

News from KSU Animal Sciences

April, 2008



Newsletter from the Department of Animal Sciences and Industry
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WHAT'S NEW....

- ↪ **Environmental Management** - Producers should clean feedlots or areas of manure accumulation once cattle are removed for summer grazing. Confined feeding pens or temporary feeding sites for the winter months are prime contributors to odor emissions if not properly cleaned and maintained. Also, fly production from these sites is much greater when manure and wasted feed is present, thus creating a nuisance and a potential reduction in animal performance for the remainder of the summer for their livestock. For more information, contact Joel DeRouchey (jderouch@ksu.edu or 785-532-2280).
- ↪ The **Wildlife Management web site** has a new look! It can be found under the Research & Extension section of the ASI web site. The new web address for this site is www.wildlife.ksu.edu. Content will continue to be added in the near future. If you have any questions or comments, please contact Charlie Lee, Karen Blakeslee, or Dan Lekie, Johnson County ANR Agent.
- ↪ The **Outstanding Extension Specialist Award** for the Midwest Section of the American Society of Animal Science was recently awarded to Dr. Joel DeRouchey. Currently, Dr. DeRouchey is the Livestock Nutrition and Environmental Management Specialist at K-State. Joel has developed a comprehensive environmental management extension and research programs as well as being a key member of the KSU Swine Team. Joel has provided producers with information and applied research to improve management practices and sustainability for both small and large livestock operations. Congratulations to Joel on this award.
- ↪ The Midwest Section of the American Society of Animal Science recently awarded Jason Woodworth the **Outstanding Young Scientist Award for Agribusiness**. Jason received his Ph.D. in swine nutrition at Kansas State University. He currently works for Lonza, a specialty ingredient manufacturer, as the product manager for their Specialty Feeds group, where he is responsible for all sales and marketing, research and development, and regulatory activities for the feed division. Congratulations to Jason on this award.
- ↪ The **K-State Research and Extension College of Agriculture Employee of the Year award** was presented to Darla Thomas at the KSU Recognition Ceremony held April 2, 2008. Darla is an exemplary employee. She serves as the departmental human resources contact for one of the largest departments on campus as well as assistant to the department head of Animal Sciences and Industry. We would like to congratulate Darla on this well deserved recognition.
- ↪ **Antimicrobial Ingredients Affect Beef Snack Stick Quality** - One of three anti-listerial ingredients: Ional™, Ional™ LC, or PURSAL Opti.Form® PD4 was mixed into a snack stick batter. Treatments were: 1) no agent (control); 2 to 4) 1.3, 2.5, or 3.5% Ional; 5 to 7) 1.3, 2.5, or 3.5% Ional LC; 8) 2.5% Opti.Form. Snack sticks were thermal processed, packaged, and placed in storage (day 0). On day 30, consumers evaluated snack stick samples for saltiness and overall acceptability (0 = lacking saltiness/dislike extremely to 7 = too salty/like extremely).
The Bottom Line.... Incorporating anti-listerial ingredients into beef snack sticks at lower percentages does not negatively impact consumer acceptance of perceived saltiness and overall desirability. For more information, contact Liz Boyle (785-532-1247; lboyle@ksu.edu) or John Unruh (785-532-1245; junruh@ksu.edu).

↪ **Behavior of Beef Cows Grazing Topographically Rugged Native Range is Influenced by Mineral Delivery System** - The study was conducted on four pastures in the Kansas Flint Hills. Each pasture was grazed by 60 mature beef cows from February to May 2007. Treatments were self-fed mineral supplements delivered in a dry, granular form (DRY) or in a low-protein, cooked molasses-based block (BLOCK). Both DRY and BLOCK were deployed in each pasture. No additional salt was supplied.

Forage utilization in the vicinity of each supplement type and the frequency and duration of herd visits to the vicinity of each supplement were measured during four 14-day periods. Supplements were moved to new locations each period. Motion-sensitive cameras monitored the frequency and duration of herd visits to each supplement deployment site.

The Bottom Line... Data suggest that block supplements influence the behavior of grazing cattle to a greater degree than dry mineral supplements. Molasses-based mineral supplements might be more effective than dry, granular mineral supplements at luring grazing cattle into underutilized areas of pasture. For more information, contact Twig Marston (785-532-5428; twig@ksu.edu) or KC Olson (785-532-1254; kcolson@ksu.edu).

↪ **Restricted Feeding Improves Performance of Growing Steers During Subsequent Grazing on Native Flint Hills Pasture** – The objective of this study was to determine if compensatory gain occurs during intensive early stocked grazing following periods of dietary restriction. Steers were fed at dry matter intakes of free choice or 2.00, 2.25, or 2.50% of body weight for 45 days in a drylot. Intakes were adjusted according to body weight every 14 days. Steers were sorted by weight and treatment and placed on pasture May 1, 2007. Steers were removed from pasture July 28, 2007.

The Bottom Line.... Restricting steers' dry matter intake to 2.50% or 2.25% of body weight in a drylot will allow steers to compensate in terms of weight gain during early intensive grazing. Limit-feeding can also reduce total production costs. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu).

↪ **Effects of Lactation Feed Intake And Creep Feeding on Sow and Piglet Performance** - A total of 84 sows (PIC, Line 1050) and their litters were used to determine the effects of lactation and creep feeding on sow and piglet performance. Three groups of sows were blocked according to day of farrowing and parity and allotted to four treatments in a 2 × 2 factorial with lactation feed intake (*ad libitum* vs. restricted) and creep feeding (none vs. creep) as factors. Piglets were cross-fostered within each block to standardize litter weights and litter size (>11 pigs). A common lactation diet (1,586 kcal ME/lb, 0.97% TID Lys) was used in the study. From d 3 of lactation, *ad libitum* sows were allowed free access to feed while restricted sows were fed 25% less than those fed *ad libitum*. A pelleted creep diet (1,614 ME/lb, 1.51% TID Lys) with 1.0% chromium oxide was offered to creep-fed pigs from d 3 to weaning (d 21). Piglets were weighed individually at d 3, 7, 14, and 21. Amount of creep feed consumed was determined daily. Fecal samples from all creep-fed pigs were taken on d 7, 14, and 21 and fecal color was assessed to categorize pigs as eaters or non-eaters. Sow weight and P2 backfat thickness (6.5 cm from the midline over the last rib) were measured after farrowing and at weaning. There was no interaction between lactation feed intake and creep feeding. *Ad libitum* feeding of sows reduced BW loss (-33.0 vs. -52.9 lb), improved total and daily gains of litters, and increased (90 vs. 71%) the percentage of sows returning to estrus by d 14 compared with limit-fed sows. Creep feeding did not affect sow BW and backfat loss, but increased days to estrus (5.4 vs. 4.9 d) for sows that returned to heat by 14 d. Creep feeding tended to improve litter weaning weights (132.7 vs. 124.9 lb/d) by reducing mortality rate after cross-fostering (3.9 vs. 7.3%). Total creep feed intake of litters did not differ (2.24 vs. 2.28 lb/litter) between *ad libitum* and limit-fed sows. About 60% of the creep-fed pigs were categorized as eaters. Of those identified as eaters, 23, 20, and 57% began consuming creep feeding from d 3 to 7, 7 to 14, and 14 to 21, respectively. From d 0 to 28 post-weaning, there was no effect of creep feeding on d 28 weights, ADG, ADFI, and F/G compared to non-creep fed pigs. Eaters tended to be heavier until d 28 post-weaning and had greater ADG and total gains than non-eaters and no creep pigs. In conclusion, creep feeding improved survivability, but had no effects on pre-weaning gain and sow performance. Low feed intake during lactation negatively affected both sow and litter performance. Creating more eaters in whole litters may be beneficial in improving post-weaning performance. More information is available on this experiment in the KSU Swine Day Report at www.ksuswine.org. (This study conducted by R C. Sulabo, M.D. Tokach, J.Y. Jacela, E J. Wiedemann, J.L. Nelssen, S.S. Dritz, J.M. DeRouchey, and R.D. Goodband.)

UPCOMING EVENTS...

- ↪ The National Junior Swine Association will hold its 7th annual national **Youth Leadership Conference** in San Antonio, Texas on May 9-11, 2008. Youth ages 14-21 will be challenged to make the most of their opportunities in life while broadening their knowledge of important swine industry issues at this conference. For an application form or more details visit, www.nationalswine.com. For more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).

- ↪ The **International Symposium on Beef Cattle Welfare** has been scheduled for May 28-30, 2008, at the Forum Hall in the K-State Student Union in Manhattan, Kansas. This symposium is a direct function of the Beef Cattle Institute at KSU. The mission of this symposium is to understand the strides that have been made by the beef industry for the welfare of cattle and discuss new areas of opportunities for improvement. Make plans now for this landmark event.

This symposium is proud to provide a venue to highlight the world's experts on beef cattle welfare. Speakers for the symposium range in areas of expertise and responsibility. Speakers will include producers, nutritionists and veterinarians that speak on current issues in the beef industry. The speaker list also includes people in policy making positions within the federal government, professional societies and industry commodity groups. Lead research specialists from around the globe will discuss current research findings and future research needs in beef cattle behavior and welfare.

For a complete schedule of events and registration form, visit www.isbcw.beefcattleinstitute.org. For more information, contact Wrenn Pacheco at the Beef Cattle Institute (785-532-4844; wpacheco@vet.ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

- ↪ A full day presentation on **Cattle Welfare Through Proper Cattle Handling** will be held on Wednesday, May 28, 2008, from 10:00 a.m. to 4:00 p.m. in conjunction with the International Symposium on Beef Cattle Welfare. This presentation will be held in Weber Arena on the KSU Campus and will highlight concepts that empower caregivers in the beef industry to create positive relationships with cattle. The presentation and demonstration will include video footage and live cattle interaction in an arena complete with processing facilities. Presenters include Lynn Locatelli, DVM, Tom Noffsinger, DVM, Clint Hoss and Curt Pate.

Topics to be discussed include: understanding prey animal instincts; the use of position, distance, angles and speed to communicate with cattle; teaching cattle to respond in a positive manner, exercise therapy; relationship of horsemanship and stockmanship; and much more. For complete details and registration information, visit www.isbcw.beefcattleinstitute.org and click on registration. If you have any questions, please feel free to call the Beef Cattle Institute at 785-532-4844 or e-mail Wrenn Pacheco at wpacheco@vet.ksu.edu.

- ↪ The **KSU Youth Horse Judging Camp – Beginning Section** will be held Friday, June 6, 2008 in Weber Arena on the KSU Campus. This camp is designed for youth that have had very little experience judging horses and would like to learn more about note taking and oral reasons. Emphasis will be on the placings of classes commonly seen in Kansas judging contests.

Camp registration will begin at 8:30 a.m. on Friday, June 6, in Room 146, Weber Hall. Camp registration fee is \$30/per student and must be paid by May 1. No entries will be accepted after this date. Camp will be limited to the first 30 participants. For a brochure or more information, contact Teresa Slough (785-532-1268; tslough@ksu.edu).

- ↪ The **KSU Youth Horse Judging Camp – Advanced Section** will be held June 9-10, 2008 in Weber Arena on the KSU Campus. This camp is designed for youth that have had some experience judging horses and would like to learn more about note taking and oral reasons. Emphasis will be on the placings and reasons of classes commonly seen in Kansas judging contests.

Camp registration will begin at 9:00 a.m. on Monday, June 9, in Room 146, Weber Hall. Camp registration fee is \$115/per student and must be paid by May 1. No entries will be accepted after this date. Camp will be limited to the first 30 participants. Youth will be housed in KSU dorm rooms. All meals are included in the registration fee. For a brochure or more information, contact Teresa Slough (785-532-1268; tslough@ksu.edu).

- ↪ The **Champion Livestock Judging Camps** will be conducted throughout the month of June. Each camp will be limited to 25 students and registrations will be accepted on a first come-first serve basis. The following dates are set for the 2008 camps: June 9-11; June 16-18; June 20-22; and June 25-27. This three-day, intense judging camp is designed for 4-H and FFA members (ages 14-18) who are seriously interested in enhancing their livestock judging and oral communication skills. Prior livestock judging experience is necessary for these camps. Workouts will be conducted similar to those at a collegiate level. The camp will focus primarily on the proper format, terminology and presentation of oral reasons. Camp participants will be exposed to livestock evaluation skills and incorporating performance records in the decision making process. The fee for camp is \$180 per person and is nonrefundable. The registration deadline is May 16. For more details, visit www.asi.ksu.edu/livestockjudging. For more information, contact Scott Schaaque (simmi@ksu.edu; 785-532-1242) or Megan McClure (mcclurem@ksu.edu; 785-532-2996).
- ↪ A **County Fair Livestock Judges Clinic** has been scheduled for Friday, June 13, 2008 at Weber Hall. This professional development opportunity is designed for livestock judges of county fairs to learn about Kansas county fair livestock shows, quality of work expectations as a livestock judge, and become up to date on current livestock industry show animal types. This clinic will include numerous hands-on sessions involving beef cattle, swine, sheep and meat goats to gain familiarity and confidence when evaluating different species of livestock at county fairs in Kansas. Registration is \$15 per participant and is due by June 9. For more information, contact Joel DeRouchey (jderouch@ksu.edu; 785-532-2280).
- ↪ **Developing and Implementing Your Company's HACCP Plan** for meat, poultry, and food processors will be held June 11-13, 2008 in Weber Hall, Kansas State University, Manhattan. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://animalscience.unl.edu/haccp/>. The workshop fee is \$250, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Dr. Liz Boyle at lboyle@ksu.edu.
- ↪ The **2008 Dr. Bob Hines Swine Classic** is scheduled for July 11-12, 2008 at CiCo Park in Manhattan. This two-day event includes educational workshops, showmanship contest, and a prospect and market hog show. It is open to all Kansas youths ages 7 through 18 as of January 1, 2008. Watch for more details coming soon. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Jim Nelssen (785-532-1251; nelssen@ksu.edu)

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
April 17, 2008	Research Round-Up	Hays
May 9-11, 2008	NJSA Youth Leadership Conference	San Antonio, Texas
May 28, 2008	Cattle Welfare Through Proper Cattle Handling	Manhattan
May 28-30, 2008	Symposium on Beef Cattle Welfare	Manhattan
June 6, 2008	KSU Horse Judging Camp – Beginning Section	Manhattan
June 9-10, 2008	KSU Horse Judging Camp – Advanced Section	Manhattan
June 9-11, 2008	KSU Livestock Judging Camp	Manhattan
June 11-13, 2008	HACCP Training	Manhattan
June 13, 2008	County Fair Livestock Judges Clinic	Manhattan
June 16-18, 2008	KSU Livestock Judging Camp	Manhattan
June 20-22, 2008	KSU Livestock Judging Camp	Manhattan
June 25-27, 2008	KSU Livestock Judging Camp	Manhattan
July 11-12, 2008	Kansas Swine Classic	Manhattan

AS&I FACULTY SPOTLIGHT



Larry Hollis (lhollis@ksu.edu; 785-532-1246)
Professor/Extension Beef Veterinarian

A graduate of Texas A & M University's College of Veterinary Medicine, Dr. Hollis spent 4 years in private practice first as an employee and later as a clinic owner in the Texas Panhandle where he was heavily involved in cow/calf and stocker production medicine and feedlot consultation. He then joined the staff of the Texas Veterinary Medical Diagnostic Laboratory - Amarillo, where he served as Case Coordinator and later Head of Diagnostic Services. He taught stocker and feedlot production medicine for Texas A & M University, the University of Tennessee, and the University of Nebraska. He received a Master of Agriculture degree in Beef Management and Nutrition from West Texas A & M University. He worked as a Technical Service Veterinarian for Syntex Animal Health and Pfizer Animal Health, working exclusively with beef cattle.

Since 2002 he has served as the Extension Beef Veterinarian at Kansas State University. In addition to his extension responsibilities he also teaches *ASI 540, Principles of Animal Disease Control* and 1/2 of *ASI 515, Beef Science*. He currently holds a 10% teaching, 20% research, and 70% extension appointment in the department



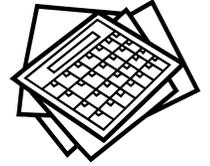
Fadi Aramouni (faramoun@ksu.edu; 785-532-1668)
Professor/Food Science

Dr. Fadi Aramouni was born and raised in Beirut, Lebanon. He received his B.S. in Biochemistry in 1977, and his M.S. in Food Technology in 1980 from the American University of Beirut. Dr. Aramouni earned his Ph.D. in Food Science in 1986 from Louisiana State University. He joined the Kansas State University Department of Foods and Nutrition in 1989, then the Department of Animal Science and Industry in 1995. Since July 1999, his responsibilities have been 0.85 Extension/0.15 Teaching. His teaching responsibilities include "Research and Development of Food Products", "Principles of HACCP", "Advanced HACCP Principles" and "Fundamentals of Food Processing". Since June 2002, Dr. Aramouni has been a Professor and Extension Specialist with the Department of Animal Sciences and Industry and a member of the Food Science Institute. His Extension activities include: managing a Value-Added Food Product Development Laboratory for Kansas's entrepreneurs; acting as

the "Process Authority" for processors of low acid/acidified foods; providing educational programs on Good Manufacturing Practices, Sanitation, HACCP, Recalls, and one- on-one assistance for the development and implementation of food processing programs; and supervising the activities of the Rapid Response Center staffed by an Extension Associate to provide quick answers to questions received primarily from Kansas County Family and Consumer Sciences Extension agents.

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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



BEEF -- Cowherd Tips by *Twig Marston, K-State Beef Extension Specialist, Cow/Calf*

June is a month to let Mother Nature take her course. Native grasses are usually at peak production; therefore, little supplementation is needed, with the exception of some minerals.

Cow-herd nutrition

- Provide plenty of clean, fresh water.
- Provide free-choice minerals to correct any mineral deficiencies or imbalances.
- Monitor grazing conditions and rotate pastures if possible and practical.
- Consider creep-feeding if it's cost-effective.

Herd health

- Monitor and treat pinkeye cases.
- Provide fly control. Consider all options; price and efficiency will dictate the best options to use.
- Monitor and treat for foot rot.
- To reduce heat stress, avoid handling and transporting cattle during the hottest times of the day.

Forage and pasture management

- Check and maintain summer water supplies.
- Place mineral feeders strategically to enhance grazing distribution.
- Check water gaps after possible washouts.
- Harvest hay in a timely manner; think quality and quantity.

Reproductive management

- If using AI, do not expect all females to conceive. A common practice is to breed once or twice with AI, then turn out cleanup bulls for the balance of a 65-day breeding season. A 42-day AI season with estrus synchronization at the front end gives most females three chances to conceive by AI.
- Watch bulls for libido, mounting and breeding function.
- Record breeding dates to determine calving dates.
- By imposing reproductive pressure (45-day breeding season) on yearling heifers, no late-calving 2-year-olds will result. This will increase lifetime productivity and profits.

Genetic management

- Monitor herd performance. Then identify candidates to cull because of poor performance.

General management

- Check equipment (sprayers, dust bags, oilers, haying equipment, etc.), and repair or replace as needed. Have spare parts on hand because downtime can make a big 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.