News from KSU Animal Sciences
July, 2006

WHAT'S NEW >>>>>>>

- **Feeder Adjustment Cards -** Feed wastage is difficult to measure on many swine operations. 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 within an area 12 inches from the feeder, this represents approximately 10% feed wastage.

  Unfortunately, many overlook the importance of feed wastage in their production systems. Old or worn out feeders contribute to excessive feed wastage. For example, a 1% reduction in feed wastage would save approximately $.45 per pig. Methods to reduce feed wastage include proper feeder management as well as the design of the feeder. On many farms, new feeders or improved feeder management could easily save more than 1% on feed wastage. Frequently new feeders will, in most instances, quickly pay for themselves based on improvements in feed efficiency. Another tool we have found to be successful in reducing feed wastage is feeder adjustment cards. These laminated cards are pictures of proper feeder settings. They are available by contacting Lois at 785-532-1267; lschrein@ksu.edu or on the following website: www.asi.k-state.edu/swine.

- **Revised requirements for Concentrated Animal Feeding Operations (CAFOs)** - EPA is proposing to revise the NPDES permitting requirements and Effluent Limitations Guidelines for CAFOs in response to the order issued by the Second Circuit Court of Appeals in Waterkeeper Alliance et al. v. EPA, 399 F.3d 486 (2nd Cir. 2005).

  This proposal would revise several aspects of EPA's current regulations governing discharges from CAFOs. First, EPA proposes to require only the owners and operators of those CAFOs that discharge or propose to discharge to seek coverage under a permit. Second, EPA proposes to require CAFOs seeking coverage under a permit to submit their nutrient management plan (NMP) with their application for an individual permit or notice of intent to be authorized under a general permit. Permitting authorities would be required to review the plan and provide the public with an opportunity for meaningful public review and comment. Permitting authorities would also be required to incorporate terms of the NMP as NPDES permit conditions. Third, this action proposes to authorize permit writers, upon request by a CAFO, to establish best management, zero discharge effluent limitations when the facility demonstrates that it has designed an open containment system that will comply with the no discharge requirements.

  Public comments are being solicited and are due for this proposed rule by August 14, 2006. Please visit http://cfpub.epa.gov/npdes/afo/aforule.cfm for further details and information.

- Kansas State University is currently seeking applications for the **position of Head, Department of Animal Sciences & Industry**. The Department Head provides leadership and administrative actions to foster excellence in research, extension, teaching, and both domestic and international service. Full job description is available at www.asi.k-state.edu/positions. For more information, contact Mike Tokach, 785-532-2032; mtokach@ksu.edu. Kansas State University is an equal opportunity employer and actively seeks diversity among its employees.

- **2007 Dr. Bob Hines Swine Classic -** Recently 117 4-H youth representing 37 Kansas counties participated in this year's Dr. Bob Hines Swine Classic at the Cico Park in Manhattan on June 30 and July 1. The show was dedicated in honor of Dr. Bob Hines, former KSU faculty member and longtime youth swine supporter. Educational events for youth and parents were conducted throughout Friday afternoon. As part of the showmanship activities, a class was provided for the young family members less than seven years of age. The class required an adult be in the ring to supervise and educate each young contestant and insure their safety in the show area. A judge interacted with the young showman and provided positive encouragement, but no placing was made. Each contestant received a purple ribbon to make the class a non-competitive, educational event. Camera opportunities were plentiful. Next years Dr. Bob Hines Swine Classic is planned for July 6 and 7th. For further details about the event, contact Joel DeRouchey, 785-532-2280, jderouch@ksu.edu

- **An accurate age verification procedure has long been a challenge to animal scientists**, and today such a method is of unprecedented importance to the U.S. beef industry. We explored the established methods of USDA maturity and dentition, as well as the eye lens as predictors of age in beef cattle. Cattle of documented ages (n = 386) ranging from 370 to 1,115 days of age were evaluated for dentition, USDA maturity, lens weight and lens nitrogen content. Correlations with chronological age were determined: lens weight (r = 0.77); dentition (r = 0.74); lens nitrogen (r = 0.71); and USDA maturity (r = 0.64). Stepwise backward regression starting with all predictors resulted in lens weight and dentition as the remaining significant predictors. The following equation (R^2 = 0.67) was developed: *Age (months)* = - 21.79 + 17.23(*lens weight*) + 0.038(*dentition score*). Using this equation, 38% of cattle ≤ 20 months of age in this study were verified as less than 21 months old. A separate group of cattle ranging in age from 1 to 12 years were evaluated for lens properties, and lens weight (R^2 = 0.91) and lens nitrogen (R^2 = 0.92) were both highly correlated with age. Higher correlations for lens weight and nitrogen content were observed in the group of 20 cattle ranging in age from 1 to 12 years because a greater range of age was used. Utilization of the equation derived in this study could qualify nearly four times more cattle for export to some countries with stringent importation requirements. Linked are complete details on this trial. For more information, contact Michael Dikeman (785-532-1225; mdikeman@ksu.edu) or Chris Raines (785-532-1269; craines@ksu.edu).

- **Early pregnancy detection** - Early identification of open replacement heifers or mature cows can be a useful management option. This is especially true when feed resources are limited. With the use of transrectal ultrasonography, pregnancy in cattle can practically be detected at 30 days after breeding. If culling needs to extend beyond open animals, accurate information on stage of pregnancy can be gathered at the same time. As pregnancies become more advanced, fetal aging is less precise. Producers wishing to identify AI-sired calves should consider early pregnancy detection to correctly identify these calves. Research has show that even with a 10 day delay in turning out clean-up bulls after AI, birth dates of some AI-sired calves will overlap with natural service sired calves. (Sandy Johnson, 785-462-6281; sandyj@ksu.edu)

UPCOMING EVENTS >>>>>>>>>>

- **Three 2006 KLA/KSU Ranch Management Field Days have been planned.** The first field day will be held on August 15 at Blundon Farms (Glen and Gary Blundon), Russell, Kansas. Topics will include the Status of the National Animal Identification System; Programs and Projects for Enhancing Native Grass Pastures and more educational sessions. The second field day will be held on August 22 at S L Cattle (Scot and Eldon Lanham), Mound City, Kansas. The Merits of Preparing a Local Animal Disease Emergency Management Plan will be addressed along with educational sessions on Brush and Tree Removal on Grazing Lands, Options for Wind Breaks on a Livestock Operation, Cattle Handling Tips and more. August 24 will be the date for the third Field Day to be held at Triangle H Grain and Cattle (Fielding, Sam, Greg and Cedric Hands), Garden City, Kansas. Topics will include a Market Outlook and Economic Considerations for Cow-Calf Producers as well as educational sessions on Management Tips for Irrigated Grazing Systems, Management Opportunities and Challenges of Early Weaning and more.

  Each of the field days will begin at 3:30 p.m. with registration and conclude with a beef dinner at 6:45 p.m. For more information on the field days, visit www.kla.org/field.htm, or contact Twig Marston at 785-532-5428; twig@ksu.edu

- **Applied Reproduction Strategies in Beef Cattle Workshops -** Beef producers interested in fixed-time artificial insemination (AI) and other breeding technology will learn the latest research – and producer success stories – at a national meeting in St. Joseph, Missouri, on Aug. 30-31. A similar meeting will be held at Rapid City, South Dakota on Oct. 3-4.

  The first day of the conference will include basics of estrous synchronization, costs & economic analysis, nutrition and reproduction, and dealing with non-cycling beef females. The second day includes research on breeding soundness exams, sexed semen, reproductive tract scores, use of ultrasound for early pregnancy detection and fetal sexing, and embryo transfer. Panels of beef producers will tell how they have upgraded their herds through the use of artificial insemination.

  Registration fee is $175 by Aug. 16. A $25 late fee is added beginning Aug. 17. For more information and registration, go to http://westcentral.unl.edu/beefrepro/ For details on the Missouri meeting, contact Dave Patterson (573-882-7519; pattersond@missouri.edu). For details on the South Dakota meeting, contact George Perry at (605-688-5456; George.Perry@sdstate.edu.)

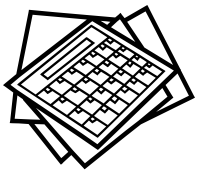
- **T**he **KSU Stocker Field Day** will be held on Thursday, September 28 at the KSU Beef Stocker Unit and will include information on the National Animal Identification System. Watch for more details.

- The **2006 KSU Swine Day** will be held at the Alumni Center on the KSU campus on Thursday, November 16th. This year's program will include a research update from K-State swine faculty as well as invited speakers covering the recent emergence of Porcine Circovirus Associated Disease (PMWS) and what producers can do to control and minimize the effects of this devastating disease on their swine farm. Watch for more details on Swine Day to be coming. For more information, contact Jim Nelssen at 785-532-1251; jnelssen@ksu.edu.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
August 15, 2006	KLA/KSU Ranch Management Field Day – Blundon Farms, Glen and Gary Blundon	Russell, Kansas
August 18-20, 2006	Flint Hills Beef Fest	Emporia
August 22, 2006	KLA/KSU Ranch Management Field Day – S L Cattle, Scot and Eldon Lanham	Mound City, Kansas
August 24, 2006	KLA/KSU Ranch Management Field Day – Triangle H Grain and Cattle, Fielding, Sam, Greg and Cedric Hands	Garden City, Kansas
August 26, 2006	State 4-H Livestock Judging Contest	Weber Arena, Manhattan
September 28, 2006	KSU Stocker Field Day	Manhattan
November 16, 2006	KSU Swine Day	Manhattan

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN SEPTEMBER……



BEEF -- Cowherd Tips by *Twig Marston*

September is when forages are mature rapidly, weaning time can be appropriate, and weather dictates several key management decisions.

Breeding Season

Remove bulls after 60 days with cows, 45 days with heifers (Never run bulls for more than a 90-day breeding season).

Cowherd Nutrition

- ☑ Provide ample amounts of clean, fresh drinking water.
- ☑ Consider limited-intake creep feeding if:
  - ♦ Drought conditions develop and persist.
  - ♦ Range conditions limit milk production.
  - ♦ Creep feed/grain prices are relatively low.
  - ♦ Value of gain allows for economic benefits.
- ☑ Tips for successful limited-intake creep feeding:
  - ♦ Limit duration to last 30 to 75 days before weaning.
  - ♦ Limit intake to less than 2 pounds/head/day.
  - ♦ Use an ionophore or other feed additive to maximize efficiency.
  - ♦ Protein level should be equal to or greater than 16%.
  - ♦ High salt levels may help limit intake, but can be tough on feeders.
- ☑ Prepurchase bulk rate winter supplementation needs prior to 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.
- ♦ Control face flies.
- ♦ Clip pastures with tall, coarse grasses that may irritate eyes.
- ♦ Provide ample shade.

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 winter nutritional program through pasture and forage management.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

Reproductive Management

- ☑ Remove bulls to consolidate calving season.
- ☑ Pregnancy check and age pregnancies 60 days after the end of the breeding season. Consider culling cows that are short-bred.

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

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 early weaning if:
  - ♦ Drought conditions develop and persist.
  - ♦ Range conditions limit milk production.
  - ♦ Cows are losing body condition.
  - ♦ Calf and cull cow prices indicate maximum profit.
  - ♦ Facilities and management is available to handle lightweight calves.
    - ✓ *First calf heifers have the most to gain.*
    - ✓ *Resist the temptation to feed the cows without weaning; feeding early*-weaned *calves is more efficient.*
- ☑ Look for unsound cows that need to be culled from the herd.
- ☑ Prepare to have your calf crop weighed and analyzed through your state, regional, or breed performance-testing program.
- ☑ Document cost of production by participating in Standardized Performance Analysis (SPA) programs.
- ☑ 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, or phone 785-532-1267.