



# News from KSU Animal Sciences

## April, 2007

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

☞ **Poultry NPIP Testing at County Shows** - As you know, all **poultry shown each year** at county fairs (not including waterfowl) are required to show test results for Pullorum/Typhoid to meet the federal requirements of the National Poultry Improvement Program (NPIP). The KAHD is again asking to work with a number of counties so that they can test for avian influenza.

They would like to test these birds at least 2 weeks prior to the county fair to have time to run further tests should any positive birds be found on either the Pullorum/Typhoid test or the avian influenza test. All birds not from a certified Pullorum/Typhoid clean flock would be required to be tested for this within 90 days of the county fair so this will work for all county shows in Kansas, as well as the State Fair. In addition, any consignor who's birds are tested for Pullorum/Typhoid at this time will have 5 birds from their consignment tested for AI (avian influenza) as well. If they have fewer than 5 birds, all birds from the consignment will be tested. AI testing is done by collecting a tracheal swab from these birds. *All tests would be conducted without charge to the exhibitors.*

We had a number of counties participate in this program last year. This is a good way to get the birds tested for both AI and Pullorum and save you some work from getting certified or finding someone who is a tester. If you are interested in this program, please contact either Chasity Flowers or Dr. Paul Grosdidier at the KAHD office between 7:30 AM and 4:30 PM at 785-296-2326. Thanks, Dr. Scott Beyer

☞ **Environmental Management** - Producers should clean feedlots or areas of manure accumulation once cattle are removed from summer grazing. Confined feeding pens or temporary feeding sites for the winter months are prime contributors to odor emissions if not properly cleaned and maintained. Also, fly production from these sites is much greater when manure and wasted feed is present, thus creating a nuisance and a potential reduction in animal performance for the remainder of the summer for their livestock. For more information, contact Joel DeRouchey (([jiderouch@ksu.edu](mailto:jiderouch@ksu.edu) or 785-532-2280).

☞ **Maintaining your Semen Investment** - A liquid nitrogen tank full of semen represents a considerable investment. Follow these guidelines for maintaining the tank and handling the semen properly for best results. Store tank in cool dry location away from direct sunlight and where it can be seen daily. Do not store tank directly on cement, set on boards or place on wood floor. Use caution when moving the tank and be sure to secure upright during transportation. Vacuum in tank is susceptible to damage from rough handling. Check liquid nitrogen levels regularly between scheduled fillings. The neck of the tank is much warmer than the body of the tank, especially when liquid nitrogen level is low. Each time canisters are brought into the neck and above the frost line, some sperm cells are damaged. Exposure to elevated temperatures for transferring semen from tank to tank or for thawing should not exceed five to eight seconds. An up-to-date semen inventory showing each straw used will minimize extra handling. Before each breeding season, check thaw unit for temperature accuracy with a reliable mercury-type thermometer. Older straw thermos thermometers must be calibrated routinely. Check with semen provider for optimum thaw technique for their processing method. Most .5- or .25-mL straws should be thawed for 45 seconds in 90°F to 95°F water. Straws thawed in warm water should be used within 15 minutes. During cold weather it will be extremely important to warm gun, sheaths, paper towels, etc, before they contact straws, while the opposite may be true during the warm summer months. Proper semen handling is a vital part of achieving high conception rates to AI. For more information, contact Sandy Johnson ([sandyj@ksu.edu](mailto:sandyj@ksu.edu)).

☞ For **[Suggested Guidelines for Tagging 4-H Pigs](#)** as well as the **[Porcine Circovirus Disease](#)** Factsheet visit the Youth Programs section under Students & Programs on the [www.asi.ksu.edu](http://www.asi.ksu.edu) website. This information was sent to each of the county offices earlier this month, but is also available at <http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=58>. For more information, contact Mike Tokach ([mtokach@ksu.edu](mailto:mtokach@ksu.edu); 785-532-2032).

↳ **Managing Alfalfa Damaged by Frost** - According to Jim Shroyer, Kansas State University research and Extension agronomy state leader, now's a good time to take a hike through your alfalfa fields and take stock of the damage. "Where the alfalfa is damaged by freeze, the leaves will probably turn dark, then start falling off a few days later. The plants may also collapse or fall over if the stems are injured." If you observe this in your alfalfa stands, you may want to mow or shred the plants and let them start all over again. However, Shroyer says that may not always be necessary. "This should only be done if the growing point clusters are frozen, the new regrowth is occurring only from the base of the plants, and the plants can be cut without damaging the new regrowth," he says. If you're going to mow or shred, set your machinery to leave 2-3 in. of stubble to help encourage regrowth. And be aware that freeze-damaged alfalfa that is 6-8 in. tall or less will be slower to regrow after mowing and shredding than taller plants.

According to Bruce Anderson, University of Nebraska-Lincoln forage specialist, here are some things to watch for on well-established alfalfa stands:

- New growth emerging from the tip. This means plants are recovering and no action is necessary.
- New growth emerging as branches below the tip. This means the growing point was killed, slowing plant development significantly, but recovery is occurring. No action is needed.
- New shoots emerging from crown buds. This means the growing point was killed and very little new growth can be expected from existing shoots. Cut or graze if sufficient growth is available for economical harvest before the new shoots get tall enough to be damaged by the harvest. Caution: cutting or damaging new regrowth shoots will cause severe, sometimes fatal, damage. If the new regrowth has grown too tall to safely cut the plants, just let the new shoots develop and expect to take the first cutting much later than normal.

↳ **Trailer-Mounted Radio Frequency Reader Scans Electronic Identification Tags During Cattle Shipments** – Twenty-four head of 650-lb beef steers were split into four groups of six head and equipped with the four major brands of low frequency RFID ear tags. These steers were used to test a RFID reader mounted onto a trailer in a fixed location. Testing was done over a period of several days.

*Bottom Line...* Trailer mounted RFID readers may present a viable option for recording cattle movements through the beef production cycle. Reader performance varies greatly across different brands of tags. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Dale Blasi (785-532-5427; [dblasi@ksu.edu](mailto:dblasi@ksu.edu)) or Larry Hollis (785-532-1246; [lhollis@ksu.edu](mailto:lhollis@ksu.edu)).

↳ **Feed Value of Distiller's Grains Depends on the Type of Grain Fed to Finishing Cattle** – The study used 621 steers that were fed 0, 10, 20, or 30% wet distiller's grains in diets that contained either steam-flaked corn or dry-rolled corn. Feedlot performance and carcass data were collected on all animals. Final data were not available for cattle fed dry-rolled corn with 20% wet distiller's grains.

*Bottom Line...* Wet distiller's grains can effectively replace a portion of the grain in finishing diets, but their nutritive value is lower in diets containing flaked corn in comparison to diets containing dry-rolled corn. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Jim Drouillard (785-532-1204; [jdrouill@ksu.edu](mailto:jdrouill@ksu.edu)) or Chris Reinhardt (532-1672; [cdr3@ksu.edu](mailto:cdr3@ksu.edu)).

↳ **Protein-Enhanced Mineral Supplement Increases Growth and Performance of Stocker Steers Grazing Native Flint Hills Pasture** – Crossbred beef steers weighing 589 lb were supplemented with salt, stocker mineral supplement, or protein and mineral supplement while grazing double-stocked native Flint Hills pastures for 90 days. Weight gains were measured at day 45 and day 90.

*Bottom Line...* Protein enhanced mineral supplements can increase weight gains of steers during the last half of the grazing season when forage quality is decreasing. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Dale Blasi (785-532-5427; [dblasi@ksu.edu](mailto:dblasi@ksu.edu)) or Twig Marston (785-532-5428; [twig@ksu.edu](mailto:twig@ksu.edu)).

☞ **Eye Lens Weight and Nitrogen Content Predicts Beef Animal Age** –Eye lens weights and nitrogen content, dentition scores, and USDA overall maturity scores were obtained from 386 cattle ranging from 370 to 1,115 days of age (slaughter group). The lens weight and nitrogen content were obtained for another group of 20 cattle ranging from 1 to 15 years of age (cull group). Correlations between age and each age predictor were determined. An equation was developed using lens weight and dentition data from the slaughter-age group. Using this equation, nearly 40% of all slaughter-age cattle in this study were verified at less than 21 months of age without instance of a false positive. The current age limit for beef exported to Japan is set at less than 21 months of age.

*Bottom Line...*Using the data obtained in this study, beef from almost four times as many cattle than currently qualify for export to Japan using the set USDA guidelines would be eligible for export. Simply using dentition to stratify cattle as less than 21 months of age and greater than or equal to 21 months of age may also more accurately predict age than the current USDA guideline. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Michael Dikeman (785-532-1225; [mdikeman@ksu.edu](mailto:mdikeman@ksu.edu)) or Liz Boyle (785-532-1247; [lboyle@ksu.edu](mailto:lboyle@ksu.edu)).

☞ **GnRH Removal in the 7-11 CO-Synch for Timed Insemination of Beef Heifers** – Two groups of heifers were synchronized using the 7-11 CO-Synch protocol. All heifers were fed MGA for seven days and received Prostamate (PGF) on the last day of feeding. Heifers assigned to the GnRH treatment group received OvaCyst (GnRH) on day 11 whereas the control group received no injection. On day 18 all heifers received Prostamate followed by a timed insemination and OvaCyst injection 54 hours later. Pregnancy rates were determined by ultrasonography at 31 days after breeding.

*Bottom Line...*When using the 7-11 CO-Synch protocol, the use of GnRH at day 11 appears to improve conception rates to a fixed time insemination. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact David Grieger (785-532-1229; [dgrieger@ksu.edu](mailto:dgrieger@ksu.edu)) or Twig Marston (785-532-5428; [twig@ksu.edu](mailto:twig@ksu.edu)).

☞ **Vaccine Impacts *E. coli* 0157 in Feedlot Cattle** – Sixty cattle testing positive for *E. coli* 0157 were utilized in this experiment. Cattle were allotted equally to three treatment groups. Treatments were placebo (no vaccine), or 2 or 3 cc of a vaccine designed to reduce *E. coli* 0157 in cattle. Cattle were fed a receiving diet and samples were collected for 8 weeks to monitor shedding of *E. coli* 0157. Bacterial culture and confirmation were performed on all samples, and procedures were included to identify animals shedding *E. coli* 0157 at abnormally high levels.

*Bottom Line...*The *E. coli* 0157 SRP vaccine at the higher dose reduced prevalence of cattle shedding *E. coli* 0157 and there is evidence that the vaccine decreases the number of cattle shedding high levels of the organism.. A complete description of the research is available online at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact T. G. Nagaraja (785-532-1214; [tnagaraja@vet.ksu.edu](mailto:tnagaraja@vet.ksu.edu)) or Larry Hollis (785-532-1246; [lhollis@ksu.edu](mailto:lhollis@ksu.edu)).

☞ **Effects Of Replacing Corn With Triticale In Diets For Nursery And Finishing Pigs** - Two experiments were conducted to determine the effects of replacing corn (none, 1/3, 2/3, and all) with triticale on growth performance and nutrient digestibility in pigs. For the 34-d nursery experiment, 168 weanling pigs (avg initial weight of 14.8 lb and avg initial age of 21 d) were used. On d 24, fecal samples were collected to allow determination of nutrient digestibility. Overall, pigs consuming diets with 1/3 of the corn replaced with triticale improved ADG (cubic effect,  $P < 0.08$ ) and F/G (linear effect,  $P < 0.01$ ). Digestibility of DM, N, and GE were not affected ( $P > 0.18$ ). For the finishing experiment, 184 pigs (avg initial weight of 131 lb) were used, and fecal samples were collected on d 46. Overall, ADG (linear effect,  $P < 0.02$ ) and ADFI (linear effect,  $P < 0.06$ ) were decreased by 6% as replacement of corn with triticale was increased from none to 100%. But F/G and digestibility of nutrients were not affected ( $P > 0.16$ ), and the negative effects on ADG and ADFI were evident only at 2/3 replacement and replacement of all corn with triticale. In conclusion, replacing corn with triticale improved growth performance in nursery pigs, but reduced ADFI and, thus, ADG in finishing pigs, when more than 1/3 of the corn was replaced. 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 C. R. Monge, J. D. Hancock, T. L. Gugle, and C. Feoli.)

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

- ☞ **Registration for the KSU Horse Judging Camps due by May 1.** The 2007 Horse Judging Camps will be held June 4 for the Beginning Section and June 11-12 for the Advanced Section. For a brochure or more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).
- ☞ 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 or toll free at 877-205-8345. The workshop is scheduled for June 6-8.
- ☞ **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). For more information, contact Julie Voge (785-532-1264; jvoge@ksu.edu).
- ☞ The **Champion Livestock Judging Camps** will be conducted throughout the month of June. 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.
 

This 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. Prior livestock judging experience is necessary for these camps. Workouts will be conducted similar to those at a collegiate level. The camp will focus primarily on the proper format, terminology and presentation of oral reasons. Camp participants will be exposed to livestock evaluation skills and incorporating performance records in the decision making process.

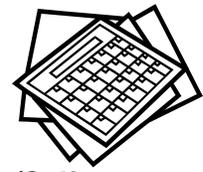
The fee for camp is \$180 per person and is nonrefundable. The registration deadline is May 18. For more details, visit our website at [www.asi.ksu.edu/livestockjudging](http://www.asi.ksu.edu/livestockjudging). For more information, contact Scott Schaake (simmi@ksu.edu; 785-532-1242) or Megan McClure (mclclurem@ksu.edu; 785-532-2996).
- ☞ The **2007 Dr. Bob Hines' Kansas 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.
 

This year's program will include sessions on "Feed Ingredients and Feed Mixing Demonstrations" as well as "Managing Show Gilts as Breeding Females." Watch for more details coming soon. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Jim Nelssen (785-532-1251; nelssen@ksu.edu)

### CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 4, 2007	KSU Horse Judging Camp, Beginning Section	Manhattan
June 6-8, 2007	HACCP Training	Manhattan
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 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

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



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

June is a month to let Mother Nature take her course. Native grasses are usually at peak production; therefore, little supplementation is needed, with the exception of some minerals.

#### *Cow-herd nutrition*

- Provide plenty of clean, fresh water.
- Provide free-choice minerals to correct any mineral deficiencies or imbalances.
- Monitor grazing conditions and rotate pastures if possible and practical.
- Consider creep-feeding if it's cost-effective.

#### *Herd health*

- Monitor and treat pinkeye cases.
- Provide fly control. Consider all options; price and efficiency will dictate the best options to use.
- Monitor and treat for foot rot.
- To reduce heat stress, avoid handling and transporting cattle during the hottest times of the day.

#### *Forage and pasture management*

- Check and maintain summer water supplies.
- Place mineral feeders strategically to enhance grazing distribution.
- Check water gaps after possible washouts.
- Harvest hay in a timely manner; think quality and quantity.

#### *Reproductive management*

- If using AI, do not expect all females to conceive. A common practice is to breed once or twice with AI, then turn out cleanup bulls for the balance of a 65-day breeding season. A 42-day AI season with estrus synchronization at the front end gives most females three chances to conceive by AI.
- Watch bulls for libido, mounting and breeding function.
- Record breeding dates to determine calving dates.
- By imposing reproductive pressure (45-day breeding season) on yearling heifers, no late-calving 2-year-olds will result. This will increase lifetime productivity and profits.

#### *Genetic management*

- Monitor herd performance. Then identify candidates to cull because of poor performance.

#### *General management*

- Check equipment (sprayers, dust bags, oilers, haying equipment, etc.), and repair or replace as needed. Have spare parts on hand because downtime 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.