Newsletter from the Department of Animal Sciences and Industry
213 Weber Hall - Kansas State University - Manhattan, KS 66506
785-532-6131 – www.asi.ksu.edu

June 2012

News from KSU Animal Sciences

In This Issue

We Need Your Help!

Please send questions, comments or ideas for future newsletter topics to lschrein@ksu.edu or call (785) 532-1267.

K-STATE Research and Extension

UPCOMING EVENTS…

- A conference on **DNA Technology: Where we've been, where we are, and where we're headed** will be held on Wednesday, June 27, 2012 at the Meat Animal Research Center in Clay Center, Nebraska. The aim of this meeting is to provide educational programming to key stakeholders including extension educators, seedstock and commercial beef producers and other allied industry participants. The meeting will begin at 11:30 a.m. with lunch and adjourn at 5:00 p.m. The registration fee is $10 and includes lunch and all handout material. For more information, contact Bob Weaber (bweaber@k-state.edu;785-532-1460).

- **Summer Health Management of Pastured Cattle** will be held on July 11, 2012, beginning at 5:45 p.m. at the Washington County Livestock LLC in Washington, KS. Topics highlighted at the workshop include: Pink-eye and Footrot Prevention and Management; Internal Parasite Control; Summer/Pasture Pneumonia; External Parasite Control and Water Quality and Blue-green Algae. Please RSVP to the Washington County Extension Office by July 6th for meal count (785-325-2121). For more information, contact Robin Slattery (rslat@ksu.edu).

- The **2012 Dr. Bob Hines Swine Classic** is scheduled for July 13-14, 2012, 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, 2012.

  This year's Classic will feature a swine photography contest along with an educational program which includes information on showcasing your industry and what is in your pig feed.

  For the Swine Photography Contest, youth may submit up to 2 swine photos. Photos should be 8x10 size and should not be framed or matted. Photos will be placed in plastic sleeves and displayed throughout the weekend. Outlined below is a schedule of this year's program.

  Friday, July 13

12:00 p.m.	*All hogs in place*
12:30 p.m.	*Swine photo check-in by the show ring*
1:15 p.m.	*Showcasing Your Industry*
1:45 p.m.	*What's in Your Pig Feed?*
3:30 p.m.	*Ice cream party by the show ring*
5:30 p.m.	*Showmanship Contests*

  Saturday, July 14

8:30 a.m.	*Purebred and Crossbred Prospect Hog Show followed by Barrow and Gilt Market Hog Show*

  Entries close on July 1, 2012 (must be postmarked by June 29, 2012). More information and registration forms are available at www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu), Jim Nelssen (785-532-1251; jnelssen@ksu.edu), or Kristine Clowers (785-532-1264; clowers@k-state.edu).

UPCOMING EVENTS…

- The **Kansas State University's 2012 Beef Conference** – Thriving in the New Beef Economy, will be held Aug. 9 in Frick Auditorium of K-State's College of Veterinary Medicine in Manhattan.

  "We've had an interesting year in the beef industry and we have an equally exciting lineup of topics and speakers for this year's conference," said Larry Hollis, veterinarian with K-State Research and Extension.

  For the convenience of those who are not able to travel to Manhattan in person, the conference will be broadcast remotely to several sites around Kansas.

  More information about K-State's 2012 Beef Conference will be available in coming weeks at www.asi.ksu.edu/beefconference.

- Make plans now to attend the **Flint Hills Beef Fest** which will be held August 17-19, 2012. Cattle Division Events include a Grass Futurity Contest, Live Stocker Cattle Show, Feedlot Contest and Carcass Competition. Events will take place on the Lyon County Fairground in Emporia, Kansas. The Flint Hills Beef Fest is an annual celebration of the grass cattle industry for which the Flint Hills region is Kansas is known. For more details and a complete schedule of events, please visit http://www.beeffest.com.

- The **Kansas Livestock Sweepstakes** has been scheduled for August 25-26, 2012. This all-around event will feature contests in Livestock Judging, Meats Judging, Livestock Skillathon, and Livestock Quiz Bowl. A special prize will be awarded to the county that does the best in all four contests. Rules and past winners can be found at www.YouthLIvestock.KSU.edu. Registration forms will need to be postmarked by August 1. Complete information for 2012 will be available soon on the Youth Livestock Web page.

- The **2012 KSU Beef Stocker Field Day** will be held on Thursday, September 27 at the KSU Beef Stocker Unit in Manhattan. Registration will begin at 9:30 a.m. and the day will conclude with a good old-fashioned Prairie Oyster Fry. Watch for complete details on www.KSUbeef.org. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 27, 2012	DNA Technology: Where we've been, where we are, and where we're headed	Clay Center, NE
July 11, 2012	Summer Health Management of Pastured Cattle	Washington, KS
July 13-14, 2012	Dr. Bob Hines' Kansas Swine Classic	Manhattan
August 9, 2012	KSU Beef Conference	Manhattan
August 17-19, 2012	Flint Hills Beef Fest	Emporia, KS
August 25-26, 2012	Kansas Livestock Sweepstakes	Manhattan
September 27, 2012	KSU Beef Stocker Field Day	Manhattan

WHAT'S NEW . . . .

Management Minute
"Let's Be Honest, Really!"

Feedlot Facts
"In Defense of Early Weaning"

Management Minute – Chris Reinhardt, Ph.D., Extension Feedlot Specialist

"Let's Be Honest, Really"

Probably the clearest and most often used analogy for managing production teams is the sports team. But one connection between coaching and managing is that coaching and managing both require identification of faults and then providing means to improve on those deficiencies. This process of constantly working to make people better may be the most critical function of any successful leader.

This aspect of management isn't about novel marketing spin or aggressive cost control. It's about identifying the performance gaps of the team and of each individual on the team. But this part isn't glamorous, nor is it easy. The only way to know your people's strengths and weaknesses is by knowing your people, and that simply takes time.

The coaches who win close games are those who make the most effective half-time adjustments. They use time-outs to immediately fill a perceived void. Afterwards they take lessons from each game and drill on any deficiencies in order to become more complete the next game. Coaches who get the most from their players spend time observing them during practice and drilling those areas of weakness.

It would never occur to a successful coach to ***not*** tell a player about their weakness; both know that's the only way to improve. But this is where the manager-as-coach analogy gets set aside. How many managers can honestly say they are completely candid with their team members? It's obviously not about shaming the person into doing a better job, it's about providing solutions for the deficiency---it's about coaching. That's yet another reason why managing people well is such hard work. That's why we make such a big deal when a team wins a championship: We acknowledge that the championship wasn't won on game day, but throughout the entire season and off-season before it---in fact the ***years*** of teaching, observation, and practice before it.

The critical part of this process comes back to the manager-as-coach. Make sure your people know you care about them and about making them more effective in their job. Once people know you care, and that you're offering guidance to improvement, criticism is looked at as an opportunity to improve.

Honesty is at the heart of any truly beneficial mentoring relationship. The successful manager doesn't ignore weaknesses just because they're busy or because it might be uncomfortable, because this may be the very heart of effective leadership.

For more information, contact Chris at 785-532-1672 or cdr3@ksu.edu.

Feedlot Facts – Chris Reinhardt, Ph.D., Extension Feedlot Specialist

"In Defense of Early Weaning"

Although most areas have gotten a reprieve from the 2011 drought, others are still feeling the lingering effects of low rainfall and high feed costs. Early weaning is an effective way to save on summer pasture and preserve cow body condition going into the winter. In fact, early weaning may be worth considering every year regardless of summer pasture conditions.

The rumen of calves begins to develop at the very first opportunity to consume solid food. Although calves rely on milk as their primary nutrient source as long as the supply is abundant, they will also begin to graze alongside their dam at only a few weeks of age. You will often observe calves grazing very close to their mothers' heads, sampling the exact same grasses as their mother as she teaches them what to eat and what to avoid.

Feedlot Facts – *"In Defense of Early Weaning" (cont.)*

The grass that is consumed early in life enters the rumen and begins to be fermented by bacteria which the calf picks up from its mother and the world around it. As this fermentation progresses, and the calf supplies increasingly greater quantities of grass, the rumen grows in size and develops papillae, or finger-like projections, which aid in nutrient uptake from the rumen. So the suckling calf is actually a fully functioning ruminant by 90 days of age.

In addition, the 6-7 month age window may actually have disadvantages compared to weaning at a younger age. The passive immunity provided by colostrum remains active for 3-4 months but then wanes, after which time the calf must rely completely on its own immune system. But in many cases the immune system is not fully competent to battle all pathogens which attack the newly weaned calf: viruses, bacteria, dust, internal parasites, etc. So it is possible that the 90-day old calf may have an immunological advantage to the 205-day old calf in battling pathogens.

Weather also plays a large factor in weaned calf health. If we could guarantee sunshine and moderate temperatures throughout the fall weaning season, calf health would not be an issue. But, unfortunately, the combination of cold temperatures, precipitation, wind, and mud in the fall further suppresses an already incompetent immune system---a perfect recipe for respiratory disease.

Finally, the elimination of milk production after weaning allows the nutrients consumed by the cow to go back into rebuilding body condition. This could result in substantial reductions in winter feed requirements because (a) nutrients harvested by the cow are nearly always lower cost than feeds harvested and transported to the cow, and (b) forage quality in late summer and fall is nearly always greater than during the winter.

The 2011 taught that it pays to be prepared for all possible eventualities in the cattle business. Although there are some complicating management considerations, early weaning can save on pasture forage, preserve cow body condition, and improve post-weaning health of the calf.

For more information, contact Chris at 785-532-1672 or cdr3@ksu.edu.

- **Assistant Professor. Animal Behavior** – Kansas State University is looking for an Assistant Professor, Animal behavior. This is a full-time, 12-month, tenure track position; 60% research/40% teaching. Earned Ph.D. degree in Animal Science or related area or equivalent is required by the start date and well as training and experience in animal behavior. Experience in conventional and alternative livestock/poultry production systems is preferred. View complete position announcement at: http://www.asi.ksu.edu/positions. Review of applications begins July 15, 2012, and continues until a suitable candidate is identified.

- **A Commercially Available SRP Vaccine Reduces Prevalence of *E. coli* O157:H7 in Feces of Beef Cattle under Commercial Feedlot Conditions** – Cattle from 10 commercial feedlots located in Nebraska and Colorado were used in a field trial, with a total of 200,000 animals enrolled in the study. Feedlots were randomly assigned so cattle in that feedlot would either receive vaccination with SRP *E. coli* O157:H7 at arrival and ~100 days pre-harvest (VAC) or would not receive the vaccine (CON). Fecal samples were collected in May, June, July, and August of 2010. Pre-harvest blood samples were taken from cattle entering the packing plant. Vaccination reduced shedding of *E. coli* O157:H7 in feces and increased serum titer for the vaccine antigen.

  Bottom Line….Vaccinating feedlot cattle at arrival and 100 days pre-harvest with SRP *E. coli* vaccine reduces fecal shedding of *E. coli* O157:H7. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Dan Thomson (785-532-4844; dthomson@vet.ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

- **Steam-Generation Cooking Versus Dry Heat Convection of Beef Roasts Differing in Connective Tissue** – Vacuum-packaged USDA Choice *Bicep femoris, Deep pectoralis,* and *Longissimus lumborum* muscles were aged 28 to 32 days. Roasts from all three muscles were cooked in a steam-generating CVap oven (Cook and Hold Vapor Oven; Winston Industries, Louisville, KY) to 160ºF (phase 1) and a Blodgett forced-air convection oven (G.S. Blodgett Co, Burlington VT) and CVap oven (phase 2). In phase 2, roasts were cooked in CVap for a constant time that matched times to reach 150, 160 and 170ºF for 3 muscles in the Blodgett. Roasts were evaluated for instrumental tenderness and sensory properties.

Roasts cooked in the CVap in phase II were tan in color with more external surface moisture, whereas roasts cooked in the Blodgett were a dark, mahogany-red color with a more caramelized, drier surface. External fat color from the CVap cooked roasts was whiter, whereas roast from the Blodgett were more yellow. Internal cooked color was not different. *Bicep femoris* roasts cooked using phase II protocol to 150ºF had the highest cooking yield, whereas roasts cooked to 160 and 170ºF had the lowest yields. *Longissimus lumborum* roasts cooked to 150ºF has the highest cooking yields. No difference was measured in cooking yields between ovens for all 3 muscles. Neither temperature nor oven type affected slice shear force or Warner-Bratzler shear force of *Biceps femoris* or *Longissimus lumborum* roasts. In phase II, cooking *Deep pectoralis* roasts in the Blodgett to 170ºF resulted in higher Warner-Bratzler shear force than in the CVap; slice shear force values in the CVap decreased markedly from 150 to 170ºF, but in the Blodgett, optimum tenderness appeared to occur at 160ºF. *Longissimus lumborum* roasts has slice shear force values that were about half as high as those for the *Bicep femoris* and *Deep pectoralis*. *Bicep femoris* roasts cooked to 170ºF in phase II in the Blodgett had a lower myofibrillar tenderness score than those cooked in the CVap, but there was no difference at the lower temperatures. No oven effect was detected for sensory scores of *Longissimus lumborum* roasts. As expected, roasts cooked to 160ºF had a higher mean juiciness score than roasts cooked to 170ºF.

Bottom Line….Cooking *Bicep femoris* and *deep pectoral* roasts in a CVap, steam-generation oven provides some advantages over a Blodgett dry-heat convection oven for either cooking yields and/or tenderness but no advantages for *Longissimus lumborum* roasts. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Liz Boyle (785-532-1247; lboyle@ksu.edu) or Michael Dikeman (785-532-1225; mdikeman@k-state.edu).

- **Effects of Increasing NDF from Either Dried Distillers Grains With Solubles or Wheat Middlings, Individually or in Combination, on the Growth Performance, Carcass Characteristics, and Carcass Fat Quality in Growing-Finishing Pigs -** A total of 288 pigs (PIC TR4 × 1050, initially 83.6 lb) were used in an 87-d study to determine the effects of increasing dietary NDF from wheat middlings (midds) and dried distillers grains with solubles (DDGS) on growth performance, carcass characteristics, and carcass fat quality of growing-finishing pigs. Pens of pigs were randomly allotted by initial weight and gender (4 barrows and 4 gilts per pen) to 1 of 6 dietary treatments with 6 replications per treatment. Treatments were arranged in a 2 × 2 factorial plus 2 additional treatments with the main effects of added wheat middlings (0 or 19%) or DDGS (0 or 30%) to corn-soybean meal-based diets. The additional treatments were a diet containing 9.5% midds and 30% DDGS and a diet containing 19% midds and 15% DDGS. These combinations of midds and DDGS provided diets with different NDF concentrations ranging from 9.3 to 18.9%. Diets were fed in 4 phases. Choice white grease (CWG) was added to the diets to maintain similar ME in all diets within each phase. The only DDGS × midds interaction was a trend for carcass yield. Adding either midds or DDGS to the diet reduced carcass yield by a similar magnitude, but the effect was not additive. Overall, (d 0 to 87), adding midds to the diet decreased ADG, final BW, and HCW, and worsened F/G and jowl iodine value (IV). Increasing DDGS did not influence growth performance or carcass traits except for an increase in jowl fat IV. Pigs fed increasing NDF had decreased ADG and HCW and poorer F/G; however, these effects were driven by the pigs fed diets containing midds and do not appear to be attributed solely to increased NDF levels. Increasing NDF also increased jowl fat iodine value, but increasing NDF with DDGS had a greater negative effect than increasing NDF through midds (due to the oil content of DDGS).

  Bottom Line…Thus, increasing NDF has negative impacts on pig performance, carcass yield, and fat IV, but the effects appear to be more closely related to the individual ingredients used to increase NDF rather than NDF itself. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by M. D. Asmus, J. M. DeRouchey, J. L. Nelssen, M. D. Tokach, S. S. Dritz, and R. D. Goodband.)

AS&I Faculty Spotlight

Dan Moser (dmoser@k-state.edu; 785-532-2459)
Associate Professor/Beef Cattle Genetics

A native of Effingham, Kansas, Dr. Dan Moser received his B.S. in Animal Sciences & Industry from Kansas State University in 1991, then earned his M.S. (1994) and Ph.D. (1997) in Beef Cattle Genetics from the University of Georgia. He returned to K-State in 1999, and currently serves as Associate Professor with a 50% teaching, 50% research appointment. His teaching responsibilities include undergraduate and graduate courses in genetics and animal breeding. He serves as advisor to 55 undergraduates and 2 graduate students, and is faculty coordinator for the Purebred Beef Teaching Unit

He remains active in his family's Hereford seedstock operation. He and his wife Lisa have two sons, Justin and Ryan, and a daughter, Allison.

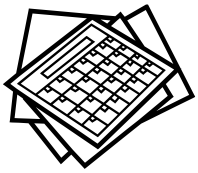
Jennifer Minick Bormann (jbormann@k-state.edu; 785-532-1222)
Associate Professor/Genetic Improvement of Beef Cattle

Originally from Muscatine, Iowa, Dr. Jennifer Minick Bormann grew up with Shorthorn cattle and horses. She earned a B.S. in Animal Science from Iowa State University in 1997, an M.S. in Animal Science from Oklahoma State University in 1999, and a Ph.D. in Animal Breeding and Genetics from Iowa State University in 2004. She joined the faculty at Kansas State University and 2004 with a 75% teaching and 25% research appointment.

Dr. Bormann specializes in beef breeding and genetics and has worked on a number of projects, including collaborations with the NCBA and the American Angus Association. Currently, she teaches Genetics, Animal Breeding Principles, Advanced Animal Breeding, Equine Genetics and Introductory Horse Lab, and advises undergraduate students. She also is the head advisor for the KSU Pre-Vet Club.

Dr. Bormann, her husband Dale, daughter Kate, and son Luke reside south of Manhattan with their horses and dogs.

What Producers Should Be Thinking About…..



WHAT PRODUCERS SHOULD BE THINKING ABOUT IN AUGUST…….

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

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions.

Breeding Season

☑ Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.

☑ Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers.

These methods contribute to a more uniform calf crop, makes winter feed management easier, and increases the success rate of next year's breeding season.

Cowherd Nutrition

☑ Provide ample amounts of clean, fresh drinking water.

☑ Conduct an inventory of forage needs for the winter feeding period

☑ Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical seasonal price increases.

Herd Health

☑ If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures.

Preventive:

- Make sure the herd is receiving adequate vitamins and trace mineral in their diet.
- Consider using a medicated trace mineral package.
- Consider vaccination for pinkeye and IBR (consult your local veterinarian).
- Control face flies.
- Clip pastures with tall, coarse grasses that may irritate eyes.

Therapy:

- Administer an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
- Shut out irritating sunlight by patching eyes, shade, etc.
- Control flies.
- Consult your veterinarian.

☑ Consider revaccinating for the respiratory diseases any animals that will be taken to livestock shows.

☑ Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least 3 weeks prior to weaning.

☑ Revaccinate all calves for blackleg.

☑ Vaccinate replacement heifers for brucellosis (4 to 10 months of age).

☑ Monitor and treat footrot.

Forage/Pasture Management

- ☑ Enhance grazing distribution with mineral mixture placement away from water sources.
- ☑ Observe pasture weed problems to aid in planning control methods needed next spring.
- ☑ Monitor grazing conditions and rotate pastures if possible and(or) practical.
- ☑ If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- ☑ Harvest and store forages properly. Minimize waste by reducing spoilage.
- ☑ Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- ☑ Plan for sufficient standing pasture for winter grazing needs.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

General Management

- ☑ Avoid unnecessary heat stress - Don't handle and/or truck cattle during the heat of the day.
- ☑ Repair, replace and improve facilities needed for fall processing.
- ☑ Order supplies, vaccines, tags, and other products needed at weaning time.
- ☑ Consider earlier than normal weaning, but have a marketing plan in place.

*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.*