



# News from KSU Animal Sciences

## September, 2007

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

✎ **IRM Redbooks for Sale** – We have a few 2008 IRM Redbooks left in stock. The price of the redbooks this year will be: Orders of less than 10 = \$4.50/book; Orders of 10 or more = \$4.25/book. To order your supply of redbooks, please contact Lois (lschrein@ksu.edu; 785-532-1267).

✎ **Getting the most from your feed dollar** - Most pork producers understand the impact of particle size on feed efficiency. As particle size is reduced, digestibility of the diet increases and feed efficiency is improved. Kansas State University recommends particle size be maintained at approximately 700 microns with an optimal range of 650 to 750 microns. Larger particle sizes result in poor feed efficiency, while smaller particle sizes increase the energy cost of grinding, susceptibility to ulcers, and problems with feeders and bins bridging.

Particle size of the diet can have a huge economic impact in your cost of production. For every 100 microns your particle size is greater than the recommend range, the cost for poorer feed efficiency will be about \$.65 per pig. For example, if you haven't checked your particle size recently, and it has crept up to 1,000 microns, reducing particle size to 700 microns will save you almost \$2.00 for every finishing pig marketed. Ensuring proper particle size can easily be accomplished through routine maintenance like changing hammer mill screens or turning hammers. Adjusting the gap between rolls and re-grooving rolls in roller mills should also be preformed regularly.

Particle size analysis can be performed by Kansas State University for \$10 each. About one to one half pound of sample (one coffee cup full) should be sent to: Kansas State University, 206 Weber Hall, Manhattan, KS 66506. Results will be sent out within 10 working days upon the arrival of the sample to the laboratory. For more information call (785) 532-1277.

✎ **More information on feeding gestating sows** -- Swine producers know that an estimate of body weight is a very important first step for accurate sow feeding. However, it is difficult to precisely estimate each sow's weight. K-State Swine Research and Extension has developed a method designed to make this process easier for producers. We have established that a "flank-to-flank" measurement can be used to estimate weight of sows. Based on weight, we can then more accurately determine an amount of feed to provide. The flank measurement is taken immediately in front of the back legs from the point of one flank over the back of the sow to the point of the other flank. We have developed a cloth tape divided into color coded sections. Each section on the tape corresponds to a weight group.

Once you know what weight group the sow is in, you can use the information available at the ASI website [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). Because body weight is important in determining the daily feed allotment for each sow, it is essential that a high percentage of sows are measured for estimated body weight. We are working to help make these important procedures easier for swine producers. If you are interested in purchasing the K-State Sow Weight tape, they are available for \$5/tape, by contacting Lois at 785-532-1267; [lschrein@ksu.edu](mailto:lschrein@ksu.edu).



✎ **Communicate the message!** Many times we tell employees to do a job and then are frustrated when the job is not done properly. But do you understand the personality of the people implementing the program? Some producers use formal personality profiling to determine the most effective methods of communication. Usually, a difficulty with compliance is not the employee's fault, but rather a need for communicating the message in a different format. An example of this is communicating the importance of feeder adjustment. When discussing feeder adjustment, frequently there is confusion as to how to properly adjust feeders. We have found that using pictures of a properly adjusted feeder has been a very effective communication tool. For more information please go to: [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine) and click on Feeder Adjustment tools under the Swine Extension and Research page.

☞ **Determining The Total Sulfur Amino Acid To Lysine Requirement Of The Lactating Sow** - A total of 163 sows were used in a study to determine the requirement for total sulfur amino acids (TSAA), relative to lysine, during lactation. All experimental diets were corn-soybean meal-based and formulated to contain 0.88% true ileal digestible (TID) lysine (0.97% total lysine). The experimental diets contained 0.37% L-lysine HCl, with other crystalline amino acids added to ensure that TSAA was first limiting. The dietary TID TSAA rates were formulated to 0.44, 0.48, 0.53, 0.57, and 0.62%, corresponding to 50, 55, 60, 65, and 70% of lysine, respectively. Sows farrowed in six farrowing groups, and were randomly allotted to the dietary treatments on the basis of parity. Over the entire lactation period, there were no differences ( $P>0.14$ ) in ADFI, weight loss, backfat loss, or plasma urea nitrogen among sows fed increasing TSAA:Lys ratios. Increasing TSAA, relative to lysine, had no effect ( $P>0.25$ ) on litter weaning weight or preweaning mortality. In summary, there were no differences in litter performance with increasing TID TSAA:Lys ratio. These results suggest that the requirement for TID TSAA is no more than 50% of lysine. Additional research is needed to confirm this relatively low TSAA requirement, and that the relatively high feed (and amino acid) intake of sows, coupled with possible tissue breakdown as a source of TSAA, did not decrease the dietary requirement. More information is available on this experiment and more 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, J. L. Nelssen, M. D. Tokach, S. S. Dritz, R. D. Goodband, and J. M. DeRouchey.)

☞ **Thermal Process for Jerky Provides Proper Lethality for Controlling Pathogens** – USDA issued a compliance guideline that provides jerky processing parameters for controlling pathogens. We validated a thermal process to determine its ability to control pathogens during the production of chopped and formed all-beef jerky. A mixture *E. coli* O157:H7 or *Salmonella* was added to the raw batter. Jerky strips were placed on screens and dried in a smokehouse. Jerky strips were sampled throughout processing, and reductions of *E. coli* O157:H7 or *Salmonella* populations were determined.

*Bottom Line.....*A thermal process for producing chopped and formed jerky provided lethality to control pathogens as *E. coli* O157:H7 and *Salmonella* so jerky is safe for consumers. For more information, contact Kelly Getty (785-532-2203; [kgetty@ksu.edu](mailto:kgetty@ksu.edu)) or Liz Boyle (785-532-1247; [lboyle@ksu.edu](mailto:lboyle@ksu.edu)).

☞ **Nutritional Value of De-Germed Corn Distiller's Grains and Traditional Distiller's Grains are Similar** – Six hundred and ten crossbred-yearling heifers (765 lb) were used in a finishing study to compare growth performance and carcass traits when fed flaked corn finishing diets with and without the addition of distiller's grains. A control diet (no distiller's grains) was compared to a diet containing 13% (dry basis) dried corn distiller's grains, or a diet containing 13% of a partially de-germed, dried corn distiller's grains.

*Bottom Line.....*Feeding distiller's grains at 13% of diet dry matter had no effect on feedlot performance or carcass characteristics, but increased manure production by 11 to 16%. Feed value of de-germed distiller's grains is similar to that of traditional distiller's grains. For more information, contact Jim Drouillard (785-532-1204; [jdrouill@ksu.edu](mailto:jdrouill@ksu.edu)) or Chris Reinhardt (785-532-1672; [cdr3@ksu.edu](mailto:cdr3@ksu.edu)).

☞ **SRP Vaccine Reduces *E. coli* O157:H7 in Cattle** – Thirty calves were randomly assigned to one of two treatment groups and administered either a placebo or the *E. coli* O157:H7 SRP (siderophore receptor/porin protein) vaccine. Calves were transported to a BL-facility and were orally inoculated with a nalidixic acid-resistant strain of *E. coli* O157:H7. Blood was collected weekly and fecal samples were collected three times each week for five consecutive weeks to evaluate the presence of nalidixic acid-resistant *E. coli* O157:H7. Calves were then euthanized and gut concentrations of nalidixic acid-resistant *E. coli* O157:H7 were determined.

*Bottom Line.....*This new vaccine could be a promising strategy for controlling pre-harvest levels of *E. coli* O157:H7. For more information, contact Dan Thomson (785-532-4254; [dthomson@vet.k-state.edu](mailto:dthomson@vet.k-state.edu)) or Larry Hollis (785-532-1246; [lhollis@ksu.edu](mailto:lhollis@ksu.edu)).

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

✚ It's not too late to register for the **2007 KSU Beef Stocker Conference** which will be held on Thursday, September 27 at the Clarion Hotel, Manhattan, Kansas. Pre-registration for the Beef Stocker Conference is \$20 per participant or \$30 per participant at the door. To register or for more information, contact Lois (lschrein@ksu.edu; 785-532-1267) or Dale Blasi (dblasi@ksu.edu; 785-532-5427).

✚ Our newly adapted **Youth Livestock Quality Assurance** program and teaching materials will be presented in October. Trainings for this program will be held October 4, in Larned (Pawnee County) and October 5, in Emporia (Lyon County). Times for both trainings will be from 9:30 a.m.–3:00 p.m. This new LQA program will meet the stipulations of the National Pork Board and can be utilized in training your swine project members for Youth Pork QA. However the greatest advantage is that it does cover all livestock and thus this important material can be utilized by all livestock project members in your county. Our featured speaker for these trainings will be Kevin Chilek from Texas A&M. Kevin was a lead developer in the Texas LQA materials and will be a great resource as we move forward with the new program. Registration fee is \$15 which includes refreshments and lunch. To register, e-mail jvoge@ksu.edu by September 26<sup>th</sup> and indicate which date you plan to attend. For more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).

✚ **Developing and Implementing Your Company's HACCP Plan for meat, poultry, and food processors** will be held October 10-12 in Regnier Hall, University of Kansas Edwards Campus, 127th & Quivira Road, Overland Park. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://animalscience.unl.edu/haccp/KansasCity.html>. The workshop fee is \$200, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Alicsa Mayer, HACCP Extension Assistant at [amayer@ksu.edu](mailto:amayer@ksu.edu) or toll free at 877-205-8345.

✚ The **Employee Management for Production Agriculture Conference** will be held on October 11-12, 2007, at the Airport Marriott in Kansas City. The sessions will be filled with such information as working with diverse cultures in agricultural businesses, dealing with difficult times, and legal issues. Early registration for the conference is \$150 for the first two attendees from a business. For businesses sending three or more participants, the group rate is \$125 per person by September 26. After that date, the full rate of \$200 per person applies. The registration fee covers lunch on both days, refreshments at breaks and all conference materials. Complete details on the conference are available at [www.oznet.ksu.edu/employee/](http://www.oznet.ksu.edu/employee/). For more information, contact Sarah Fogelman at 620-431-1530 or [sfoglema@oznet.ksu.edu](mailto:sfoglema@oznet.ksu.edu).

✚ The **Oklahoma Meat Goat Conference** will be held November 2-3, 2007 at Ada, Oklahoma. If you are looking for information to make your Meat Goat business sound and profitable, make plans to attend this conference. Detailed information can be accessed at [www.oklagoats.com](http://www.oklagoats.com).

✚ Mark your calendars for the **Western Kansas Livestock Update** scheduled for November 6, 2007. More details will be available shortly at [www.ksubeef.com](http://www.ksubeef.com) or for more information, contact Sandy Johnson (785-462-6281; [sandyj@ksu.edu](mailto:sandyj@ksu.edu)).

✚ The **BEEF Quality Summit** will be held November 7-8, 2007 at the Holiday Inn Centre in Omaha, NE. The topic for this year's Summit will be "Beef Quality in the Ethanol Era." This workshop is for cow/calf operators, feedlot operators, and anyone who needs to know about beef marketing channels. This is your roadmap to success in the beef value chain. For more information, visit [www.beefconference.com](http://www.beefconference.com).

↵ The **2007 KSU Swine Day** will be held at the Alumni Center on the KSU campus on Thursday, November 15. The morning program for Swine Day will include Dr. Lisa Tokach and Dr. Steve Henry, veterinarians from the Abilene Animal Hospital, and Faculty of the KSU College of Veterinary Medicine discussing “*Porcine Circovirus: What Have We Learned in the Last Year??*”

The afternoon program will include an Update on Current K-State Swine Research as well as a presentation by Trent Loos, Loos Tales, on *Positioning Animal Agriculture for the Future*. Trent Loos is a sixth-generation U.S. farmer who has taken his passion for a rural lifestyle to the radio air waves with a program called Loos Tales. The day will conclude with the K-State Pork Tailgate Party.

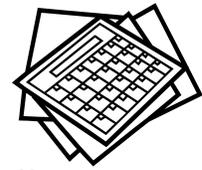
Pre-registration is \$15 per participant by November 8 or \$25 at the door. For a copy of the day’s program, visit our website at [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). For more information, contact Jim Nelssen at 785-532-1251; [jnelssen@ksu.edu](mailto:jnelssen@ksu.edu).

↵ Mark your calendars for the new **Junior Beef Producer Day** to be held Saturday, December 15, 2007 at Weber Hall. Featured speaker for the event will be Kirk Stierwalt. Registration cost is \$15 per person before December 1. Look for registration forms at your local Extension Office. For more information, contact Julie Voge (785-532-1264; [jvoge@ksu.edu](mailto:jvoge@ksu.edu)) or Scott Schaaake (785-532-1242; [simmi@ksu.edu](mailto:simmi@ksu.edu)).

↵ For those interested in the **PQA Plus Training**, mark December 18 on your calendar. Plans are to hold a one-day training in Manhattan for agents and veterinarians that wish to become PQA Plus Advisors. With the recent changes in the PQA Plus program, only trained advisors are allowed to certify pork producers in the PQA Plus program. Several agents were trained as advisors in August, but we have had requests for an additional training. The December training is for those that have not already been trained as advisors, but wish to receive the training. Details will be sent as soon as they are available to agents and veterinarians. For more information, contact Mike Tokach (785-532-2032; [mtokach@ksu.edu](mailto:mtokach@ksu.edu)) or Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)).

<b>CALENDAR OF UPCOMING EVENTS</b>		
<b>Date</b>	<b>Event</b>	<b>Location</b>
September 27, 2007	KSU Beef Stocker Conference	Manhattan
October 4, 2007	Livestock Quality Assurance Trainings	Larned
October 5, 2007	Livestock Quality Assurance Training	Emporia
October 10-12, 2007	HACCP Plan for Meat, Poultry and Food Processors	Overland Park
October 11-12, 2007	Employment Management for Production Agriculture Conference	Kansas City
November 2-3, 2007	Oklahoma Meat Goat Conference	Ada, Oklahoma
November 6, 2007	Western Kansas Livestock Update	TBA
November 7-8, 2007	BEEF Quality Summit	Lincoln, NE
November 15, 2007	KSU Swine Day	Manhattan
December 15, 2007	Junior Beef Producer Day	Manhattan
December 18, 2007	PQA Plus Training	Manhattan

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



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

#### **Spring Calving Cows**

##### *Cowherd Management*

- Pregnancy Check (if not already completed)
- If candidates for culling were not selected in September or October, it should be completed now.
- Consider feeding cull cows to increase body weight, value, and utilize cheap feedstuffs. Value of gain is equal to the difference between the ending value and beginning values divided by the gain. Compare this to cost of gain figures. When cost of gain is less than value of gain, profit will be realized.
- Body Condition Score
  - Provide thin cows (body condition score 3's and 4's) extra feed now. Take advantage of weather, stage of pregnancy, lower nutrient requirements, and quality feedstuffs.
- In late fall and early winter, start feeding supplement to mature cows using these guidelines:
  - Dry grass      1½ - 2 lb supplement/day of a 40% CP supplement
  - Dry grass      3 - 4 lb supplement/day of a 20% supplement
  - Dry grass      10 lb good nonlegume hay, no supplement needed
  - Compare supplements on a cost per pound of nutrient basis.
- Utilize crop residues.
  - Average body condition cows can be grazed at 1 to 2 acres/cow for 30 days assuming normal weather. Available forage is directly related to the grain production levels.
  - Limiting nutrients are usually protein, phosphorus, and vitamin A.
  - Strip graze or rotate fields to improve grazing efficiency.
- Discontinue feeding tetracycline if used for anaplasmosis control

##### *Calf Management*

- Participate in National Level Breed Association Performance Programs CHAPS, and(or) other ranch record systems.
- Finalize plans to merchandise calves or to background through yearling or finishing programs

##### *Forage/Pasture Management*

- Plan winter nutritional program through pasture and forage management

##### *General Management*

- Document cost of production by participating in Standardized Performance Analysis (SPA) programs.
- Review management decisions, lower your costs on a per unit of production concept.
- Plan your marketing program, including private treaty, consignment sales, test stations, production sales, etc

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.