



News from KSU Animal Sciences

October, 2007

WHAT'S NEW >>>>>>

- ↙ **A Second Look at Distillers Dried Grains with Solubles** - In the past, we have been very cautious with the addition of distillers dried grains with solubles (DDGS). This concern was based on the high cost of DDGS relative to corn prices here in Kansas as well as controversy in research results – some studies showing negative responses in growth performance versus other studies showing similar performance to a corn-soybean meal diet. With the continual increase in ethanol plant construction, there has been a recent drop in DDGS price coupled with increases in corn price. The net result is that DDGS are beginning to price into swine diets in many areas of the country. The price of DDGS in Kansas is still higher than in many other areas, but may be reduced with increased ethanol production. A quick rule of thumb for general evaluation is that if DDGS is the same price as corn, it will create enough savings to justify use in the diet. The breakeven for DDGS will move between 110 and 130% of the price of corn depending on the cost of other ingredients. Because carcass yield declines and carcass fat becomes softer as DDGS levels increase in the diet, value of DDGS must consider ramifications at the packing plant. For help with formulating diets and calculating the economics of adding DDGS to swine diets please contact one of your swine extension specialists.
- ↙ **2007 KSU Stocker Conference Proceedings available online** – Topics for this year's KSU Stocker Conference included a Cattle Market Outlook, Health Protocols that Add Value, Strategies for Controlling Input Costs, Using By-product Feeds for Receiving and Growing Diets and much more. A copy of the proceedings is linked to this newsletter and is also available at www.ksubeef.com. If you would like a printed version, please contact Lois (785-532-1267; lschrein@ksu.edu).
- ↙ **Efficacy of Feed Grade Antibiotics in Finishing Diets Containing Distiller's Grains** – Three hundred and seventy-one crossbred-yearling heifers were used in a 150-day finishing study. Heifers were fed finishing diets based on steam-flaked corn with and without 25% (dry basis) corn wet distiller's grains with solubles. Within each diet, heifers were fed Rumensin, Rumensin plus Tylan, or no feed additives.
Bottom Line... Distiller's grains in steam-flaked corn diets reduced animal performance and carcass value. Rumensin did not improve growth performance or carcass quality. Efficacy of Tylan appears to be less in diets containing distiller's grains. For more information, contact Jim Drouillard (785-532-1204; jdrouill@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).
- ↙ **Microbial Use of Recycled Urea is Dependent on the Level and Frequency of Degradable Intake Protein Supplementation** – Two levels of supplemental protein were provided daily: 0.31 pounds (low) and 0.93 pounds (high), and two levels were provided every third day: 0.93 pounds (low) or 2.79 pounds (high) per supplementation event. 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... The high level of protein supplementation resulted in greater digestible organic matter intake. Urea recycling played the most significant role in meeting ruminal nitrogen requirements when the supplement was provided infrequently at the high level. For more information, contact Evan Titgemeyer (785-532-1220; etitgeme@ksu.edu) or Twig Marston (785-532-5428; twig@ksu.edu).
- ↙ **Ammonia Ion Selective Electrode and Indophenol Methods Can Be Used Successfully to Evaluate Meat Contaminated by Ammonia** – Indophenol, ion selective electrode (ISE), Reflectoquant[®] test strips, and salicylate methods were tested using ground eye of round spiked with ammonium chloride as a standard. Beef samples were spiked with 25, 50, 100, or 200 ppm ammonia as nitrogen and the amounts recovered were background corrected, depending on the background determined on the day of analysis.

Bottom Line... According to the FDA, the responsibility for ensuring safety of food rests with the owner of the product. Both ion selective electrode and indophenol methods are reliable and can be used for in-plant testing for ammonia contamination of muscle food products. For more information, contact J. Scott Smith (785-532-1219; jsschem@ksu.edu) or Liz Boyle (785-532-1247; lboyle@ksu.edu).

↪ **Effects Of A Liquid (Neolac) And Dry Feed Combination Fed In Varying Durations On Weanling Pig Performance** - One hundred eighty pigs were used in a 28-d growth assay to determine the effects on nursery pig performance of combining a complete liquid feed (Neolac) with dry feed for various durations. Pigs were randomly allotted to experimental treatments consisting of: dry feed only (control) or Neolac provided for a period of 3 and 7 days in combination with dry feed. Overall, pigs fed the liquid-dry feed combination had a greater ADG than did the dry-fed pigs until d 7 after weaning. Weight gains obtained during this period were not maintained until the end of the nursery period, regardless of the duration of liquid feeding. Both dry matter intake (DMI) and DM feed/gain increased as a result of liquid feeding. Pigs provided liquid feed for 7 d also had a higher DM feed/gain than that of the dry-fed controls in all periods. Feeding a liquid complete diet for various durations, in combination with dry feed, only had positive effects on growth rate immediately after weaning, but did not have lasting gains to influence overall nursery performance. Further experiments are needed to determine whether the improvement in initial feed intake with liquid feeding will reduce “starve-outs” and mortality. More information is available on this experiment and more in the KSU Swine Day Report at www.ksuswine.com. (This study conducted by R. C. Sulabo, C. N. Groesbeck, J. M. Benz, R. D. Goodband, M. D. Tokach, S. S. Dritz, J. M. DeRouchey, J. L. Nelssen, and D. McKilligan).

↪ **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 (PIC Line C29) were used to determine the influence of feeding frequency (2 versus 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 more in the KSU Swine Day Report at www.ksuswine.com. (This study conducted by J. D. Schneider, M. D. Tokach, S.S. Dritz, R. D. Goodband, J. L. Nelssen, and J. M. DeRouchey).

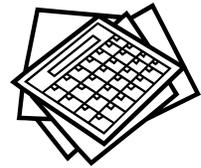
UPCOMING EVENTS >>>>>>>>>

- ☞ Mark your calendars for the **Western Kansas Livestock Update** scheduled for November 6, 2007. More details will be available shortly at www.ksubeef.com or for more information, contact Sandy Johnson (785-462-6281; 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.
- ☞ Dr. Scott Beyer, Ph.D., KSU Extension Poultry Specialist for the Department of Animal Sciences & Industry will be holding a **National Poultry Improvement Plan (NPIP) Testing School** on November 10, 2007. The school will be held in conjunction with the Kansas Classic Poultry Show sponsored by the Heart of America Bantam Club in Hutchinson, KS at the State Fairgrounds in the poultry building. The school will start at 1 pm. There is no cost for the testing school and demonstration; however, to become a certified tester each person must pay \$20 annually to the Kansas Animal Health Department who administers the program. Attendees will learn how to conduct the Pullorum test and become certified to test poultry. All poultry shown at local fairs or sold at swaps and auctions must show Pullorum testing results. A general question and answer session will be held following the school for questions about anything related to poultry. For more information about the show, contact George Robbins at gerobbins@embarqmail.com. For information about the testing school, contact Scott Beyer at sbeyer@ksu.edu.
- ☞ 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. For more information, contact Jim Nelssen at 785-532-1251; jnelssen@ksu.edu.
- ☞ Dates for the **2007 KSU Dairy Days** have been scheduled as follows: December 11 at Valentinos in Seneca and December 13 at the Amish Community Center in Whiteside. For more information, contact John Smith (785-532-1203; jfsmith@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) or Scott Schaaake (785-532-1242; 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) or Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
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 10, 2007	National Poultry Improvement Plan (NPIP) Testing School	Hutchinson, KS
November 15, 2007	KSU Swine Day	Manhattan
December 11, 2007	KSU Dairy Days	Seneca, KS
December 13, 2007	KSU Dairy Days	Whiteside, KS
December 15, 2007	Junior Beef Producer Day	Manhattan
December 18, 2007	PQA Plus Training	Manhattan

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



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

Cow herd management for spring-calving cows

- In late fall and early winter, start feeding supplement to mature cows using these guidelines:
 - Dry grass — 1-2 pounds (lb.) per day of a 40% crude protein (CP) supplement
 - Dry grass — 3-4 lb. per day of a 20% CP supplement
 - Dry grass — 10 lb. good nonlegume hay, no supplement needed
- Compare supplements based on cost per pound of nutrient.
- Utilize crop residues.
- Strip-graze or rotate cattle to improve grazing efficiency.
- Cows in average body condition can be grazed at 1-2 acres per cow for 30 days, assuming normal weather. Available forage is directly related to grain production levels.
- Limiting nutrients are usually rumen degradable protein, trace minerals and vitamin A.
- Control lice.

General management

- Document your cost of production by participating in Standardized Performance Analysis (SPA) programs.
- Review management decisions; lower your costs per unit of production.
- Check your financial management plan and make appropriate adjustments before the end of the year.

SWINE

- Make fall ventilation management updates. Make sure inlet and fans are clean and running properly.
- Fall is the big time of the year for swine waste application. Remember applicators permits as well as incorporating or knifing in swine waste to minimize odor.

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.