



K News from KSU Animal Sciences

- ↪ Dates have been set for the **2022 KSRE-KSU Sheep and Goat Management Series**. Dates and locations for the series include: March 1 in Olathe; March 3 in Holton; March 29 in Erie; March 30 in Minneapolis; April 7 in Wabaunsee; and April 27 in Johnson. More specific details and flyers on programming will be shared by the county/district, so stay tuned for more info through social media and the K-State Extension website. Watch the @ksusheepandgoatextension facebook page for more registration and program details. For more information, contact Alison Crane (arcrane@ksu.edu; 785-532-1672).
- ↪ The **51st Annual LMIC Stockmen's Dinner** will honor Pat Koons as Stockman of the Year. The dinner will be Thursday, March 3, at the Stanley Stout Center. Go to www.asi.ksu.edu/stockmensdinner for the latest schedule and registration.
- ↪ **Make plans to attend Cattlemen's Day 2022** – The 109th annual Cattlemen's Day will be hosted Friday, March 4, 2022. The trade show and educational exhibits will open at 8 a.m. in Weber Arena. The schedule includes:
 - 8:00 a.m. Commercial Trade Show and Educational Exhibits (Weber Arena)
 - 10:00 a.m. Morning Presentations:
 - Welcome** - *Mike Day, Department Head, ASI*
 - K-State Beef Research Roundup** – An update of research highlights featuring cow-calf and range management; stocker, growing and backgrounding; feedlot and ruminant nutrition; and meat science and muscle biology
K-State ASI Faculty: KC Olson, Dale Blasi, Jim Drouillard, and Michael Chao
 - Beef Industry Economic Outlook**
Glynn Tonsor, K-State Agriculture Economics
 - 12 noon Lunch (compliments of US Premium Beef and Commercial Trade Show exhibitors)
Visit Trade Show and enjoy Call Hall Ice Cream

Afternoon Break-out Sessions:

 - Weber Hall Room 146**
 - 1:30 p.m. Reproductive Research Updates – *Sandy Johnson and David Grieger, KSU*
 - 2:30 p.m. *Question and Answer Session: All Things Reproduction*
 - Weber Hall Room 123**
 - 1:30 p.m. What's Up With the Weather (Extremes and Outlook)
Jeff Basara, University of Oklahoma School of Meteorology
 - 2:30 p.m. Rules of the Road for Kansas Farmers and Ranchers
Kansas Highway Patrol
 - Weber Hall Room 111**
 - 1:30 p.m. Meat Alternatives, Taste Testing and Consumer Acceptance – *Lane Eggers, KSU*
 - 2:30 p.m. *Repeat Session*

Registration for KSU Cattlemen's Day will be \$25 per person in advance or \$35 per person at the door. Morning refreshments and lunch are included with registration. For registration and updated information, go to www.asi.ksu.edu/cattlemensday or call 785-532-1267.

Department of Animal Sciences and Industry

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Manhattan, KS 66506
785-532-6533
www.asi.ksu.edu - Facebook.com/KSUASI

February 2022 issue



UPCOMING EVENTS...

- ✎ The **45th Annual Legacy Bull and Heifer Sale** will be March 4, 2022, at 4:00 p.m. at the Stanley Stout Center. Visit www.asi.ksu.edu/bullsale for more information, as it becomes available, including the sale catalog.
- ✎ **Free BQA Training Sessions Scheduled at Five Kansas Locations** – Five advanced beef cattle care and health training sessions will be hosted by the Kansas Beef Council (KBC) during February and March. These checkoff-funded sessions will provide beef producers with up-to-date standards and technologies to improve animal welfare and food safety. The trainings will be led by KSU veterinarian A.J. Tarpoff. Dates and locations are: February 24-Mankato Livestock Market; March 8-Fort Scott Livestock Market; March 10-Herington Livestock Commission; March 15-Pratt County Fairgrounds; and March 29-Fisher Community Center in Hiawatha. All the meetings will begin at 6 p.m.
- Producers and veterinarians will receive Beef Quality Assurance (BQA) training and information relevant to the cow-calf, stocker and feedlot segments. The information will include animal husbandry best management practices, downed animal care and humane euthanasia training. In addition, low-stress cattle-handling techniques will be reviewed. All producers and veterinarians who attend will earn BQA certification valid for three years.
- Each workshop is free of charge and includes a complimentary meal. To register for one of the sessions, go to www.kansasbeef.org/bqa or call KBC at (785) 273-5225 one week prior to the date of the event. For more information, contact A.J. Tarpoff (tarpoff@ksu.edu; 785-532-1255).
- ✎ The **2022 Junior Beef Producer Day** is scheduled for Saturday, March 5. It will be hosted in-person in Weber Hall on the K-State campus in Manhattan. This event is a one-day educational opportunity for families to learn about the selection and management of their beef project. Youth, parents, extension agents, project leaders, and volunteers of all skill levels are invited to attend. Presentations will be provided by K-State faculty, staff, students, extension agents, and guest speakers. Topics range from selection to nutrition, reproduction, meat science, and showmanship.
- The deadline to register has passed, but late registrations and walk-ins are accepted. The cost is \$20/person for anyone attending, including youth and adults. Only those registrations received by the deadline will receive a t-shirt. Visit <http://bit.ly/ksujrproducerdays> to register online and view the flyer, which includes the tentative schedule.
- An optional instructor-led YQCA training and state livestock nomination process session will be held at the conclusion of the program for those interested.
- K-State COVID-19 protocols in effect at the time of the event will be followed. Registration is non-refundable. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.
- ✎ The **2022 Junior Sheep Producer Day** is scheduled for Saturday, March 19. We are excited to return to in-person programming for the KSU junior producer day events! Junior Sheep Producer Day will be hosted in Weber Hall on the K-State campus in Manhattan. This event is a one-day educational opportunity for families to learn about the selection and management of their sheep project. Youth, parents, extension agents, project leaders, and volunteers of all skill levels are invited to attend. Presentations will be provided by K-State faculty, staff, students, extension agents, and our guest speaker, Payton Dahmer. Topics range from selection to nutrition, reproduction, meat science, and showmanship.
- The deadline to register is February 25. All attendees must register, including youth and adults. The cost is \$15/person by February 25, or \$20/person after the deadline. Only those registrations received by the deadline will receive a t-shirt. Visit <http://bit.ly/ksujrproducerdays> to register online and view the flyer, which includes the tentative schedule.
- An optional instructor-led YQCA training and state livestock nomination process session will be held at the conclusion of the program for those interested.
- K-State COVID-19 protocols in effect at the time of the event will be followed. Registration is non-refundable. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.
- ✎ **Implementing Your Company's HACCP Plan** will be held March 30 – April 1, 2022 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 on-line at <http://bit.ly/HACCPCourse>. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu; 785-532-1247).

UPCOMING EVENTS...

- Livestock County Fair Management Clinic** - The biennial Livestock County Fair Management Clinic will be hosted virtually April 5-6, 2022. 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 for 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 pm, 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 of 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 by March 31 at https://kstate.qualtrics.com/jfe/form/SV_2hKAXBfaQHYPQHk. For more information, contact Lexie Hayes (adhayes@ksu.edu; 785-532-1264) or Joel DeRouchey (jderouch@ksu.edu; 785-532-2280).
- The **2022 K-State Sheep Day** will be held on Saturday, April 30. Watch the @ksusheepandgoatextension facebook page for more information, registration and program details. For more information, contact Alison Crane (arcrane@ksu.edu; 785-532-1672).
- Spring Shows and Local Youth Livestock Opportunities** - Any county that has a youth livestock educational opportunity open to kids outside of the county is invited to share that information with Lexie Hayes (adhayes@ksu.edu). This includes virtual events, spring shows, showmanship clinics, skillathons, field days, etc. These opportunities will be included on the youth livestock website. Information on the site will be updated as 2022 opportunities are received directly from county offices.
- Watch the **KSU ASI Headlines** for January 2022 and find out the latest happenings in the department. Follow the link at <https://youtu.be/MmMScSkypN8>. For questions about the department, contact Dr. Mike Day, ASI Department Head, at 785-532-1259; mlday@ksu.edu.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
February 15, 2022	K-State Winter Ranch Management Series	Randolph, KS
February 24, 2022	K-State Winter Ranch Management Series	Oakley, KS
February 24, 2022	BQA Training Session	Mankato, KS
March 1, 2022	KSRE-KSU Sheep and Goat Management Series	Olathe, KS
March 3, 2022	KSRE-KSU Sheep and Goat Management Series	Holton, KS
March 3, 2022	LMIC Stockmen's Dinner	Manhattan
March 4, 2022	KSU Cattlemen's Day	Manhattan
March 4, 2022	Legacy Bull and Heifer Sale	Manhattan
March 5, 2022	Junior Beef Producer Day	Manhattan
March 8, 2022	BQA Training Session	Fort Scott, KS
March 10, 2022	BQA Training Session	Herington, KS
March 15, 2022	BQA Training Session	Pratt, KS
March 19, 2022	Junior Sheep Producer Day	Manhattan
March 29, 2022	KSRE-KSU Sheep and Goat Management Series	Erie, KS
March 29, 2022	BQA Training Session	Hiawatha, KS
March 30, 2022	KSRE-KSU Sheep and Goat Management Series	Minneapolis, KS
March 30 – April 1, 2022	HACCP Workshop	Columbia, MO
April 5-6, 2022	Livestock County Fair Management Clinic	
April 7, 2022	KSRE-KSU Sheep and Goat Management Series	Wabaunsee, KS
April 27, 2022	KSRE-KSU Sheep and Goat Management Series	Johnson, KS
April 30, 2022	K-State Sheep Day	Manhattan

WHAT'S NEW...

Management Minute – Justin Waggoner, Ph.D., Beef Systems Specialist

“What’s the Culture of Your Organization? Is it Always Safety First?”

The data tells us that agriculture is a high-risk industry, where “near misses,” accidents, and even fatalities unfortunately occur. What is the culture of your organization or business? Is employee safety at the forefront? I certainly hope so. However, if it is not, how do we change that and create a culture of safety? Some say that the safety culture within an organization starts with the organization’s leaders and trickles down. Other sources indicate that training has to be a continual and ongoing process to create an organizational culture of safety. These are both correct.

However, with safety, it is very easy to find examples of “here is how we do it when the boss isn’t looking” and examples of great people who had the proper training and still made a bad decision. In both of these situations, the formal leaders of the organization were engaged in the process and the employees had the proper training. So how can we make progress? Leadership is an essential component of creating a safety culture, but the formal leaders within the organization are not the leaders who are likely the greatest influencers. Safety is an everyday, in-the-minute issue on most operations. Thus, the informal leaders within the organization or business are those who can have the greatest impact in creating a culture of safety. Leading by example, in those “in the heat of the moment” situations is critical. Who are the informal leaders in your organization? Do they exemplify the core values of your safety culture? Identifying and engaging informal leaders is an essential and powerful component of initiating any change within an organization.

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

Feedlot Facts – Justin Waggoner, Ph.D., Beef Systems Specialist

“Receiving Protocols”

Receiving cattle management and the process of adapting cattle to grain-based finishing diets are important components of managing feedlot cattle that can ultimately impact cattle performance for the remainder of the finishing period. What does a typical industry receiving protocol look like and how does the feeding industry transition cattle to a finishing diet? A survey of consulting nutritionists conducted by Samuelson et al. (2016), which summarized responses from 24 consulting nutritionists (servicing more than 14 million head annually), reported that 66% of the feedyards they service allow cattle to rest 12 to 24 hours prior to initial processing and nearly 30% allow cattle to rest more than 24 hours. The majority of the consulting nutritionist (64%) suggested that cattle should be provided access to hay for 4 days after arrival. Approximately 56% of the nutritionists surveyed used multiple step-up diets with an average forage concentration of 40.7% roughage. On average, four transition diets were used with diets being fed for 6 days before moving to the next diet. Thus, cattle on average are transitioned to the finishing diet within 24 days of feeding the first step-up diet. Alternatively, approximately 40% of the nutritionists utilize a two-ration blending program to adapt cattle (effectively a starter and finisher diet). Those that used a two-ration program recommended 38% roughage in the starter ration and cattle adapted to the finishing diet within approximately 27 days.

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

↻ **Farm Manager - Dairy Unit (Job #512167)** - 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. This is a full-time, unclassified professional staff, term contract position. Review of applications begins: Immediately and continues until position is filled. For more information, contact Dr. Mike Brouk, Search Committee Chair, at 785-532-1207 or mbrouk@ksu.edu. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/512167/farm-manager>.

↻ **Animal Technician Supervisor -Dairy Unit (Job #511868)** - This position is critical to the overall operation of the KSU Dairy Teaching and Research Center (DTRC). 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 DTRC 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. This is a full-time, unclassified professional staff, term contract position. Review of applications begins: Immediately and continues until position is filled. For more information, contact Dr. Mike Brouk, Search Committee Chair, at 785-532-1207 or mbrouk@ksu.edu. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/511868/animal-technician-supervisor>.

WHAT'S NEW...

- ☞ **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 position is filled. For more information, contact Dr. Mike Brouk, Search Committee Chair, at 785-532-1207 or mbrouk@ksu.edu. To apply, go to <https://careers.pageuppeople.com/742/cw/en-us/job/510744/animal-technician-ii>.
- ☞ **Decreasing Corn Particle Size Increases Metabolizable Energy When Fed to Gestating Sows** - Previous research has demonstrated that reducing the particle size of corn improved metabolizable energy (ME) utilization in many phases of swine production. One phase that has had limited research thus far is the gestating phase for sows. The objectives of this paper were to determine the effects of corn particle size on the digestibility of gross energy (GE) and determine the digestible energy (DE) and ME in gestating sow diets. A total of 27 sows during the second phase of gestation (d 40 to 74) were chosen and fed a common diet with corn ground to 1 of 3 target average particle sizes (geometric mean diameter; dgw) of 400, 800, or 1200 μm . Corn was ground using a 3 high roller mill (RMS model 924). Titanium dioxide (0.25%) was included in the diet as an indigestible marker for index digestibility calculations. Sows were fed experimental diets for 7 d to allow for diet adaptation before a 2-d collection period. At the beginning of the collection period, sows were fitted with a urinary catheter and urine was collected in buckets containing 20 mL of sulfuric acid. Fecal grab samples were also collected from each sow during the collection period. Subsamples were taken, mixed, analyzed for GE, and titanium levels to determine digestibility of gross energy and to calculate DE and ME. The ME of corn was calculated by subtracting the ME of soybean meal (1,494 kcal/lb) and soybean oil (3,889 kcal/lb) from diet ME, utilizing the NRC 2012 values for those ingredients. Apparent total tract digestibility (ATTD) of GE and calculated DE, ME, and corn ME content increased as corn particle size was reduced from 1200 to 400 μm . The ME of the diet (88.5% DM) increased by 81 kcal/lb as the dgw was reduced from 1,200 to 400 μm . The calculated corn ME (88.5% DM) also increased by 103 kcal/lb as the dgw was reduced from 1,200 to 400 μm . Utilizing a linear regression model and the analyzed corn particle size data herein, it was determined that for every 100 μm reduction in corn dgw from 1,372 to 404 μm , the ME value of corn is increased by 10.7 kcal/lb. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Gage E. Nichols, Caitlin E. Evans, Julia P. Holen, Rachel N. Kort, Haley K. Wecker, Charles R. Stark, and Chad B. Paulk.)
- ☞ **Effects of Mat Feeding on the Growth Performance and Mortality of Pigs After Weaning** - Three experiments were conducted to determine the effect of different mat feeding strategies on the growth performance and morbidity and mortality of pigs after weaning. Upon arrival to the nursery facility, pigs were randomized to pen. A total of 96 pens (48 feeders) with 30 to 35 pigs/pen were used for each experiment, with one barrow pen and one gilt pen per feeder. Thus, feeder (2 pens) was the experimental unit. Feeders were then blocked by group (date of placement) and randomly allotted to treatment. In Exp. 1, treatments consisted of two feed management strategies; mat feeding vs. no mat feeding. Overall, a tendency was observed for ADG with mat fed pigs having poorer ADG compared to the control group, which resulted in decreased final body weights. No differences were observed in ADFI or feed efficiency. Mat fed pigs had reduced total removals compared to the control group. In Exp. 2, treatments were arranged in a 2 \times 2 factorial with main effects of diet form (pellet or crumble) and mat feeding (without or with). No interactions between diet form and mat feeding were observed. No differences were observed in overall growth performance for the main effect of mat feeding, but for diet form, pigs that received pelleted feed had decreased overall ADFI and improved feed efficiency. No differences were observed in total removals. In Exp. 3, treatments consisted of three feed management strategies: mat feeding small (1/8 in.) pellets, mat feeding large (1/2 in.) pellets, and no mat feeding. No differences were observed in overall ADG or feed efficiency; however, mat fed pigs had increased ADFI, regardless of pellet size. Although not statistically significant, mat feeding the small pellets reduced the total removal rate by 2.1 percentage points compared to the control group, and 1.2 percentage points compared to mat feeding the large pellets. When combining the removal and mortality data for the three experiments, mat fed pigs had fewer total removals compared to the control group. In summary, mat feeding has limited effects on the growth performance of pigs after weaning; however, mat feeding may encourage earlier feed intake, therefore reducing the morbidity and mortality rate of pigs. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Madie R. Wensley, Mike D. Tokach, Robert D. Goodband, Jordan T. Gebhardt, Jason C. Woodworth, Joel M. DeRouchey, Matt Allerson, and Mariana Menegat.)

WHAT'S NEW...

- ☞ **The Effect of Live Yeast and Yeast Extracts Included in Lactation Diets on Sow and Litter Performance** - A total of 80 sows across three farrowing groups were used in a study to evaluate the effect of feeding live yeast and yeast extracts to lactating sows on sow and litter performance. Sows were blocked by BW and parity on d 110 of gestation and allotted to 1 of 2 dietary treatments. Dietary treatments consisted of a standard corn-soybean meal lactation diet or a diet that contained yeast-based pre-and probiotics (0.10% Actisaf Sc 47 HR+ and 0.025% SafMannan). Diets were fed from d 110 of gestation until weaning (approximately d 19). A tendency was observed for increased feed intake from farrowing to weaning when sows were fed a diet with yeast additives compared to the control diet. There was no evidence that sow treatment influenced any other sow or litter performance criteria. In conclusion, feeding live yeast and yeast extracts tended to increase feed intake during lactation but did not influence other sow or litter performance measurements. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Jenna A. Chance, Jordan T. Gebhardt, Joel M. DeRouchey, Mike D. Tokach, Jason C. Woodworth, Robert D. Goodband, Joseph A. Loughmiller, and Brian Hotze.)
- ☞ **Effect of Calcium Carbonate Level with or without Benzoic Acid on Weanling Pig Growth Performance, Fecal Dry Matter, and Blood Calcium and Phosphorus Concentrations** - A total of 360 barrows were used in a 38-d study to evaluate the interactive effects of added dietary calcium carbonate and benzoic acid on nursery pig growth performance, fecal dry matter, and blood Ca and P concentration. Upon arrival to the nursery research facility, pigs were randomly assigned to pens (5 pigs per pen) and pens were allotted to 1 of 6 dietary treatments with 12 pens per treatment. Dietary treatments were formulated to provide 0.45, 0.90, or 1.35% calcium carbonate, with or without 0.5% benzoic acid. Diets were fed in three phases with phase 1 treatment diets (0.66, 0.83, or 1.00% Ca) fed from weaning (d 0) to d 10; phase 2 treatment diets (0.54, 0.72, or 0.89% Ca) fed from d 10 to 24; and a common phase 3 diet from d 24 to 38 (0.68% Ca). Standardized total tract P concentrations were formulated to 0.58, 0.51, and 0.47 in phases 1, 2, and 3, respectively. There were no calcium carbonate × benzoic acid interactions observed for any response criteria. From d 0 to 10 (phase 1), there was evidence for benzoic acid to marginally increase ADG and significantly increase ADFI. From d 10 to 24 (phase 2), F/G improved as the level of calcium carbonate decreased. For the overall experimental period (d 0 to 24), there was a tendency for benzoic acid to improve ADG and ADFI, as well as an improvement in F/G as calcium carbonate in the diet decreased. During the common period (d 24 to 38), pigs previously fed benzoic acid had increased ADG and marginally increased ADFI. For the overall study, pigs fed benzoic acid had increased ADG and ADFI and marginally improved F/G. For fecal DM, there was no observed evidence for differences among treatments. For serum analysis, serum Ca decreased as the level of dietary calcium carbonate decreased. These data suggests that lower levels of calcium carbonate may improve feed efficiency in the early nursery period. Also, nursery pigs fed benzoic acid had increased ADG and ADFI, and tended to have improved F/G. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Alan J. Warner, Joel M. DeRouchey, Mike D. Tokach, Jason C. Woodworth, Robert D. Goodband, and Jordan T. Gebhardt.)
- ☞ **Determining the Phosphorus Release of GraINzyme Phytase in Nursery Pigs** - A total of 360 pigs were used in a 21-d growth trial to determine the available P (aP) release curve for GraINzyme Phytase. Pigs were weaned at approximately 21 d of age, randomly allotted to pens based on initial BW and fed common starter diets. From d 18 to 21 post-weaning, all pigs were fed a diet containing 0.11% aP. On d 21 post-weaning, considered d 0 of the study, pens were blocked by BW and randomly allotted to 1 of 8 dietary treatments with 5 pigs per pen and 9 pens per treatment. Dietary treatments were formulated to include increasing aP derived from either an inorganic P source (0.11, 0.19, or 0.27% from monocalcium P) or increasing levels of phytase (150, 250, 500, 1,000, or 1,500 FTU/kg). Diets were corn-soybean meal-based and contained 1.24% standardized ileal digestible (SID) Lys. On d 21 of the trial, 1 pig per pen (weighing closest to the mean pen BW) was humanely euthanized and the right fibula was collected to determine bone ash using the non-defatted processing method. Overall (d 0 to 21), pigs fed increasing aP from inorganic P or phytase had improved ADG, ADFI, and F/G. Bone ash weight and percentage bone ash increased with increasing inorganic P or added phytase. Based on these results, the release equations developed for GraINzyme for ADG, G:F, bone ash weight, and percentage bone ash are: $aP = (0.255 \times FTU) \div (1299.969 + FTU)$; $aP = (0.233 \times FTU) \div (1236.428 + FTU)$; $aP = (45999.949 \times FTU) \div (462529200 + FTU)$; and $aP = (0.272 \times FTU) \div (2576.581 + FTU)$, respectively. More information is available on this experiment and others in the KSU Swine Day report at www.KSUSwine.org. (This study conducted by Larissa L. Becker, Madie R. Wensley, Joel M. DeRouchey, Jason C. Woodworth, Mike D. Tokach, Robert D. Goodband, Jordan T. Gebhardt, R. Michael Raab, and Philip A. Lessard.)

ASI FACULTY SPOTLIGHT...



Scott Schaake (simmi@k-state.edu; 785-532-1242)
Associate Professor/Beef Cattle Production and Management

Dr. Scott Schaake was raised on a cow-calf ranch/row crop operation near Lawrence, Kansas. He graduated from Kansas State University in 1984 with a B.S. in Animal Sciences and Industry. He earned his M.S. at Clemson University and Ph.D. at the University of Kentucky, specializing in Meat Science.

He served as the coach of the Kansas State Livestock Judging Team from 1992 to 2013, leading his teams to five consecutive national championships during his tenure. Dr. Schaake has judged livestock shows in 40 states, Canada, Mexico, and South America.

He and his wife, Kandi, live in Westmoreland, Kansas, where they manage more than 80 head of registered Simmental cattle. Their program utilizes an extensive AI and ET program designed around successful, proven cow families. They take pride in building their herd around cattle that are sound, functional, and display genetic excellence not only in the show ring, but most importantly when put in production. Sons Shane, his wife, Melissa, and Shilo remain actively involved in the growth of Schaake Farms and assist with the marketing of their genetics.



Jim Nelssen (jnelssen@k-state.edu; 785-532-1251)
Professor/Extension Specialist, Swine Nutrition and Management

Dr. Jim Nelssen is an extension specialist and swine nutritionist at Kansas State University. His current position is 41% Extension and 41% Research.

Dr. Nelssen grew up in Smith Center, Kansas, where he was active in 4-H and FFA. He received his B.S. in Animal Science (1978) and his M.S. in swine reproductive physiology (1980) from Kansas State University. He received his Ph.D. in Swine Nutrition from the University of Nebraska in 1983. Later that year Jim started his career at Kansas State University as an Assistant Professor and Extension Swine Specialist. He was promoted to associate professor in 1989 and a full professor in 1995.

Jim's focus is transferring information to swine producers and conducting practical nutrition research. Jim has presented invited seminars at over 190 animal and veterinary science meetings around the world in addition to numerous presentations to local producer groups. Jim has authored or co-authored 123 refereed journal papers, 320 abstracts, 492 extension publications, and 4 book chapters. In 2005, Jim was named one of the 50 people that have made the greatest impact on the swine industry in the last 50 years by the National Hog Farmer Magazine.

WHAT PRODUCERS SHOULD BE THINKING ABOUT

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN APRIL...

BEEF -- *Tips by Dale Blasi, Extension Beef Specialist*

Many producers should consider calving in this month. Stress is minimized and forage/grass management may be optimized.

- ☑ Keep calving areas as clean and dry as possible. Give each calf a dry, comfortable, and clean environment.
- ☑ Supplement and feed cows to maintain or improve body condition prior to the breeding season (cows should be in moderate body condition by the start of the breeding season to maximize fertility).
- ☑ For thin, young cows, consider feeding fat to improve rebreeding rates. Research indicates that when feeding about 0.4 lb. per head per day of a plant source (soybean, sunflower, safflower oils), fat can increase first-service conception and pregnancy rates (0% to 15%). Feeding fat can be effective both before and after calving. Consult your nutritionist.
- ☑ Mineral supplementation should include greater levels of magnesium (intake should be between 15 to 30 grams (g) per head per day, or at least 11% of the mineral mix) for grass tetany prevention.
- ☑ Plan your breeding season, both AI and natural service. Make sure all supplies and semen are on hand prior to the breeding season. For natural-service programs assign yearling bulls to 10-15 cows, 2- and 3-year-old bulls to 20-25 cows, and older bulls to 25-40 cows. Breeding for 65 days should be long enough; less than 90 days is a key sign of good management. Some suggest the service capacity of a yearling bull (less than 24 months) is equal to his age in months at turn out.
- ☑ Bulls should be in good body condition prior to the breeding season. Thin bulls can run out of stamina. Now is the time to make sure bulls are physically capable of performing for the upcoming summer breeding season.
- ☑ Breeding soundness examinations are recommended for all bulls!
- ☑ Consider using estrus synchronization and AI. Several synchronization systems to overcome anestrus are available. Selection depends on labor, facility, and implementation costs.
- ☑ Consider breeding heifers three weeks prior to the mature cow herd to give them a greater chance to rebreed.
- ☑ Maintain top management concerning calf scours (sanitary conditions, early detection, electrolyte/dehydration therapy).
- ☑ Vaccinate calves as per veterinarian consultation. Castrate males that are not candidates for breeding stock prior to pasture turnout. Implant calves that will be sold at weaning.
- ☑ Wait for fly control until critical numbers are reached (100 to 200 horn flies per animal).
- ☑ Deworm cows and bulls if needed. Expect performance response to be variable dependent on location, weather, grazing system, history, infestation level, and management.
- ☑ Use prescribed burning techniques to eradicate Eastern Red Cedar trees and improve forage quality.
- ☑ Good fences make good neighbors. Summer pastures should have had fences checked, repaired, or replaced by now.
- ☑ Check equipment (sprayers, dust bags, oilers, haying equipment) and repair or replace as needed. Have spare parts on hand; downtime can make a large difference in hay quality.

*We need your input! If you have any suggestions or comments on **News from KSU Animal Sciences**, please let us know by e-mail to lschrein@ksu.edu or phone 785-532-1267.*