



News from KSU Animal Sciences

- ↳ **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 spring shows, showmanship clinics, skillathons, field days, etc. These opportunities will be included on the youth livestock website. Information on the site is updated as 2020 opportunities are received from county offices.
- ↳ **Junior Beef Producer Day** is scheduled for Saturday, February 29, 2020, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of beef projects. K-State faculty members, graduate students and guest speakers will cover topics including selection, nutrition and feeding, meat science and alternative proteins, grooming and clipping, low stress cattle handling, the state livestock nomination process, herd health, reproduction, and showmanship. An optional instructor-led YQCA training will also be held at the conclusion of the program. The early-bird deadline has passed, but late registrations will be accepted at \$20/person. Those who register after the deadline also cannot be guaranteed a t-shirt. All attendees, including youth and adults, must register. Those who plan to attend the YQCA certification will need to register separately for that portion through www.yqca.org. Detailed instructions will be emailed to those families who indicate they plan to attend YQCA on their junior day registration materials. Youth may attend the optional YQCA session without participating in the junior day activities. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.
- ↳ The **50th Annual LMIC Stockmen's Dinner** will be held on Thursday, March 5, at the Four Points by Sheraton, 530 Richards Drive, Manhattan, KS. Dr. Patsy Houghton will be honored as Stockman of the Year. The social will begin at 6 pm with dinner to follow at 6:30 pm. To register online, go to www.asi.ksu.edu/stockmensdinner. For questions, contact Lois at lschrein@ksu.edu or 785-532-1267.





Make plans to attend Cattlemen's Day 2020 – The 107th annual Cattlemen's Day will be hosted Friday, March 6, 2020. The trade show and educational exhibits will open at 8 a.m. in Weber Arena. The schedule includes:

- 8 a.m. Commercial Trade Show (Weber Arena)
10 a.m. Morning Presentations:
Welcome
Mike Day, Department Head, ASI
Ernie Minton, KSU College of Ag Dean
Genetic and Reproductive Trends in the Global Beef Industry
Lorna Marshall, Select Sires, Vice President of Beef Programs
Opportunities for the Beef Industry in Dynamic Global Meat Markets
Derrell Peel, Oklahoma State University Extension Livestock Marketing Specialist
- 12 noon Lunch (compliments of US Premium Beef and Commercial Trade Show exhibitors)
Visit Trade Show
Afternoon Break-out Sessions:
Weber Hall Room 123
1 p.m. Factors Influencing Sale Prices of Calves – *Ken Odde, Karol Fike and Esther McCabe, KSU*
2 p.m. *Repeat Session*
Weber Hall Room 111
1 p.m. Update on Insemination Timing with Sexed Semen, Split-Time AI and Embryonic Loss – *Sandy Johnson and David Grieger, KSU*
2 p.m. Question and Answer Session: All Things Reproduction
Weber Hall Room 146
1 p.m. Current Changes in the Mexican Meat Industry and the Impact of Mexico's New Beef Quality Grading System – *Francisco Najar-Villarreal, KSU*
2 p.m. *Repeat Session*
Purebred Beef Unit, 2200 Denison Avenue
1:15 p.m. Calving School: Tools, Timeframes, Intervention Tips – *A.J. Tarpoff, KSU*
1:15 p.m. Where Ruminant Digestion Begins – *K-State Veterinary Health Center staff*
Beef Stocker Unit, 4330 Marlatt Avenue
1:15 p.m. Forage Sampling and Analysis 101 – *Justin Waggoner, KSU*
2:15 p.m. Stocker Unit Tour

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. A complete schedule will be coming soon to www.asi.ksu.edu/cattlemensday or call 785-532-1267.

If you are interested in exhibiting at Cattlemen's Day or have any questions, please contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).



The **43rd Annual Legacy Bull and Heifer Sale** will be March 6, 2020, at 4 p.m. at the Stanley Stout Center. The sale will include 40 feed-efficiency tested bulls: 20 Angus, 10 Simmental and 10 Hereford; 1 Elite Simmental Heifer; 15 Fall-Bred Cows; 21 Commercial Heifers; and 3 AQHA Ranch Performance Horses. Visit www.asi.ksu.edu/bullsale for more information, including the sale catalog.



The **Junior Sheep Producer Day** will be hosted on Saturday, March 14, 2020, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth sheep projects. All ages and knowledge levels are invited! K-State faculty members, graduate students, and guest speakers will cover topics including selection, nutrition, the state nomination process, flock management, herd health, facilities and equipment, clipping, and showmanship. An optional instructor-led YQCA training will also be held at the conclusion of the program. The cost for junior sheep producer day is \$15 per person, if registration is submitted by February 21, 2020, or \$20 per person after the early deadline. All attendees, including youth and adults, must register. All participants who sign up by February 21 will also receive a t-shirt. Families may register online at <http://bit.ly/ksuasiregister> or by downloading the flyer (<http://bit.ly/ksuirproducerdays>), completing the bottom portion of the flyer and mailing it, with payment, to the KSU Youth Livestock Program. Those who plan to attend the YQCA certification will need to register separately for that portion through www.yqca.org. Detailed instructions will be emailed to those families who indicate they plan to attend YQCA on their junior day registration materials. Youth may attend the optional YQCA session without participating in the junior day activities. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.



KSU Sheep Producer Day will be held on Saturday, March 21, 2020, from 8:00 am – 3:30 pm at the Stanley Stout Center. Featured speakers include Dr. Christopher Schauer, Shane Tiffany, Dr. Maggie Highland, and Tamra Kott. The day will include a tour of Benz Rambouillet. Registration includes lunch, speakers and the tour. Advance registration is \$15 for KSA members and \$25 for non-members. At the door registration fee is \$20 for KSA members and \$30 for non-members. For more information, visit www.asi.k-state.edu/research-and-extension/sheep-and-goats/ or contact Alison Crane (arcrane@ksu.edu; 785-532-1672).



Livestock County Fair Management Clinics are scheduled for April 7 and 8. Every other year, K-State Research and Extension and the Department of Animal Sciences and Industry host a Livestock Fair Management Clinic for county fair board members, extension agents, and other adult volunteers involved in local livestock fair management and leadership. This professional development opportunity provides a forum for open communication for individuals with local livestock fairs across Kansas. There will be two different locations on two different days with the same general agenda. Tuesday, April 7, will be the first session at the Sedgwick County Extension Office in Wichita. The second session will be held on Wednesday, April 8, at the Logan County Fairgrounds in Oakley. Lunch and refreshments will be provided. The registration fee is \$15/person and is due by March 27. Checks can be made payable to "KSU-ASI" and mailed to Livestock Fair Management Clinic, Attn: Lexie Hayes, 214 Weber Hall, KSU, Manhattan, KS 66506. For a registration form and a detailed agenda, please visit the website, www.YouthLivestock.KSU.edu. Information is linked to the event on the calendar at the top of the page. If you have any questions, please contact Lexie Hayes at 785-532-1264 or adhayes@ksu.edu or Joel DeRouchey at 785-532-2280 or jderouch@ksu.edu.



K-State Animal Sciences Leadership Academy - Kansas State University will host the K-State Animal Sciences Leadership Academy on June 24-27, 2020, for young livestock industry leaders. This four-day event will focus on increasing young leaders' knowledge of Kansas' diverse livestock industry, as well as building participants' leadership skills. Students will stay in university housing with event staff for the duration of the event.

The program's itinerary will feature interactive workshops, tours and faculty mentor time with animal sciences and industry professors. Industry leaders will also join the participants frequently to share their knowledge and expertise. Throughout the week, participants will work in teams to evaluate current events within the animal science industry and educate others. This experience will culminate with team presentations and a closing reception on Saturday morning.

Twenty high school students (current 9th-12th graders) will be selected to participate. The application deadline is April 15, 2020. Application forms are available at www.asi.k-state.edu/research-and-extension/youth-programs/k-state-animal-science-leadership-academy/. For more information, please contact academy director, Sharon Breiner at sbreiner@ksu.edu.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
February 27, 2020	KSU Winter Ranch Management Workshop	Yates Center, KS
February 29, 2020	Kansas Junior Beef Producer Day	Manhattan
March 5, 2020	LMIC Stockmen's Dinner	Manhattan
March 6, 2020	KSU Cattlemen's Day	Manhattan
March 6, 2020	Legacy Bull and Heifer Sale	Manhattan
March 14, 2020	Kansas Junior Sheep Producer Day	Manhattan
March 21, 2020	KSU Sheep Day	Manhattan
April 7, 2020	Livestock County Fair Management Clinic	Wichita, KS
April 8, 2020	Livestock County Fair Management Clinic	Oakley, KS
April 15, 2020	Applications due for K-State Animal Sciences Leadership Academy	

What's New.....

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

"Failure"

Leadership and management are evaluated by an organization or operation's successes. However, the path to success often involves failure. Everyone hates to fail. However, failure is an excellent teacher and the simple truth is that we learn more from our failures than we do our successes. One of the traits many successful people possess is that they did not let fear of failure exceed their desire to succeed. History is full of leaders who were quite familiar with failure. However, when they made a mistake, they learned from it, moved on and didn't let it happen again. Additionally, great leaders in the business world recognize that department or unit managers don't always succeed and that failure is an unfortunate, but necessary component of empowering and cultivating good managers within the organization.

"Winners are not afraid of losing. But losers are. Failure is part of the process of success. People who avoid failure also avoid success." - Robert Kiyosaki, author of "Rich Dad, Poor Dad"

"I have not failed. I've just found 10,000 ways that won't work." - Thomas Edison, inventor of the light bulb

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

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

"Cow Nutrition: Protein, Energy and Forage Availability"

Protein supplementation is important, but there is more to cow nutrition than simply ensuring that the cow's protein requirements are met and that we have supplied the rumen microbes with sufficient nitrogen to digest the low-quality forages that sustain our cows through the winter months. Most cattle producers know and appreciate the value of protein supplementation, but often overlook energy. Although, protein supplementation does impact energy status by enhancing digestibility and intake of low-quality forages.

The benefits of protein supplementation are not fully realized by the cow if forage availability (supply) is limited. Both protein and energy requirements steadily increase during gestation and post-calving. Thus, there are many production scenarios, where both protein and energy may become limiting or where energy becomes more limiting than protein, minerals or vitamins.

I have found that producers often attribute negative production outcomes, such as higher percentage of open cows, with their previous protein supplementation protocols or mineral and vitamin deficiencies. Protein, minerals and vitamins are important components of cow nutrition, but in many cases energy deficiency may be the more likely cause. Energy status of grazing beef cows is essentially a function of forage availability in most situations.

The most basic way to think about forage availability is to ask yourself "Does each cow have all she can eat in the pasture or field?" If the answer to that question is "No" then energy is likely the most limiting factor in your production system. There are many ways to address situations where energy has become limiting. Feeding hay to replace grazed forage, moving to a new pasture or field of stalks or feeding combination supplements that provide both protein and energy are all strategies that may be used to increase energy status.

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



Assistant/Associate Professor, Meat Science position open - The Department of Animal Sciences and Industry within Kansas State University's College of Agriculture is seeking applications for a 12-month, tenure-track position (70% Research, 30% Teaching). The position will be at the rank of Assistant or Associate Professor and located in Manhattan, KS (job #508698). The successful individual will be expected to develop a nationally-recognized, externally funded research program in meat science. Applicants with research interests and expertise that target discoveries with the potential to be translated to improve meat quality are preferred. Participation in interdisciplinary efforts to enhance the Department's research in focus areas including nutrition, breeding and genetics, reproductive physiology, food science and others is strongly encouraged. Opportunities exist to form multidisciplinary groups with faculty in Veterinary Medicine, Biology, Biochemistry and others. Teaching and mentoring responsibilities would be consistent with the successful individual's expertise, interests and needs of the Department. It is expected that the successful individual develops a dynamic graduate training program. The application deadline is March 9, 2020. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508698/assistantassociate-professor>. For more information, contact Dr. Liz Boyle, Search Committee Chair, at 785-532-1247 or lboyle@k-state.edu.



Agricultural Technician II position open - The Department of Animal Sciences and Industry within Kansas State University's College of Agriculture is seeking applications for a full-time, University Support Staff (USS) position (job no. 508825). This position is key to the agricultural planning of crop planting and harvesting to utilize the land and resources that we have as a department to meet the needs of our Animal Units during the year. This position is vital in supporting mechanical experience to all of our units to keep machinery up and running on a daily basis. The incumbent will have other duties as assigned including but not limited to all related livestock and general farming jobs, grounds maintenance, departmental functions such as field days, clinics, and seminars and maintaining necessary records and reports. Must be neat and able to work with staff, students, producers, and departmental clientele. Screening begins immediately and continues until a suitable candidate is identified. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508825/agricultural-technician-ii>. For more information, contact Bob Heptig, Search Committee Chair, at 785-256-5420 or bobheptig@k-state.edu.



Office Specialist II position open – Kansas State University Animal Sciences and Industry is looking for an Office Specialist II. This is a full-time, unclassified, benefits eligible position (job no 508666). This position provides clerical support of teaching, research, and extension faculty in Weber Hall. This position will be responsible for the Animal Sciences and Industry Testing Center and all mailroom responsibilities on a daily basis. This person will help with departmental schedules, events, and other faculty itineraries. This position will assist with marketing and communications projects, including but not limited to web page updates and newsletters, etc. This person will maintain the daily calendar for the Extension vehicle reservations. This position will also make sure that maintenance and cleaning are done on the vehicles. The incumbent will order and maintain inventory of supplies for the Department. Screening of applications will begin February 4, 2020, and will continue until a suitable candidate is identified. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508666/office-specialist-ii>. For more information, contact Dr. Joel DeRouchey, Search Committee Chair, at 785-532-2280 or iderouch@k-state.edu.



Effects of Weaning Age and Antibiotic Use on Pig Performance in a Commercial System - A total of 2,184 barrows and gilts were used in a study from weaning to market to evaluate the effect of increasing weaning age and antibiotic use on pig performance in a commercial production system. A 3×2 factorial arrangement was used. The treatments included weaning age (18.5, 21.5, or 24.5 days of age) and the use of antibiotic (AB) or antibiotic free (ABF). There were 14 replicate pens per treatment and 26 pigs per pen (13 barrows and 13 gilts). Pigs were weaned from a 4,000-sow farm and placed in pens by weaning age with pens randomly assigned to AB or ABF. Pigs assigned to AB had access to a diet containing 400 ppm of chlortetracycline (CTC) from d 8 to 21 post-weaning, and after a porcine respiratory and reproductive syndrome (PRRS) outbreak at week 7 post-weaning, they were medicated via drinking water for five consecutive days with CTC (10 mg/lb of body weight (BW) per day). For the first 42 days post-weaning, increasing weaning age reduced the number of pigs treated with injectable antibiotic, but AB use did not influence this variable. Each additional day of weaning age resulted in greater BW at weaning and at 197 days of age with slopes of 0.484 lb and 1.485 lb, respectively. From weaning to 197 days of age, increasing weaning age increased average daily gain (0.02 lb/day of weaning age) and the same effect was found for AB (0.03 lb/d). Weaning age and AB also affected average daily feed intake (0.03 lb/day of increase in weaning age and 0.08 lb/d, respectively). An interaction was found for feed efficiency. When AB were fed, pigs weaned at 21.5 and 24.5 d were less efficient. However, AB improved feed efficiency of pigs weaned at 18.5 d. Pigs with access to AB in feed and water had lower total losses (2.7% less mortality + removal). Increasing weaning age also marginally decreased total losses (-0.21% per day increase in weaning age). The weight sold (at 197 d of age) per pig weaned was increased by increasing weaning age (an additional 1.55 lb for each day increase in weaning age) and by using AB in feed and water (an addition of 10.1 lb/pig).

Bottom Line... In summary, increasing weaning age linearly improved pig performance and relatively short-term use of antibiotics reduced mortality and removals. In addition, both factors contributed to maximizing the weight sold per pig weaned. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J.E.G. Faccin, M.W. Allerson, J.C. Woodworth, J.M. DeRouchey, M.D. Tokach, S.S. Dritz, and R.D. Goodband)



Effects of Soybean Meal Level on Growth Performance of 25- to 50-lb Nursery Pigs - Four experiments were conducted to determine the effects of increasing soybean meal (SBM) level in diets with or without 25% distillers dried grains with solubles (DDGS) on growth performance of nursery pigs raised in university or commercial facilities. Treatments were arranged in a 2×3 factorial with main effects of SBM (27.5, 32.5, or 37.5% of the diet) and DDGS (0 or 25% of the diet). A total of 296, 2,502, 4,118, and 711 pigs initially 23.2, 25.7, 27.5, and 27.1 lb body weight (BW) were used in Exp. 1, 2, 3, and 4, respectively. There were 10, 16, 13, and 12 replicates per treatment in Exp. 1, 2, 3, and 4, respectively. After weaning, pigs were fed common diets for approximately 21 d. Then, pens of pigs were assigned to treatments in a randomized complete block design with BW as the blocking factor and experimental diets were fed for 21 d. Pigs were weighed and feed disappearance measured to calculate average daily gain (ADG), average daily feed intake (ADFI), feed-to-gain ratio (F/G), and caloric efficiency (CE). Pigs used in all experiments did not undergo major health challenges during the experimental period and due to the low number of mortality and cull events, statistical analysis was not performed on these variables. The average cull rate was 0.7, 0.5, 0.2, and 0% and the mortality rate was 0.7, 0.3, 0.4, and 0% in Exp. 1 to 4, respectively. There were interactions between SBM and DDGS for F/G and CE in Exp. 2 and for ADG and ADFI in Exp. 3. These were mostly driven by increasing SBM negatively affecting performance in a greater magnitude when diets contained DDGS compared to diets without DDGS. The main effects of DDGS and SBM were more consistently observed across experiments. Pigs fed diets with 25% DDGS had decreased ADG and ADFI in all experiments as well as poorer F/G and CE except for Exp. 3.

Bottom Line... Feeding increasing amounts of SBM generally did not result in any major impact in ADG, but consistently improved F/G and CE across experiments. The mechanism for this response is unclear but could be driven by intrinsic components of SBM, such as isoflavones, or by underestimation of SBM energy value. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by H.S. Cemin, M.D. Tokach, S.S. Dritz, J.C. Woodworth, J.M. DeRouchey, and R.D. Goodband)



Determining the Effects of Manganese Source and Level on Growth Performance, Carcass Characteristics, and Economics of Growing-Finishing Pigs - A total of 1,944 mixed sex growing-finishing pigs were used in a 107-d growth trial to determine the effects of increasing levels of two different manganese sources on the performance of growing-finishing pigs from 76 to 295 lb. Pens were assigned to one of six treatments in a randomized complete block design with initial weight as a blocking factor. There were 12 replicate pens per treatment and 27 pigs per pen. The experimental diets were corn-soybean meal-based and were fed in 4 phases. The six dietary treatments were arranged in a 2×3 factorial with main effects of Mn source, (MnSO₄ or Mn hydroxychloride: IBM), and 3 added Mn concentrations (8, 16, or 32 ppm). The trace mineral premix was formulated to contain no added Mn. There were no Mn source \times level interactions observed for any of the individual dietary phases. For the overall period (d 0 to 107), there was a Mn source \times level interaction for feed efficiency (F/G), with F/G improving for the lowest and highest level of Mn supplementation from IntelliBond M (IBM) whereas F/G tended to improve with increasing Mn from MnSO₄. For the main effect of level, the intermediate dietary level of Mn had the poorest average daily gain (ADG) in phases 1 and 4, which resulted in the poorest overall ADG and final body weight (BW). There was no evidence for differences in pigs fed either Mn source for ADG or ADFI. There was a tendency for Mn source \times level interaction for carcass yield, where yield did not change by added MnSO₄, but increased then decreased for pigs fed diets with IBM. Loin depth increased for pigs fed increasing amounts of Mn from MnSO₄ but decreased when Mn was increased from IBM. Pigs fed the intermediate level of Mn also had the lightest HCW and decreased loin depth. No differences were observed in economics except for revenue being the lowest for pigs fed the intermediate level of Mn. No evidence of difference was observed for Mn source \times level interactions on the concentration of Cu, Mn, and Zn in the liver. Manganese concentration increased as added Mn increased and liver Mn tended to be greater when Mn was supplied by MnSO₄ compared to IBM. There was no evidence of difference for Mn source or level influence on liver Cu and Zn concentrations.

Bottom Line... In conclusion, these data suggest little difference among Mn sources but did show improvements in growth performance for dietary levels of 8 and 32 ppm of Mn compared with 16 ppm. Further research is needed to understand why pigs fed the intermediate level of Mn had decreased ADG. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by H.R. Kerkaert, J.C. Woodworth, J.M. DeRouchey, S.S. Dritz, M.D. Tokach, and R.D. Goodband)

ASI Faculty Spotlight



Joel DeRouchey (iderouch@k-state.edu; 785-532-2280) **Professor/State Extension Leader/Swine Nutrition**

Dr. Joel DeRouchey grew up on a diversified purebred swine, cattle and sheep operation in Pukwana, S.D. He graduated with his bachelor's in Animal Science from South Dakota State University in 1997 and his M.S. (1999) and Ph.D. (2001) in Swine Nutrition from Kansas State University. He was hired in 2001 as the Northeast Livestock Extension Specialist for Kansas State University. In 2004, Joel moved to the Department of Animal Sciences and Industry as a Livestock Nutrition and Environmental Management Specialist with an Extension, Research, and Teaching appointment. Currently, he is a full professor and has an Extension and Research appointment and serves as the Extension Coordinator for Animal Sciences.

Joel is the faculty coordinator for ASI 890 and ASI 990 Graduate Student Monogastric Seminar, and is a guest lecturer in other Animal Science classes. He formerly taught ASI 320 Principles of Feeding. Joel works with a productive applied

swine nutrition team that maintains approximately 12 MS and PhD students. He has co-authored 203 refereed journal papers, 454 abstracts and 653 extension publications and field day reports and a co-advisor or active committee member for 75 MS and PhD graduate programs. In 2018 Joel was named the National ASAS Outstanding Extension Specialist and received the North Central Region Excellence in 4-H Volunteerism Award. He was also recognized in 2010 by South Dakota State University as a Distinguished Young Alumni. Joel and his wife, Julene, have three children — James, Jenna and Jacob. They enjoy K-State football tailgating, 4-H activities, youth livestock exhibitions and currently live on a small farm near Wamego, KS.



Jason Woodworth (jwoodworth@k-state.edu; 785-532-1157) **Associate Research Professor/Swine**

Dr. Jason Woodworth was raised in Sterling, Kansas, on a diversified crop farm. In 1997, Jason completed his B.S Animal Science degree at KSU and during his undergraduate career he worked and lived at the KSU Swine Unit. Jason went on to complete his swine nutrition M.S. and Ph.D. degrees at KSU with his research emphasis related to the vitamin and mineral requirements of nursery pigs and sows.

After completing his degrees, Jason joined Lonza, which was the same company that funded his Ph.D. In his 11+ year tenure at Lonza, Jason's responsibilities transitioned from being the NAFTA Technical Sales & Service Manager, to the NAFTA Business Manager, and finally to the Global Product Manager for some of Lonza's specialty feed ingredients. In this capacity, Jason was responsible for the global research & development initiatives of Lonza's animal nutrition portfolio for all production and companion animal species. Furthermore, he had the global profit/loss responsibility for Lonza's Feed L-Carnitine-based portfolio and spent about 50% of his time traveling internationally to develop the global business.

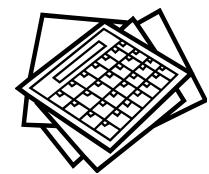
In June of 2013, Jason re-joined the Applied Swine Nutrition team at KSU and is currently a Research Professor. In this role, Jason contributes to the research objectives of the team and helps with graduate student mentorship and development. Jason serves as the faculty manager of the KSU Swine Teaching and Research Center, KSU early-weaned pig facility, Swine Lab and ASI Analytical Lab. During his tenure at KSU, Jason has been the PI on 69 grants that have generated more than \$3 million in funding and resulted in 144 peer-reviewed journal publications.

Jason lives in Enterprise, KS, with his wife, Brooke, and two sons, Jensen and Carson, where they spend their time at youth sporting and music events, 4-H activities, and on their Angus farm.

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.