



News from KSU Animal Sciences

UPCOMING EVENTS...

➤ **KSU Sheep Producer Day** will be Saturday, March 23, 2019, at the Stanley Stout Center, 2200 Denison Avenue, Manhattan, KS. The day will begin with a tour of Shannon Creek Lamb, Olsburg, KS. Vans will leave at 8:15 a.m. from the Stout Center. The day will continue with body condition scoring, FAMACHA and a trapping/snaring clinic hosted at the KSU Sheep and Meat Goat Center presented by Dr. Emily Reppert, KSU Veterinary School; Dr. Alison Crane, KSU sheep and meat goat specialist; and Charlie Lee, KSU wildlife specialist.

Lunch will be provided and served at the Stanley Stout Center. The afternoon program will include presentations by Mike Wallace, retired US-MARC manager; Lesa Eidman, Superior Farms; and Emily Voris, Kansas Department of Ag.

A trade show will be held throughout the day. Pre-registration is \$15 for KSA members and \$25 for non-members if received by March 11. Registration at the door is \$20 for members and \$25 for non-members. Lunch is provided with all registrations. If interested in sponsoring or for more information, contact Lois Schreiner (lschrein@ksu.edu; 785-532-1267) or Alison Crane (arcrane@ksu.edu; 785-532-1672).

➤ Inaugural **Livestock Field Day to be Held in North Central Kansas** - Make plans to attend the first-ever Stock Growers Field Day on Tuesday, March 26, 2019. The event will be highlighted by a market outlook from CattleFax and by a presentation on increasing production efficiency from the well-known reproductive physiologist, Dr. Rick Funston. The field day, hosted in Beloit, Kansas, at the Mitchell County Fair Grounds, will be a collaboration from K-State Research and Extension, the Kansas Livestock Association, and the Kansas Bull Test.

In addition to the speakers, the program will offer breakout sessions where attendees can pick and choose which topics apply to them. Topics discussed may include a producer panel on cover crop grazing, a session on livestock watering considerations for the upcoming summer grazing season, and more. More than 30 agricultural businesses will be on hand in the trade show and bulls from the Kansas Bull Test will be available for viewing throughout the afternoon.

Cost to attend the meeting is \$15, which includes an evening meal and a copy of the field day proceedings. This event has been generously sponsored by Merck Animal Health, Anipro / Xtraformance Feeds, Guaranty State Bank, and Rawhide Portable Corral. Registrations can be mailed to: Post Rock Extension District, 307 N Commercial, Mankato, KS 66956. Please write "Stock Growers Field Day - Registration" in the memo line. Further questions can be directed to Barrett Simon at 785-378-3174 or barrett8@ksu.edu.

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- ↪ **Junior Meat Goat Producer Day** will be hosted on Saturday, March 30, 2019, in Weber Arena on the K-State campus in Manhattan. This one-day educational event is devoted to the selection and management of youth meat goat projects. All ages and knowledge levels are invited! K-State faculty members, graduate students, and guest speakers will cover topics including selection, meat science, nutrition, the state nomination process, herd health, reproduction, health and wellness, facilities and equipment, and showmanship. An optional instructor-led YQCA session will also be held at the conclusion of the program. The early registration deadline was March 11, 2019. Families may continue registering online at <http://bit.ly/ksuasiregister>, but they will not be guaranteed a t-shirt. All attendees, including youth and adults, need to register. Those who indicate they would like to participate in the optional YQCA certification will receive additional details and instructions via email in late March. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.
- ↪ The **Kansas State University All Campus Open House** will be held Saturday, April 6, 2019. The Department of Animal Sciences and Industry, including the Food Science Institute, will host several activities during the event. The Little American Royal (LAR) will take place at Weber Hall. The public is welcome to watch the LAR show that begins at 12:30 p.m. in Weber Arena. Different ASI organizations will be hosting activities throughout Weber and Call Hall. Plan to attend these educational activities. For more information, visit ASI.k-state.edu.
- ↪ **K-State Animal Sciences Leadership Academy** - Kansas State University will host the K-State Animal Sciences Leadership Academy June 5-8, 2019, 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 participant's leadership skills. Students will stay in university housing with event staff for the duration of the event. Twenty high school students (current 9th-12th graders) will be selected to participate. The application deadline is April 1, 2019. For more information and forms, visit <https://www.asi.k-state.edu/research-and-extension/youth-programs/k-state-animal-science-leadership-academy/> or contact academy director, Sharon Breiner at sbreiner@ksu.edu.
- ↪ A **Sheep Scanning Certification School** will be hosted April 10-12, 2019, at the KSU Sheep and Meat Goat Center, Manhattan, KS. Kansas State University Animal Sciences and Industry and KSU Research and Extension, through sponsorship by the National Sheep Industry Improvement Center, are hosting this sheep scanning educational and certification school to increase the number of trained technicians available to sheep producers. Participants will receive educational material on sheep scanning and be shown methods of collecting loin-eye area and depth, back fat, and body wall thickness. Participants also will have the opportunity to become certified to collect ultrasound data for submission to the National Sheep Improvement Program. The registration fee is \$200 and the school will be limited to 20 students. For more information, contact Alison Crane at 785-532-1672; arcrane@ksu.edu.
- ↪ **State Livestock Nomination Season Approaching** - The state livestock nomination season is rapidly approaching! The 2019 materials have been distributed to counties and are posted on the KSU Youth Livestock website, under the "Nomination Information" tab (<http://bit.ly/ksunominations>). Market Beef nominations will be due on May 1, 2019. All other species, which includes commercial heifers, market swine, commercial gilts, market lambs, commercial ewes, and ALL meat goats, will be due June 15, 2019. Please remember there is not a registered breeding doe show at either state show, so all meat goats must be nominated to be eligible. The nomination deadlines are firm postmark deadlines. Any nomination envelope or package received must have a visible postmark prior to the deadline, or it will not be accepted. It is also important to note that June 15 is a Saturday this year, so families should be cautious in waiting until the deadline to submit their nominations. Certified mail is highly encouraged. Families are also encouraged to use the check list provided for each specie to make sure their nominations are complete. Incomplete or incorrect nominations will be returned to the family and cost \$20 to correct. For more information, please contact Lexie Hayes (adhayes@ksu.edu or 785-532-1264).
- ↪ The 2019 **Kansas Wildlife Habitat Education Program (WHEP) Contest** for Kansas youth will be hosted Thursday, May 2, in Manhattan. The ecoregion for contestants to study is Great Plains Grassland – Tallgrass/Mixed Prairie, which can be found in the WHEP manual online at <https://www.whep.org/national-whep-manual/>. For more information, contact Charlie Lee (clee@k-state.edu or 785-532-5734).

- ↳ Plan to attend the **42nd Annual Midwest Meat Processing Workshop** on May 3, 2019, at K-State. Join us at the workshop to see, hear, taste and ask questions as state award winners share their expertise and demonstrate the manufacturing techniques used to make award winning products. Mark your calendar and watch for more details coming soon. For more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).
- ↳ **Developing and Implementing a HACCP Plan for Meat and Poultry Workshop** will be June 11-13, 2019, in Weber Hall, Kansas State University, Manhattan, KS. This three-day workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors and is led by an International HACCP Alliance Lead Instructor. For more information, contact Dr. Liz Boyle (lboyle@ksu.edu; 785-532-1247).
- ↳ The **first annual Poultry Days and Pullet Sale** will be held on June 29, 2019. The events will be located at Stanley Stout Center, 2200 Denison Avenue, Manhattan KS. The Poultry Days Events will include a presentation on "How to Manage Your New Pullets" at 11:30 AM, followed by an omelet lunch at noon. After lunch, there will be presentation on "Health Care for Small Flocks" at 1:30 PM. Dr. Scott Beyer, KSU Extension Poultry Specialist, will be there to help with all your questions about keeping small poultry flocks. The events are open to all poultry keeping enthusiasts. No purchase of pullets is required to attend the workshop. There are no charges for the Poultry Days presentations or lunch; however, reservations are required by using the online form at: <https://www.asi.ksu.edu/pulletsale>. Forms may be emailed to poultry@ksu.edu. Reservations may also be made by contacting Kevin Snell at 785-532-1281.
- ↳ During Poultry Day, KSU students will also be holding their **Annual Pullet Sale**. Egg-type pullets raised by the students may be picked up from 9 AM to 3 PM, June 29 at the Stanley Stout Center. KSU students have raised these pullets for spring class projects and they will be ready-to-lay (16-17 weeks old) and fully vaccinated. Our brown birds are great yard birds, tame and friendly but will lay more brown shelled eggs. They are a hybrid type that will look similar to a New Hampshire Red. We also have a white feathered, white egg shell type hybrid, a bit smaller and less friendly, but will produce the most eggs possible on the least amount of feed. We will have a limited supply on a first come, first sold basis. A description of the bird types and prices can be found at <https://www.asi.ksu.edu/pulletsale>. All pullets must be pre-ordered. For questions about the pullet sale, email poultry@ksu.edu or call the farm at (785)539-5041.
- ↳ **Local Youth Livestock Opportunities** - Any county that has a youth livestock educational opportunity open to Kansas youth 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.

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
March 23, 2019	KSU Sheep Producer Day	Manhattan
March 26, 2019	Livestock Field Day	Beloit
March 30, 2019	Junior Meat Goat Producer Day	Manhattan
April 1, 2019	Application Deadline for K-State Animal Sciences Leadership Academy	
April 10-12, 2019	Sheep Scanning Certification School	Manhattan
May 1, 2019	Market Beef Nominations due	
May 2, 2019	Wildlife Habitat Education Program Contest	Manhattan
May 3, 2019	Midwest Meat Processing Workshop	Manhattan
June 11-13, 2019	HACCP Plan for Meat and Poultry Workshop	Manhattan
June 15, 2019	Small livestock nominations due (includes commercial heifers, market swine, commercial gilts, market lambs, commercial ewes, and meat goats)	
June 29, 2019	KSU Poultry Days and Pullet Sale	Manhattan
August 24-25, 2019	Kansas 4-H Livestock Sweepstakes	Manhattan

WHAT'S NEW.....

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

“Leadership”

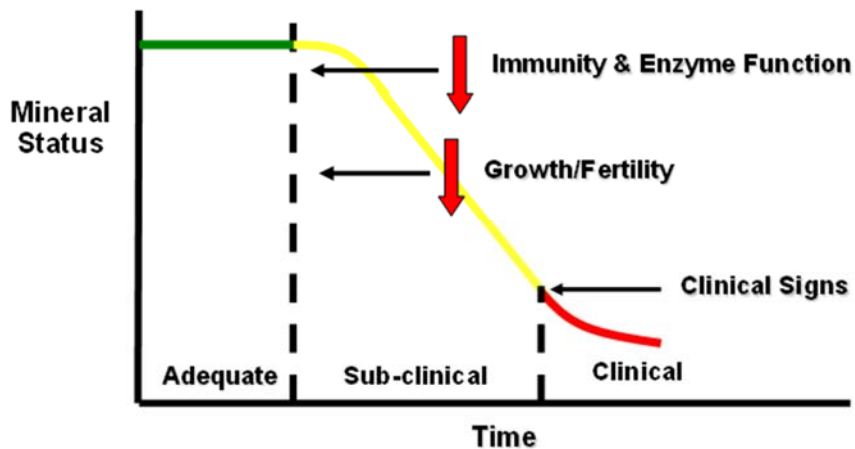
What is leadership? And what makes a leader effective? The term leadership is simply defined as “the action of leading a group of people or an organization” or the “ability to lead other people.” History has given us a number of examples of excellent leaders who have motivated groups or organizations to accomplish tremendous acts against overwhelming odds. Pick one. Any leader of your choice. What made this individual a great leader? Could we concisely come up with a list of traits or characteristics that made this individual an excellent leader? Now pick another. Do your two leaders have anything in common? What made these leaders effective? Although leadership has been the focus of tremendous study and numerous books, we still do not understand it. However, I would contend that the one thing all great leaders share is that they helped those they were leading get better and accomplish bigger things than those individuals thought was possible. As a leader, “What are you doing to help your people get better at what they do?”

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

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

“The Basics of Mineral Nutrition”

Beef cattle producers recognize that mineral nutrition is important. However, a mineral program is only one component of an operation's nutrition and management plan. An exceptional mineral program will not compensate for deficiencies in energy, protein or management. Additionally, the classic signs associated with clinical deficiency (wasting, hair loss, discoloration of hair coat, diarrhea, bone abnormalities, etc.) are not often or are rarely observed in production settings. The production and economic losses attributed to mineral nutrition in many situations are the result of sub-clinical deficiencies, toxicities and antagonisms between minerals which are often less obvious (reduced immune function, vaccine response, and sub-optimal fertility). The figure below, adapted from Wikse (1992), illustrates the effect of trace mineral deficiency on health and performance and the margin between adequate mineral status and clinical deficiency.



Seventeen minerals are required in the diets of beef cattle. However, no requirements have been established for several minerals that are considered essential (Chlorine, Chromium, Molybdenum, and Nickel). Minerals may be broken down into two categories. 1. The macrominerals whose requirements are expressed as a percent of the total diet (calcium, phosphorous, magnesium, potassium, sodium, chlorine and sulfur). 2. The microminerals or trace minerals (required in trace amounts) whose requirements are expressed as parts per million (ppm) or milligrams per kilogram of dry matter consumed (chromium, cobalt, copper, iodine, iron, manganese, molybdenum, nickel, selenium and zinc).

Mineral status of an animal is a function of the total diet (both water and feed) and stored mineral reserves within the body. Water may be a substantial source of minerals; however, the variation in water consumption makes estimating the contribution of mineral from water sources difficult. Mineral content of forages is influenced by several factors including plant species, soil, maturity, and growing conditions. These factors, and others not mentioned, makes estimating the dietary mineral content of grazing cattle challenging. Most commercial mineral supplements are formulated to meet or exceed the requirements for a given stage of production. This ensures that deficiencies are unlikely, but providing supra-optimal levels of minerals may be unnecessary unless specific production problems exist. A mineral program does not have to be complex or expensive to be successful.

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



Visual Degree of Doneness Has an Impact on Palatability Ratings of Consumers Who Had Differing Degree of Doneness Preferences

– The objective of this study was to determine the impact of feeding consumers of varying degree of doneness preferences steaks cooked to multiple degrees of doneness on their perceptions of beef palatability. Paired Low Choice frozen steaks from the posterior half of the strip loin were randomly assigned a degree of doneness of rare (140°F), medium-rare (145°F), medium (160°F), medium-well (165°F), or well-done (170°F). Consumer panelists, prescreened to participate in panels based on their degree of doneness preference, were served steak samples cooked to each of the five degrees of doneness under low-intensity red incandescent lighting to mask any degree of doneness differences among samples. Next, consumers were served steak samples under white incandescent lighting, with white fluorescent background lighting. Pre-screening consumers for degree of doneness preference allowed for a measure of the impact of “missing” the consumer’s ideal degree of doneness and quantification of the impact of both under-cooking and overcooking steaks on consumer beef palatability ratings.

Bottom Line... When steaks are overcooked, palatability ratings decrease; however, undercooking has a positive effect on palatability perception regardless of the consumer’s degree of doneness preference. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Travis O’Quinn (travisquinn@ksu.edu; 785-532-3469) or Terry Houser (houser@ksu.edu; 785-532-1253).



Effects of Feeding Increasing Amounts of Finishing Diet Blended with Nursery Diets on Growth Performance and Economics of Nursery Pigs

– A total of 1,260 pigs were housed in two commercial research rooms and used in a 28-d study to determine the effects of blending increasing amounts of finishing feed into phase 3 nursery diets on pig growth performance. At weaning, pigs were placed into pens with 21 pigs per pen and 30 pens per room. Pigs were fed commercial nursery diets in a 5-phase feeding program with phases 1 and 2 fed before the start of the experiment. At the beginning of phase 3 (day 0), pens of pigs were blocked by pen weight and room. Within blocks, pens were allotted randomly to one of four treatments with 15 replications per treatment. Treatments consisted of a dose-titration of blending increasing amounts of late finishing feed (0, 2.75, 5.5, and 8.25 lb per pig, corresponding to 0, 3, 6, and 9 tons per 2,200-head barn, respectively) into a phase 3 nursery diet. Diet changes to the remaining phases were based on feed budgets. From day 0 to 14, average daily gain (ADG) was unaffected as finishing feed budget increased from zero to 2.75 lb/pig but decreased thereafter. Average daily feed intake (ADFI) was unaffected, but feed-to-gain ratio (F/G) worsened as more finishing feed was blended into phase 3 nursery diet. From day 14 to 28, pigs previously fed increasing levels of late finishing feed had improved ADG and F/G, but unaffected ADFI. Overall (day 0 to 28), blending increasing amounts of finishing feed with phase 3 nursery diet decreased ADG and tended to decrease ADFI and final BW. However, there was no evidence of any linear or quadratic effects of increasing finishing feed budgets on overall F/G. Feed cost, gain value, and feed cost per lb of gain decreased as finishing feed budget increased from zero to 8.25 lb/pig. However, income over feed cost was not different among treatments.

Bottom Line... In conclusion, feeding increasing amounts of late finishing feed to phase three (28 lb) nursery pigs decreased overall ADG and ADFI, but did not affect income over feed cost. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by F. Wu, M.D. Tokach, J.C. Woodworth, C.W. Hastad, J.M. DeRouchey, S.S. Dritz, and R.D. Goodband)



Effects of Increasing Oat Groats on Nursery Pig Performance – In Exp. 1, a total of 225 pigs were used in a 28-d study to evaluate the effects of increasing ground oat groats on nursery pig growth performance. Pigs were weaned at 21 d of age and randomly allotted to pens and fed a commercial starter diet for 7 d prior to the start of the experiment. Pens of pigs were assigned to one of five dietary treatments in a randomized complete block design by body weight (BW) with 4 or 5 pigs per pen and 10 pens per treatment. Dietary treatments consisted of 0, 7.5, 15, 22.5, or 30% oat groats added in replacement for corn in the diet. Treatment diets were fed for 14 d with pig weights and feed disappearance collected weekly to determine average daily gain (ADG), average daily feed intake (ADFI), and feed-to-gain ratio (F/G). A common diet was fed from d 14 to 28.

Data were analyzed using PROC GLIMMIX with pen as the experimental unit. For the experimental period (d 0 to 14), increasing oat groats resulted in no evidence for differences in ADG, ADFI, F/G, or d 14 BW. There was no evidence for treatment differences during the common phase (d 14 to 28) or the overall period. In Exp. 2, a 7-d preference study was conducted to evaluate the response when pigs were given the choice between the diet with 0% groats compared to either the diet with 7.5 or 30% groats. A total of 48 pigs were used with four pigs per pen and six replications per comparison. Pigs were weighed on d zero and seven, and feeders were weighed and rotated position within the pen twice daily to determine ADFI of each diet offered. When given the choice, there was no evidence for difference in ADFI or percentage of diet consumed between the 0 and 7.5% oat groat diets. When given the choice between the 0 or 30% oat groat diets, pigs had increased ADFI (0.11 vs. 0.64 lb) for the 30% oat groat diet compared to the diet without oat groats.

Bottom Line... In conclusion, increasing oat groats in nursery diets did not improve growth performance; however, when given the choice, pigs preferred the 30% oat groat diet compared to diets without oat groats. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J.A. Chance, A.B. Lerner, J.M. DeRouchey, J.C. Woodworth, M.D. Tokach, R.D. Goodband, and S.S. Dritz)



Evaluation of the Effects of High-Lysine Sorghum on Nursery Pig Performance – Two experiments were conducted to determine the standardized ileal digestibility (SID) of amino acids in a high-lysine sorghum cultivar, followed by a growth trial to determine the effect of this sorghum on pig performance using increasing additions of feed-grade amino acids at the expense of soybean meal. In Exp. 1, ten growing barrows (initially 57.1 lb; Line 359 x 1050; PIC, Hendersonville, TN) were surgically fitted with a T-cannula at the terminal ileum and randomly assigned to 1 of 5 test diets in a 5-period, cross-over design. Experimental diets consisted of a corn-based diet, a diet containing high-lysine sorghum, or two diets with either white or red sorghum cultivars. The grain sources were the only protein sources included in these experimental diets. The fifth experimental diet was N-free for determining basal endogenous amino acid loss. All diets contained 0.40% chromic oxide as an indigestible marker. Standardized ileal digestible crude protein, lysine, methionine, threonine, and valine were greater in corn than in the sorghum-based diets with no evidence for differences among the three sorghum cultivars. In Exp. 2, a total of 293 pigs (initially 21.3 lb; Line 241 x 600; DNA, Columbus, NE) were used in a 20-d growth trial. On d 20 after weaning, considered d 0 in the trial, pens were randomly assigned to one of six dietary treatments with 10 replications per treatment. Treatments consisted of a corn-based diet, a diet based on conventional sorghum (a mixture of red and white sorghum), and four diets with high-lysine sorghum. The corn-based, conventional sorghum, and the first high-lysine sorghum diets each contained the same amount of soybean meal with varying amounts of feed-grade amino acids. The three remaining high-lysine sorghum diets included incrementally increasing amounts of feed-grade amino acids, replacing soybean meal. Overall, there was no evidence for differences in average daily gain (ADG) or average daily feed intake (ADFI) among dietary treatments. However, pigs fed the high-lysine sorghum with the greatest amount of added feed-grade amino acids had the poorest feed-to-gain ratio (F/G) compared with those fed other experimental diets.

Bottom Line... In summary, SID amino acid values for the high-lysine sorghum used in this study were not different from either red or white sorghum cultivars; however, these values were all lower when compared with corn. When swine diets for nursery pigs were formulated on an SID amino acid basis, there were no differences in ADG among pigs fed any of the various diets. High-lysine sorghum is a viable alternative grain source in swine diets and can be used with feed-grade amino acids to reduce the amount of soybean meal in the diet, potentially lowering feed cost. Research is needed to determine the maximum inclusion of feed-grade amino acids in nursery pig diets without negatively impacting 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 L.L. Thomas, R.D. Goodband, C.D. Espinosa, H.H. Stein, J.C. Woodworth, M.D. Tokach, S.S. Dritz, and J.M. DeRouchey)

ASI Faculty Spotlight



Valentina Trinetta (vtrinetta@k-state.edu; 785-532-1667)
Assistant Professor/Food Microbiology and Safety

With an emphasis in Food Safety and Microbiology, Dr. Trinetta's research focuses on the development and implementation of antimicrobial intervention technology in efforts to reduce and control foodborne pathogens on different commodities. Dr. Trinetta also focuses on the identification of the point of contamination through the food supply chain (from farm to fork). In the lab, interventions such as Chlorine Dioxide, UV treatment, cold plasma, as well as technologies including active packaging systems and nanotechnology for antimicrobial encapsulation are explored. The main microorganisms worked with in Dr. Trinetta's lab include *Salmonellamonovariant*, *Listeria*, and STEC *E. coli*, as they are of great concern in the animal and human food processing industry.

Dr. Valentina Trinetta obtained her B.S. in Food Biotechnology (2005) from the University of Pisa, Italy, her M.S. in Genetics Biotechnology for Food Quality and Safety (2006) from the University of Naples, Italy, and she received her Ph.D. in Food Science and Technology (2009) from the University of Milan, Italy, with an emphasis on active packaging and food safety. After 4 years of working at the Research and Development Center of ECOLAB, Dr. Trinetta returned to Academia to bring a unique teaching and research style at Kansas State University. Courses taught by Dr. Trinetta include Food Microbiology (FDSCI 600/601), lecture and laboratory, and Food Fermentation (FDSCI 801).



Scott Beyer (sbeyer@k-state.edu; 785-532-1201)
Associate Professor/Poultry Nutrition and Management

Originally, from Galveston, Texas, Dr. Scott Beyer attended Texas A&M University and received an undergraduate degree in Biochemistry in 1983. He obtained his Masters and Ph.D. degrees in the Animal Nutrition Program from the University of Georgia. He then worked as a Post-Doctoral Research Associate for Harvard University in the Department of Nutrition. In 1993, he accepted an Assistant Professor position at Kansas State University where he currently has a 60% teaching, 25% research and 15% extension appointment.

Dr. Scott Beyer has about 50 advisee undergraduate students and 2 graduate students. He teaches 9 different courses in the Department, which includes ASI 106, Dairy/Poultry Science Lab; ASI 107, Companion Animal and Equine Lab; ASI 310, Poultry/Production Evaluation; ASI 520, Companion Animal Management; ASI 635, Gamebird Management; ASI 640, Poultry Product Technology; ASI 645, Poultry Management; ASI 676, Avian Nutrition and ASI 677, Companion Animal Nutrition.

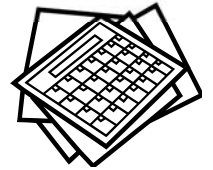
Dr. Beyer is coach of the KSU Collegiate Poultry Judging team, which won the national championship in 2002 and 2003, and has finished well in every contest since then. He also works with numerous 4-H volunteers and FFA instructors and teams. He is involved with poultry judging at county fairs and supervisor of the poultry division at the Kansas State Fair.

Dr. Beyer is also the Poultry Extension Specialist for the state of Kansas and maintains extramural funding for his research program related to poultry and companion animals. He helps with home flock poultry production problems. Dr. Beyer also works with undergraduate students to hold the annual pullet sale each spring. His research focuses on feed manufacturing and poultry nutrition. He has been an invited speaker at almost every nutrition conference in the US. He has been an invited speaker at international conferences in Mexico, Tunisia, Egypt, China, Malaysia, South Korea, Indonesia, Australia, Switzerland, Vietnam, Morocco and the Philippines.

Dr. Scott Beyer resides in Manhattan with his wife, Amy. They have three sons, one who is a K-State graduate, another currently at KSU and another hoping to get there soon. When he has some spare time and isn't doing something poultry, he enjoys woodworking, fishing, and gardening.

What Producers Should Be Thinking About.....

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN MAY.....



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

- Breeding season is beginning or continuing for many operations; therefore, both females and males must be reproductively fit.
- Several estrus synchronization procedures have been developed. To determine the correct synchronization program to use, consider the following: age group of females (yearling replacement heifers vs. cows), commitment of time and efforts for heat detection, potential number of females that are anestrous (days postpartum, body condition, calving difficulty), labor availability, and the return on investment for total commitment to the breeding program.
- Handle semen properly and use correct AI techniques to maximize fertility.
- Natural service bull should have body condition, eyes, feet, legs and reproductive parts closely monitored during the breeding season. Resolve any problems immediately.
- All bulls should have passed a breeding soundness examination prior to turnout.
- Begin your calf preconditioning program. Vaccination, castration and parasite control at a young age will decrease stress at weaning time. This is a time to add value to the calf crop.
- Implanting calves older than 60 days of age will increase weaning weight.
- Properly identify all cows and calves. Establish premises numbers for compliance with state and national programs.
- Use best management practices (BMPs) to establish sustainable grazing systems.
- Use good management practices when planting annual forage sources and harvesting perennial forages.
- Maintain records that will verify calving season, health programs, and management practices.

*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.*