milk/d) could be met by a mineral with at least 8% phosphorous (average of 6 and 10 in the table).

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu)

	Total diet P, %			
	0.05	0.10	0.15	0.20
	-----% P needed in mineral supplement-----			
<b>Maintenance</b>				
1000 lb BW	8	6	6	6
1200 lb BW	10	6	6	6
1400 lb BW	12	8	6	6
<b>Gestation</b>				
Last 1/3	16	10	6	6
<b>Lactation</b>				
20 lb milk/d	16	16	10	6
30 lb milk/d	16	16	16	6

Intake assumption: 2% bodyweight during maintenance and gestation. Intake increases with milk production

Wright, 2003

# KSU Cow-Calf Checklist – April 2023

## Management Considerations for June 2023

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

### Cow Herd Management

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

### Calf Management

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

### General Management

- Continue to evaluate early-summer grass growth and adjust your grazing plan as needed.
- Continue efforts to control invasive species in pastures.
- Use the Management Minder tool on [KSUBeef.org](http://KSUBeef.org) to plan key management activities for your cow herd for the rest of the year.
- Employ multiple strategies and chemistries for controlling flies and insects.
- With high feeder calf prices, consider price risk management tools.
- Make and evaluate important production calculations:
  - Calving distribution (% 1<sup>st</sup> cycle, % 2<sup>nd</sup> cycle, % 3<sup>rd</sup> cycle)
  - Calving interval
  - % calf crop (# calves weaned/# cows exposed for breeding) for calves born in fall 2022.

# What's New for Beef Producers

↪ **Effects of Late-Summer Prescribed Fire on Botanical Composition, Soil Cover, and Forage Production in Caucasian Bluestem-Infested Rangeland in the Kansas Smoky Hills: Year 4 of 5** Our objective was to determine effects of late-summer prescribed fire on frequency of Caucasian bluestem (*Bothriochloa bladhii*) in the Kansas Smoky Hills as well as changes in soil cover, botanical composition, and forage production associated with fire treatment. The study was in Ellsworth County, KS. Eighteen one-acre plots were randomly assigned to one of three treatments: no burn, one burn (August 14, 2019), and two burns (August 14, 2019, and August 11, 2021). Soil cover, botanical composition, forage production, and Caucasian bluestem frequency were measured annually beginning in 2019.

**The Bottom Line:** These data suggest that regular application of late-summer prescribed fire may be an effective method to reduce Caucasian bluestem frequency while improving overall grass-species richness. More information is available on this experiment and others in the KSU Cattlemen's Day report at [www.KSUbeef.org](http://www.KSUbeef.org). For more information, contact KC Olson (785-532-1254; [kcolson@ksu.edu](mailto:kcolson@ksu.edu)) or Dale Blasi (785-532-5427; [dblasi@ksu.edu](mailto:dblasi@ksu.edu).)

↪ **Assessment of Kansas Beef Producers' Perception and Knowledge Level of Business-to-Consumer Marketing-** The objective of this study was to assess the perception and knowledge level of Kansas beef producers regarding business-to-consumer marketing. A digital survey was created to assess the perception and knowledge level of business-to-consumer (B2C) marketing of Kansas beef producers. The survey was disseminated to Kansas beef producers utilizing the Shop Kansas Farms online social networking group.

Results from this study showed that 25.5% of beef producer respondents (n = 41) raise another species in addition to beef. It was found that 50.0% of survey respondents sold 20 or fewer head of finished beef cattle in 2020, with 43.9% selling 100% of their beef to individual consumers. Furthermore, 61.0% of respondents reported an increase in sales to individual consumers in 2020 compared to previous years, with 75.0% indicating sales to large beef processors were about the same. An increase in individual consumer sales was classified as "very desirable" by 73.0% of respondents, and 87.1% believe sales to individual consumers are the most profitable marketing channel. There were 72.2% of respondents selling beef in a B2C market for 1–10 years, with 47.2% reporting that repeat customers make up 75% of their sales. Word of mouth was the most common method of product marketing, as indicated by 91.6% of producers. Concerns or complaints from consumers were noted by 38.9%. It was believed by 47.1% of respondents that an improvement in consumer knowledge would be "very effective" to prevent future complaints or concerns. Moreover, an increase in producer knowledge was believed by 31.03% to be "extremely effective" in preventing future complaints or concerns. Finally, it was believed that an increase in state extension resources would be "moderately" or "very" effective in improving consumer and producer knowledge by 46.9% and 33.3% of respondents, respectively.

**The Bottom Line:** Producers self-reported B2C marketing to be the most profitable marketing channel within their operation. However, many are not utilizing this channel to its full potential, and many have experienced consumer concerns or complaints. This study confirms the need for more state extension resources to support B2C marketing for beef producers in Kansas and sets the foundation for future research priorities. More information is available on this experiment and others in the KSU Cattlemen's Day report at [www.KSUbeef.org](http://www.KSUbeef.org). For more information, contact Travis O'Quinn (785-532-3469; [travisquinn@ksu.edu](mailto:travisquinn@ksu.edu)) or A.J. Tarpoff (785-532-1255; [tarpoff@ksu.edu](mailto:tarpoff@ksu.edu).)

# What's New for Swine Producers

- **Evaluation of Environmental Enrichment on Feed Intake and Growth Performance of Weanling Pigs**-A total of 360 pigs (DNA 200 × 400; initially  $13.8 \pm 1.83$  lb BW) were used in a 42-d nursery trial to determine the effects of the addition of an environmental enrichment, in the form of ropes tied to the feeder dividers, on feed intake and growth performance of weanling pigs. Pigs were weaned at approximately 21-d of age and randomly assigned to 1 of 2 treatments with 5 pigs per pen and 36 pens per treatment. At placement, a rope was secured to each of the dividers in the feed pans of the feeder (3 ropes/feeder) and remained tied to the feeders from d 0 to 10. There was no statistical difference in ADG, ADFI, or F/G in phases 1 or 2 for pigs in pens with or without ropes tied to the dividers in the feed pan. Feed intake was not recorded for phase 3, but there was no evidence of a difference in phase 3 ADG or final BW between treatments. There was no observed difference in daily feed disappearance from d 0 to 14 based on the presence or absence of the environmental enrichment used in this trial. These results indicate that exposing newly weaned pigs to an environmental enrichment, in the form of ropes tied in the divider of the feed pan, at placement into the nursery did not impact growth performance or feed intake. More information is available on this experiment and others in the KSU Swine Day report at [www.KSUSwine.org](http://www.KSUSwine.org). (This study conducted by Jenna Bromm, Mike Tokach, Jason Woodworth, Robert Goodband, Joel DeRouchey, and Jordan Gebhardt.)
- **Effect of Percent Fines in Pelleted Diets on Growth Performance of Grow-Finish Pigs During Three Phases of Production** -Swine feed is commonly pelleted to improve F/G, feed handling characteristics, and bulk density. However, the degree of improvement in F/G of pigs depends on pellet quality or the percent fines at the feeder. The objective of this study was to determine if the response to pellet quality was dependent on the BW range of grow-finish pigs. Therefore, a total of 350 pigs (initially 80 lb; line 600 × 241, DNA) were randomly placed in 35 pens with 10 pigs per pen (5 barrows and 5 gilts per pen). All pigs were fed a common diet until the onset of the first experiment. At this time, pens of pigs were weighed to determine average pig weight per pen and split into 7 blocks based on average pen weight. Treatments were randomly assigned to pens within block. There was a total of 5 treatments with 7 replications per treatment. For Exp. 1, 2, and 3, pigs were fed treatments for 20 days from 96 to 150 lb, 21 days from 179 to 234 lb, and 20 days from 260 to 317 lb, respectively. Between each experiment, a 10-day washout period was utilized to mitigate any residual effects from the previous experiment and pens were rerandomized to treatment before the start of each experiment. Treatments consisted of 10% fines (screened pellets), pellets with increasing fines inclusions (45, 65, and 85% fines), and mashed feed. Experiment 1 (96 to 150 lb) treatments contained 90.4, 67.6, 46.4, and 12.5% fines at the feeder. There was no evidence of differences in ADG or ADFI in pigs fed the mash diet compared to those fed any of the pelleted treatments. However, pigs fed pellets with 12.5% fines had improved F/G compared to those fed mash diets. Pig ADFI and total feed cost increased in those fed pelleted diets with an increasing percentage of fines. Pigs fed pelleted diets with increasing percentage of fines had poorer F/G. Experiment 2 (179 to 235 lb) treatments consisted of 86.0, 60.5, 43.6, and 15.5% fines at the feeder. There was no evidence of differences in ADG. Pigs fed 86.0% fines had a tendency for increased ADFI and poorer F/G when compared to the mash diet. Therefore, total feed cost increased for pigs fed pellets with 86.0% fines when compared to pigs fed the mash diet. However, pigs fed pellets with 15.5% fines had improved F/G compared to those fed mash diets. For pigs fed pelleted diets, increasing percentage of fines increased ADFI which resulted in poorer F/G, total feed cost, and income over feed cost (IOFC). Experiment 3 (260 to 317 lb) pelleted diets contained 83.6, 65.1, 41.8, and 9.6% fines at the feeder. There was no evidence of differences in ADG or ADFI for pigs fed pellets with 65.1, 41.8, or 9.6% fines compared to those fed the mash diet. Pigs fed 83.6% fines had increased total feed cost per pig and a tendency for increased ADFI when compared to pigs fed the mash diet. Pig F/G improved when fed 9.6 and 41.8% fines compared to those fed mash diets. Pigs fed 65.1% fines had a tendency for improved F/G when compared to pigs fed the mash diet. Income over feed cost improved in pigs fed pellets with 9.6% fines when compared to those fed the mash diet. Pig F/G became poorer as percent fines increased in the pelleted diets. Pelleted diets with fines increasing from 9.6 to 83.6% tended to increase total feed cost. In conclusion, feeding pigs 12.5, 15.5, and 9.6% fines in Exp. 1, 2, and 3 improved F/G by 4.1, 4.5, and 6.7%, respectively, compared to pigs fed mashed diets. Increasing the percent fines from 12.5 to 90.4%, 15.5 to 86.0%, and 9.6 to 83.6% reduced F/G of pigs by 5.9, 8.6, and 6.4% for Exp. 1, 2, and 3, respectively. More information is available on this experiment and others in the KSU Swine Day report at [www.KSUSwine.org](http://www.KSUSwine.org). (This study conducted by Patrick Badger, Haley Otott, Adam Donnelly, Charles Stark, Chad Paulk.)

# ASI FACULTY SPOTLIGHT...



**Billy Brown ([brownb@ksu.edu](mailto:brownb@ksu.edu); 785-532-7974)**

**Assistant Professor, Dairy Cattle Nutrition/Physiology**

Billy grew up on his family's beef and hay operations during their time in Louisiana, Texas, and Kansas. In particular, it was an experience of milking dairy cows at a local dairy during the summer months that piqued his interest in the dairy industry. This led him to pursue dairy-related activities in youth organizations to continue to fuel his interest. Billy studied animal science with a dairy emphasis at Kansas State University, before completing a Master's degree in dairy cattle nutrition at Michigan State University. He took a 5-year break from academia to promote Kansas agriculture while working at the Kansas Department of Agriculture. In particular, he worked to expand the state's burgeoning dairy industry, led beef genetics trade missions to Latin America, and aided general agribusiness in establishing and growing within Kansas. Next, Billy completed a doctoral program in dairy cattle nutrition at KSU, followed by postdoctoral training at the University of Wisconsin-Madison. During all of his training, Billy broadly studied mechanisms of feed intake regulation, feeding behavior, and feed intake prediction modeling in lactating cows, in addition to applied studies in feed and forage quality, calf developmental programming, and dairy cattle nutrition.

Joining the faculty at KSU in 2022, Billy has a 60% teaching, 40% research appointment. He is responsible for teaching introductory dairy and general nutrition courses. His research program focuses on dairy cattle nutritional physiology, with a particular interest in elucidating mechanisms contributing to variation in nutrient utilization and feed intake regulation in lactating dairy cows and development programming in calves. Billy and his wife, Jordan, and their daughter live in Wamego.



**Morgan Zumbaugh ([mdzumbaugh@ksu.edu](mailto:mdzumbaugh@ksu.edu); 785-532-1253)**

**Assistant Professor, Muscle Biology/Meat Science**

Dr. Morgan Zumbaugh is a muscle biologist and meat scientist with research interest in skeletal muscle metabolism and the associated regulatory signaling pathways. The overall goal of Zumbaugh's research is to optimize muscle growth and fresh meat quality.

Zumbaugh earned her bachelor's degree in the animal and poultry sciences department at Virginia Tech in 2016. Then, she continued her education at Virginia Tech and earned her doctorate in muscle biology and meat science in the animal and poultry sciences department in 2020.

Her appointment is 70% research and 30% teaching. She teaches the growth and development course and other subjects in muscle biology and/or meat science that further prepare our students for future careers or advanced education.

During her studies at Virginia Tech, she worked as an undergraduate and graduate research assistant in the animal and poultry sciences department. Through this role, she had the chance to gain teaching experience in meat science, animal growth and development, and animal breeding- and genetics-based courses. Morgan and her husband, Chuck, enjoy exploring Manhattan's parks with their son, Cade, and American Mastiff, Ripley.

*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](mailto:katiesmith@ksu.edu)*