



# News from KSU Animal Sciences

## November, 2006

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

↵ **ASI Department Head Named:** Dr. Ken Odde has accepted the position as the department head of Animal Sciences and Industry. Although not all details are available, the official start date is February 26, 2007. Let's welcome Ken and his wife, Arlene, to K-State!

↵ **Minimize Feed Wastage** - Feed wastage is a difficult criterion to measure on a swine operation. This is because of slotted flooring and different management and manure handling systems. There is very little conclusive research data to determine actual on-farm feed wastage figures. However, it is generally assumed that if there is feed approximately within an area 12 inches from the feeder, that this would represent approximately 10% feed wastage. Methods to reduce feed wastage include proper feeder management as well as the design of the feeder. In most feeders, general recommendations are that no more than 15 to 20% of the pan area be covered by feed. Too often feeders are not properly adjusted with an inch or two of feed covering the entire bottom of the feeder. Not only does this increase feed and nutrient excretion into the environment, it can easily add over \$1 to \$3 in unnecessary cost. To assist producers in standardizing feeder adjustment, we recommend providing employees with actual pictures of well managed feeders. Having a picture of ideal feeder management in every barn provides a quick and standardized reference to reduce feed wastage. Additional color photos of properly adjusted feeders can be obtained for a small charge by contacting Lois at 785-532-1267; [Ischrein@ksu.edu](mailto:Ischrein@ksu.edu) or on our website at <http://www.asi.ksu.edu/swine>.

↵ Plans are underway for the **KSU Sheep Day Breeders Showcase/Trade Show**, which will coincide with Youth Sheep Day 2007, to be held March 10 at Weber Hall. This year will offer a new format concerning sponsorship for this exciting event. Sponsor categories will include Buckle (\$200 and above); Silver (\$150-\$199); Bronze (\$100-\$149) and Banner (\$50-\$99). This is a great opportunity for youth to meet the sheep breeders and producers from the state. Booth space will be in Weber Arena and time is scheduled for everyone to stop by your booth and visit with you about your product. If you are interested in being a part of the showcase/trade show, contact Julie Voge (785-532-1264; [jvoge@ksu.edu](mailto:jvoge@ksu.edu)).

↵ **Selection of Winter Feeding Sites** - The use of temporary feeding sites during winter and early spring months to supply feed and/or water to livestock is a common management practice with livestock producers. When selecting a location, producers need to be aware of both environmental and animal performance impacts of these sites. The growth performance of animals can be greatly affected if sites are improperly selected and managed. Poor drainage leading to muddy conditions can have detrimental effects as outlined below:

Risk Potential Caused by Mud, 21-39°F <sup>a</sup>	
Mud Depth	Potential Loss of Gain
No mud	0%
Dewclaw deep	7%
Shin deep	14%
Below hock	21%
Hock deep	28%
Belly deep	35%

<sup>a</sup>Beef Feeder, University of Nebraska, August 1991.

### ↵ **Effects of Dried Distillers Grain with Solubles on Growing-Finishing Pig Performance -**

Three experiments were conducted to determine the effects of increasing dried distiller's grains with solubles (DDGS) on growth performance and palatability in growing-finishing pigs. In Exp. 1, a total of 1,050 pigs (initially 104.9 lb) were used in a 28-d study in May 2002. Pigs were fed diets with either 0 or 15% DDGS and 0, 3, or 6% added fat, for a 2 × 3 factorial arrangement. Overall, there were no DDGS × fat content interactions ( $P = 0.20$ ). There was an improvement (linear,  $P < 0.01$ ) in ADG and F/G with increasing added fat and no difference in growth performance between pigs fed 0 or 15% DDGS. In Exp. 2, a total of 1,038 pigs (initially 102.1 lb) were used in a 56-d study in August 2005. Pigs were fed diets with either 0, 10, 20, or 30% DDGS from the same ethanol plant as in Exp. 1. Overall (d 0 to 56), there was a trend for decreased ADG (linear,  $P < 0.10$ ) and ADFI (linear,  $P < 0.06$ ) as DDGS increased. The greatest reduction occurred in pigs fed more than 10% DDGS. In Exp. 3, a total of 120 growing pigs (initially 48.7 lb) were used in a 21-d feed preference study in October 2005. Pigs were randomly allotted to a pen with 4 feeders, each containing a separate dietary treatment. Pigs were offered diets based on corn-soybean meal, with 0, 10, 20, or 30% DDGS from the same source as in Exp. 1 and 2. For all periods (d 0 to 7, 7 to 21, and 0 to 21), there was a decrease in ADFI (quadratic,  $P < 0.01$ ) as DDGS increased in the diet. The most dramatic decrease was observed between 0 and 10% DDGS. Experiment 1 showed no difference in growth performance in pigs fed 0 or 15% DDGS. In Exp 2, at DDGS contents higher than 10%, there were trends for decreased ADG and ADFI; in Exp. 3, ADFI decreased with increasing DDGS in the diet. In summary, DDGS from the ethanol plant tested can be used at 10 to 15% in finishing diets without reducing pig performance. Higher percentages of DDGS in the diet decreased ADFI in growing and finishing pigs. For more information on this experiment and others, check out the full Swine Day Report at [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). (*This experiment conducted by S. K. Linneen, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, S. S. Dritz, J. L. Nelssen, R. O. Gottlob, and R. G. Main.*)

### ↵ **Comparison of Particle Size Analysis of Ground Grain with, or Without, the Use of a Flow Agent -**

The American Society of Biological and Agricultural Engineers' standard for particle size analysis indicates that the analysis can be conducted with or without the use of a flow agent. Because of this allowed variation in procedures, particle size analysis results can be variable and difficult to interpret, depending on whether the laboratory uses a flow agent or not. Therefore, a retrospective analysis was made of 603 samples of ground corn analyzed for particle size with, or without, 0.5 g of synthetic amorphous precipitated silica (Sipernat® 22-S) per 100 g of sample. Results of both analyses were compared with a Method of Agreement analysis. Results indicated that there was a bias between the two procedures for particle size analysis, but that the bias was consistent across the range of particle sizes evaluated (400 to 1000  $\mu$ ). Particle size analysis conducted with a flow agent will result in a mean particle size that is approximately 80  $\mu$  smaller than the result from analysis without a flow agent. The same procedures were used in comparison of particle size standard deviation. Using a flow agent produced a greater particle size standard deviation value than without a flow agent. Unlike the bias for the particle size analysis, which was consistent for the wide range of samples evaluated, the standard deviation values showed a significant bias. As the standard deviation of the sample increased, the magnitude of difference between the two procedures also became greater. Results of this study indicate that there are differences in results between the two procedures; therefore, selection of one of the two procedures as the official standard is necessary. Also, it is important to know if a flow agent was, or was not, used in the analysis when interpreting results. For more information on this experiment and others, check out the full Swine Day Report at [www.asi.k-state.edu/swine](http://www.asi.k-state.edu/swine). (*This study conducted by R. D. Goodband, W. Diederich, S. S. Dritz, M. D. Tokach, J. M. DeRouchey, and J. L. Nelssen.*)

↵ **IRM Redbooks for Sale** – It's not too late to order your IRM Redbooks. The 2007 IRM Redbooks are in and are being sold on a first come, first serve basis. The price of the redbooks this year will be: Orders of less than 10 = \$4.25/book; Orders of 10 or more = \$4.00/book. To order your supply of redbooks, please contact Lois (lschrein@ksu.edu; 785-532-1267).

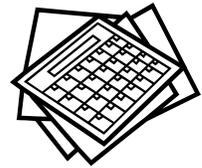
## UPCOMING EVENTS >>>>>>>>>>

- ↵ Dates and locations for the **2006 KSU Dairy Days** have been scheduled as follows: December 13 at the Whiteside Amish Community Building in Whiteside, KS; December 14 at Valentino's Restaurant in Seneca, Kansas; and December 15 in Celebration Hall at the Franklin County Fairgrounds in Ottawa, Kansas. For more information, contact John Smith (785-532-1203; [jfsmith@ksu.edu](mailto:jfsmith@ksu.edu)).
- ↵ Area Cattlemen Should Make Plans to Attend the **23<sup>rd</sup> Annual 4-State Beef Conference**. The conference planning committee has designed an excellent program that should have something of interest to all beef producers. Speakers and their topics for the 2007 conference are as follows:
- Dr. John Lawrence, Iowa State University – *“What is the State of the Beef Industry?”*
  - Dr. Rick Rasby, University of Nebraska – *“Utilizing Co-Product Feeds – Storage, Purchasing, etc.”*
  - Dr. Rob Kallenbach, University of Missouri – *“Grazing Management”*
  - Dr. Larry Corah, Certified Angus Beef – *“Why is Percent Choice Declining?”*
- The conference is scheduled for Wednesday, January 10<sup>th</sup> and Thursday, January 11<sup>th</sup>, 2007. The Wednesday morning session will begin at 10:00 a.m. in Holton, Kansas at the Jackson County Fair Building, and the afternoon session will begin at 4:00 p.m. in Tecumseh, Nebraska at the Community Building. The Thursday morning session will also begin at 10:00 a.m. in Lewis, Iowa at the ISU Armstrong Research Farm, and the afternoon session will start at 4:00 p.m. in Bethany, MO at the Community Center.
- The 4-State Beef Conferences are designed to give beef cattle producers in Iowa, Kansas, Missouri, and Nebraska an annual update on current cow-calf and stocker topics. The conferences provide a forum of Extension Specialists from four of the USA's leading beef cattle land grant universities.
- The registration fee is \$25.00 per person and reservations are requested by January 5<sup>th</sup>, 2007. The fee includes a beef meal and a copy of the conference proceedings. For more information, contact your local county extension office, or visit our website at: [www.extension.iastate.edu/feci/4StBeef/](http://www.extension.iastate.edu/feci/4StBeef/).
- ↵ Plans are underway for the **KSU Swine Profitability Conference** to be held February 6, 2007, at the KSU Student Union. Watch for more details.
- ↵ Mark your calendar for February 15, 2007, for the upcoming **KOMA Beef Conference** to be held at the Fort Scott Sale Barn, Fort Scott, Kansas. More details will be coming soon.

### CALENDAR OF UPCOMING EVENTS

Date	Event	Location
December 13, 2006	KSU Dairy Days	Whiteside, KS
December 14, 2006	KSU Dairy Days	Seneca, KS
December 15, 2006	KSU Dairy Days	Ottawa, KS
January 10-11, 2007	4-State Beef Conference	
February 6, 2007	KSU Swine Profitability Conference	Manhattan
February 15, 2007	KOMA Beef Conference	Fort Scott, KS
March 2, 2007	KSU Cattlemen's Day	Manhattan
March 10, 2007	KSU Sheep Day and Youth Sheep Day	Manhattan

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



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

#### Cow herd management

- ☑ Historically, cull cow prices will increase over the next 2 or 3 months. Feeding cull cows can be a efficient and profitable
- ☑ Continue feeding or grazing programs started in early winter. Weather conditions may require wrapping up grain sorghum and cornstalk field grazing. Severe winter weather may begin to limit crop residue utilization, so be prepared to move to other grazing and feeding systems
- ☑ Supplement to achieve ideal BCS at calving.
  - ☞ Use this formula to compare the basis of cost per lb. of crude protein (CP):  
Cost of supplement, \$ per hundredweight (cwt.) ÷ (100 X % CP) = cost per lb. of CP.
  - ☞ Use this formula to compare energy sources on basis of cost per lb. of TDN:  
Cost, \$ per ton ÷ [2,000 X % dry matter (DM) X % TDN in DM] = cost per lb. of TDN.
- ☑ Control lice; external parasites could increase feed costs.
- ☑ Provide an adequate water supply. Depending on body size and stage of production, cattle need 5-11 gallons (gal.) of water per head per day, even in the coldest weather.
- ☑ Sort cows into management groups. BCS and age can be used as sorting criteria. If you must mix age groups, put thin and young cows together, and feed separately from the mature, properly conditioned cows.
- ☑ Use information from forage testing to divide forage supplies into quality lots. Higher-quality feedstuffs should be utilized for replacement females, younger cows, and thin cows that may lack condition and that may be more nutritionally stressed.
- ☑ Consult your veterinarian regarding pre- and postpartum vaccination schedules.
- ☑ Continue mineral supplementation. Vitamin A should be supplemented if cows are not grazing green forage.
- ☑ Plan to attend local, state and regional educational and industry meetings.
- ☑ Develop replacement heifers properly. Weigh them now to calculate necessary average daily gain (ADG) to achieve target breeding weights. Target the heifers to weigh about 60%-65% of their mature weight by the start of the breeding season. Thin, lightweight heifers may need extra feed for 60-80 days to “flush” before breeding.
- ☑ Bull calves to be fed out and sold in the spring as yearlings should be well onto feed. Ultrasound measurements should be taken around one year of age and provided to your breed association.
- ☑ Provide some protection, such as a windbreak, during severe winter weather to reduce energy requirements. The LCT is the temperature at which a cow requires additional energy to simply maintain her current body weight and condition. The LCT for cattle varies with hair coat and body condition. Increase the amount of dietary energy provided 1% for each degree (including wind chill) below the LCT.

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.