



# News from KSU Animal Sciences

## May, 2007

### WHAT'S NEW >>>>>>

- ☞ **Pork Quality Assurance (PQA) program changes** – Changes to the Pork Quality Assurance program will impact swine producers starting in June 2007. The youth PQA Plus program will also be changing in 2007, although the program will not be fully implemented until June 2008. Agents received a letter discussing the impact of the PQA changes on youth programs. A copy of this letter can be found at <http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=58>. For more information, contact Mike Tokach (785-532-2032; mtokach@ksu.edu); Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Julie Voge (785-532-1264; jvoge@ksu.edu).
  
- ☞ **Attitudes of Cow-Calf Producers Toward the National Animal Identification System are Guarded** – A national survey was conducted in the spring of 2006 as a joint project between Kansas State University and BEEF<sup>®</sup> Magazine. Participants were selected from a mailing list of cow-calf producers with more than 100 cows. BEEF<sup>®</sup> Magazine provided the mailing list and a random sample of 1,000 producers were selected. The survey gathered the thoughts and opinions of 522 cow-calf producers from 41 states. Data were collected by Prism Business Media, Inc., and analyzed by both Prism Business Media and KSU.  
*Bottom Line...* These data provide us with a better understanding of producer attitudes toward the implementation of a national animal identification system. The data ultimately indicates that there is no large majority in favor of or opposed to such a system. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu) or Larry Hollis (785-532-1246; lhollis@ksu.edu).
  
- ☞ **Aging, Blade Tenderization, and Injection Impacts Tenderness of Muscles from Fed Steers** – Whole muscle cuts were removed from both sides of 24 steer carcasses. Cuts from each side were vacuum aged for 7 to 28 days, then frozen. Frozen, aged beef was thawed, then blade tenderized and injected with a typical industry enhancement. Round tip, top sirloin, and top blade (flat iron) steaks from these muscles were measured for package loss, cooking loss, and tenderness.  
*Bottom Line...* Aging of some cuts, such as the top blade, in addition to enhancement may increase tenderness. For more information, contact John Unruh (785-532-1245; junruh@ksu.edu) or Liz Boyle (785-532-1247; lboyle@ksu.edu).
  
- ☞ **Supplementation with Degradable Intake Protein Increases Low-Quality Forage Utilization and Microbial Use of Recycled Urea** – Increasing amounts of supplemental degradable intake protein were provided to cattle consuming prairie hay. Four levels of supplement were provided (0, 0.37, 0.74, 1.11 pounds per day). Intake, digestion, and nitrogen balance were measured. Urea metabolism was measured following intravenous infusion of labeled urea, and the contribution of urea recycling to meeting microbial nitrogen requirements was determined.  
*Bottom Line...* Degradable intake protein increased forage intake and digestion. Urea recycling played a significant role in meeting ruminal nitrogen requirements and should be considered as a source of nitrogen when supplementing protein. For more information, contact Evan Titgemeyer (785-532-1220; etitgeme@ksu.edu) or Twig Marston (785-532-5428; twig@ksu.edu).
  
- ☞ **Dried Distiller's Grains Improve Performance of Steers Grazing Double-Stocked Bluestem Pastures** – Pelleted dried distiller's grains (34% crude protein, 9% crude fat) made exclusively from sorghum grain were fed to 346 steers (573 lbs) at four levels: 0%, 0.25%, 0.50%, and 0.75% of body weight (dry matter basis). The dried distiller's grains were fed only during the final 45 days of the 90-day grazing period.  
*Bottom Line...* Supplementation of dried distiller's grains increases average daily gain of steers in an intensive grazing system, but also has a negative impact on subsequent feedlot performance. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

☞ **Ultrasound Sorting Increases Feedlot Profitability** – Steers were scanned and assigned to one of four system-assigned test groups or the control group. Implant protocol and harvest date were set by feedyard management for the control steers. Initial value was based on live weight at scanning. Each of the four test groups were marketed as a single group based on the projected days on feed from the Designer Genes sorting system. Profit was defined as carcass value less the initial value of the steer plus feed, implant, and scanning costs.

*Bottom Line...* Sorting feedlot cattle into uniform marketing groups at re-implant time using ultrasound and computer technology is a cost-effective tool that can predict future carcass merit and improve profitability. For more information, contact Dan Moser (785-532-2459; dmoser@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

☞ **Validation of flank-to-flank measurements for predicting boar weight** - Allometric relationships in which linear body dimensions are expressed as a function of body weight are commonly used in growth studies. Previous work at Kansas State University showed a positive correlation between flank-to-flank measurement and sow body weight. Prediction equations were developed to estimate sow weight, but it is not known if the same equation will be valid in estimating body weight among other groups of pigs, such as boars. The objective of this study was to validate the use of flank-to-flank measurement in predicting boar weight, and to determine if the allometric equation for gestating sows can also be used for adult boars. A total of 100 adult working boars in a commercial A.I. stud were selected for this study. Flank-to-flank measurement and body weight were measured on each individual boar. Flank-to-flank measurement was positively correlated to boar body weight ( $R^2 = 0.84$ ,  $P < 0.01$ ). The fit of the model improved slightly ( $R^2 = 0.86$ ,  $P < 0.01$ ) when body weight was expressed as  $BW^{0.333}$ . The boar equation was:  $BW^{0.333}$ , kg =  $0.0458 \times$  flank-to-flank, cm + 1.1838. The comparison of residuals indicated that all three equations accurately predicted boar weight. The sow equation was also shown to be as accurate as the boar equations in estimating boar weight. Therefore, the sow allometric equation can be used as the final model to predict both sow and boar body weight. More information is available on this experiment and others in the KSU Swine Day Report at [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). (This study conducted by R. C. Sulabo, J. Quackenbush, R. D. Goodband, M. D. Tokach, S. S. Dritz, J. M. DeRouchey, and J. L. Nelssen).

☞ **Investigation into the effects of feeding schedule on body condition, aggressiveness, and reproductive failure in group housed sows** - A total of 208 sows and 288 gilts were used to determine the influence of feeding frequency (2 vs 6 times per day) in gestation on performance and welfare measurements. The experiment was conducted on a commercial sow farm in northeast Kansas that typically housed gestating sows and gilts in pens. Treatments consisted of feeding similar amounts of feed to each sow or gilt over 2 (07:00 and 15:30) or 6 meals per day (07:00, 07:30, 08:00, 15:30, 16:00, and 16:30 hours). There were 8 sows or 12 gilts in each pen. Gilts and sows were moved to pens after breeding.

In gestating sows, there were no differences between treatments in ADG, backfat change, or variation in body weight. There was a trend for sows fed twice a day to farrow more total number born, but number born alive or other measures of reproductive performance were not different among treatments. Sows fed 6 times a day had increased vocalization during the morning and afternoon feeding periods, compared with sows fed twice a day, but sows fed twice a day had more skin and vulva lesions, as well as a small, but significant, increase in feet/leg and hoof problems. In this commercial facility, the standard management protocol required moving gilts to a different gestation facility. On d 42, two pens of gilts with similar breeding dates and treatment were combined and moved to another facility with larger pens until farrowing. From d 0 to 42, gilts fed 6 times a day had greater ADG and d-42 backfat. After movement to the larger groups from d 42 to farrowing, ADG was similar for gilts fed 2 or 6 times per day. Gilts fed twice a day had less weight variation at both d 42 and at farrowing. In gilts, there were no differences for reproductive performance, skin and vulva lesions, and leg/feet and hoof scores.

In conclusion, there were few growth, farrowing, or aggression differences among gilts fed either 2 or 6 times per day. This suggests that either feeding method is suitable for group-housed gilts. Among sows, different feeding frequency resulted in few growth or farrowing-performance differences. Feeding 6 times per day did result in a small, but significant, reduction in skin and vulva lesions and structural-problem scores, while increasing vocalization. Increasing the feeding frequency from 2 to 6 times per day does not seem to have a dramatic negative or positive impact on performance or welfare of group-housed gilts and sows. More information is available on this experiment and others in the KSU Swine Day Report at [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). (This study conducted by J. D. Schneider, M. D. Tokach, S.S. Dritz, R. D. Goodband, J. L. Nelssen, and J. M. DeRouchey).

## UPCOMING EVENTS >>>>>>>>>>

- ☞ Make plans now to attend the **2007 Beef Empire Days** which will be held Wednesday, May 30 to Sunday, June 10, in Garden City. This 12 day Beef Empire Days celebration features industry events, including live and carcass cattle shows and competition. Some of the events include the Schering Plough Animal Health Live Show on Wednesday, May 30, a Cattle Working Contest on Thursday, May 31, and the Carcass Show and Judging Contest on Saturday, June 2.

There are many more activities planned for Beef Empire Days. For full details and a schedule, please visit [www.beefempiredays.com](http://www.beefempiredays.com).

- ☞ **Game Bird Meeting to be held in Kansas City** - A workshop for all Game Bird breeders, Raised for Release Growers, and Game Bird enthusiasts, for business or pleasure, will be held in Kansas City, MO on Monday, June 4, 2007 from 1-5 pm. The agenda includes such topics as Producing Top Flyers, Biosecurity Basics, Avian Influenza, Nutrition, and the NPIP Program. Speakers include Drs. Dustan Clark and Keith Bramwell of the University of Arkansas, and Dr. Scott Beyer of Kansas State University. The meeting will be held at the Chase Suites Hotel, 9900 NW Prairie View Road, KC, MO. This meeting is for the regional area and is sponsored by the Missouri Department of Agriculture. For more information, contact Rose Foster, 573-522-3377, [Rose.Foster@mda.mo.gov](mailto:Rose.Foster@mda.mo.gov). or contact Dr. Scott Beyer at 785-532-1201, [sbeyer@ksu.edu](mailto:sbeyer@ksu.edu). A brochure about the meeting can be obtained from the KSU Animal Sciences web site at <http://www.asi.k-state.edu/poultry>

- ☞ An **Introduction of Safe Vacuum Packaging Workshop has been scheduled for June 5, 2007.** If you package food at retail using vacuum or reduced oxygen packaging (ROP), or plan to in the future, come to this introductory workshop to learn what your company must do to meet Kansas Food Code requirements. You will learn what is considered a potentially hazardous food, what packaging systems are considered ROP, become familiar with current food code ROP rules, and much more. This workshop is for retail food store personnel, food and meat processors, extension agents, entrepreneurs and state and county food safety inspectors.

The registration fee is \$25 per participant and is due by May 25. For more information, contact Liz Boyle (785-532-1247; [lboyle@ksu.edu](mailto:lboyle@ksu.edu)) or Fadi Aramouni (785-532-1668; [faramoun@ksu.edu](mailto:faramoun@ksu.edu)).

- ☞ For more information on the upcoming workshop on **Developing and Implementing Your Company's HACCP Plan**, contact Alicsa Mayer, HACCP Extension Assistant at [amayer@ksu.edu](mailto:amayer@ksu.edu) or toll free at 877-205-8345. The workshop is scheduled for June 6-8.

- ☞ The **40<sup>th</sup> annual Beef Improvement Federation Annual Meeting** will be held June 6-9, 2007, in Fort Collins, Colorado. The meeting will focus on the future of genetic evaluation and improvement with a variety of presenters from around the country. To register and for program details go to [www.beefimprovement.org](http://www.beefimprovement.org) under the conventions tab. For more information, contact Twig Marston ([twig@ksu.edu](mailto:twig@ksu.edu); 785-532-5428).

- ☞ **The 2007 World Pork Expo will be held June 7-9** at the Iowa State Fairgrounds in Des Moines. As the largest pork-industry trade show and exhibitor in the world, the expo draws some 30,000 pork producers, exhibitors and visitors from across the country and around the globe. World Pork Expo events will include: Career Center and Job Fair; Marketing Information Center; Employee Care Center; Environmental Information Center; Educational Seminars; Breed Shows and Sales, and more. For more information, visit <http://www.worldpork.org/>.

- ☞ **The Kansas State Horse Training Clinic will be held June 8-9, 2007 in Manhattan.** This clinic, sponsored by Purina Mills and RodRock Ranches from Bucyrus, KS, will present featured clinician, Jay Henson, offering 3 sessions including:

- Session 1: *Starting Colts* (Demonstration Only), Friday, June 8, 6:00 – 8:30 p.m.
- Session 2: *Starting Your Horse on Cattle*, Saturday, June 9, 9:00 a.m. to 12:00 noon
- Session 3: *Working Cow Horse Strategies*, Saturday, June 9, 1:00 – 5:00 p.m.

Bring your horse and work hands-on or audit the course ring-side. Fees for riders for Saturday will be: One Session = \$35; All day = \$60; K-State Students all day = \$50. Limited space is available, so please register by May 25 to reserve your spot. Fees for auditors for the event include: Weekend Pass = \$25; Friday Only = \$15; Saturday Only = \$20. To register, RSVP to Megan Guilfoil-Rice (316-648-2036; [mmg7777@ksu.edu](mailto:mmg7777@ksu.edu)). For more information, contact Julie Voge (785-532-1264; [jvoge@ksu.edu](mailto:jvoge@ksu.edu)).

- ☞ The **Champion Livestock Judging Camps** will be conducted throughout the month of June. The 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. Each camp will be limited to 25 students and will be accepted on a first come-first serve basis. The following dates are set for the 2007 camps: June 11-13; June 18-20; June 22-24; and June 27-29. For more information, contact Scott Schaake (simmi@ksu.edu; 785-532-1242) or Megan McClure (mcclurem@ksu.edu; 785-532-2996).
  
- ☞ The **State 4-H Horse Judging Contest** will be held on Tuesday, June 19 at the CiCo Park, Manhattan, KS. Check-in time is 7:45-8:15 a.m. The contest will begin at 8:30 a.m. Pre-entries are due by June 6, 2007 to the State 4-Office. For more information, contact Sharon Breiner (785-532-1171; glaenzer@ksu.edu).
  
- ☞ The **2007 Dr. Bob Hines' Swine Classic** is scheduled for July 6-7 at CiCo Park in Manhattan, Kansas. 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, 2007. Last year this event was renamed the Dr. Bob Hines' Swine Classic in recognition of his dedication and service to the Kansas swine industry.
 

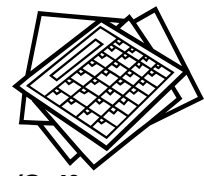
All hogs for the event are to be in place by 12:00 noon on Friday, July 6. The program includes a "Feed Ingredients and Feed Mixing Demonstration" at 1:00 p.m., followed by "Managing Show Gilts as Breeding Females." An ice cream party will be held at 4:00 p.m. Friday's program will conclude with the showmanship contests beginning at 5:30 p.m. On Saturday, July 7, the prospect hog show will start at 8:30 a.m. followed by the Barrow and Gilt Market Hog Show.

Registration is \$15/head, with a maximum of 4 pigs per exhibitor and is due by June 29. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Jim Nelssen (785-532-1251; nelssen@ksu.edu).
  
- ☞ Mark your calendar for the upcoming **K-State Beef Conference on August 9-10, 2007**. This conference is designed to provide take-home knowledge that will enhance the ability of cow/calf producers to improve profitability. On Thursday, August 9, industry experts will present information on practical methods to add value to calves. On Friday morning, August 10, concurrent demonstrations will be conducted on cattle handling, live animal evaluation and carcass end products, and practical cow feeding including ration formulation exercises. Watch for more details at [www.asi.ksu.edu/beefconference](http://www.asi.ksu.edu/beefconference). For more information, contact Larry Hollis (lhollis@ksu.edu; 785-532-1246) or Twig Marston (twig@ksu.edu; 785-532-5428).

## CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 4, 2007	Game Bird Meeting	Kansas City
June 4, 2007	KSU Horse Judging Camp, Beginning Section	Manhattan
June 6-8, 2007	HAACP Training	Manhattan
June 6-9, 2007	BIF Annual Meeting	Fort Collins, CO
June 7-9, 2007	World Pork Expo	Des Moines, IA
June 8-9, 2007	Kansas State Horse Training Clinic	Manhattan
June 11-12, 2007	KSU Horse Judging Camp, Advanced Section	Manhattan
June 11-13, 2007	Champion Livestock Judging Camp	Manhattan
June 13-15, 2007	Western Equestrian Boot Camp	Manhattan
June 18-20, 2007	English Equestrian Boot Camp	Manhattan
June 18-20, 2007	Champion Livestock Judging Camp	Manhattan
June 19, 2007	State 4-H Horse Judging Contest	Manhattan
June 22-23, 2007	Introduction to Collegiate Riding Camp	Manhattan
June 22-24, 2007	Champion Livestock Judging Camp	Manhattan
June 27-29, 2007	Champion Livestock Judging Camp	Manhattan
July 6-7, 2007	Kansas Swine Classic	Manhattan
August 9-10, 2007	K-State Beef Conference	Manhattan

## WHAT PRODUCERS SHOULD BE THINKING ABOUT IN JULY.....



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

#### *Cowherd Nutrition*

- Provide plenty of clean, fresh water.
- Provide free-choice mineral to correct any mineral deficiencies or imbalances.
- Monitor grazing conditions and rotate pastures if possible and/or practical.
- If ammoniated wheat straw is planned for winter needs, follow this rules:
  - ✓ Best time is immediately after harvest, prior to weather deterioration.
  - ✓ Ammoniation process is temperature sensitive, fastest during hot days.
  - ✓ Apply 3% Anhydrous Ammonia (60 pounds/ton of straw).
  - ✓ Do ***not*** ammoniate wheat hay or any other intermediate or high quality forage; production of imidazole can cause cattle hyperactivity and death.
  - ✓ Will double crude protein content, enhances intake, and be cost effective.
- Consider early weaning if drought conditions develop and persist.
- Consider creep feeding only if cost effective.

#### *Herd Health*

- Monitor and treat Pink Eye cases.
- Provide fly control. Consider all options, price and efficiency will dictate the best option(s) to use.
- Monitor and treat foot rot cases.
- Avoid handling and transporting cattle during the hottest part of the day-reduce heat stress.
- Vaccinate replacement heifers for Brucellosis if within proper age range (4 - 10 months).
- Continue anaplasmosis control program (consult local veterinarian).

#### *Forage/Pasture Management*

- Check and maintain summer water supplies.
- Places mineral feeders strategically to enhance grazing distribution.
- Check water gaps after possible washouts.
- Harvest hays in a timely manner, think quality and quantity.
- Harvest sudan and sudan hybrids for hay in the boot stage (normally three to four feet in height). It is a good idea to run a routine nitrate test on a field before harvesting hay.
- Plan hay storage placement wisely. Putting hay conveniently near feeding sites reduces labor, time demands, and equipment repair cost.

#### *General Management*

- Good fences and good brands make good neighbors.
- Check equipment (sprayers, dust bags, oilers, haying equipment) and repair or replace as needed. Have spare parts on hand, down time 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](mailto:lschrein@ksu.edu), or phone 785-532-1267.