



# News from KSU Animal Sciences

## March, 2006

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

↵ The **2006 KSU Cattlemen's Day** was a huge success!! We had over 1,300 beef producers, allied industry representatives, K-State staff and students registered this year. We appreciate your support of this educational event and would also appreciate any comments or suggestions you might have for next year.

Listed below are just a few of the articles that you can find in the Beef Cattle Research Report:

- Comparison of Corn and Grain Sorghum Dried Distillers Grains as Protein Supplements for Growing Beef Heifers
- Effects of Spring Pasture Burning, Pasture Deworming, and Grain Supplementation on Performance of Stocker Steers Grazing Native Flinthills Pasture
- Effect of Optaflexx and Days on Feed on Feedlot Performance, Carcass Characteristics, and Skeletal Muscle Gene Expression in Yearling Steers
- Comparison of Dectomax and Valbazen on Beef Cattle Carcass Traits
- Examining Cost of Gain in Kansas Feedlots
- Variation in Performance of Electronic Cattle Ear Tags and Readers
- Comparison of CIDR to MGA in a 7-11 Cosynch Protocol with Timed Insemination of Beef Heifers
- Accelerated and "Natural" Production-system Effects of Performance and Carcass Traits

You can find out more information on these and other articles in the Research Report, by visiting the Animal Sciences and Industry website ([www.asi.ksu.edu](http://www.asi.ksu.edu)) or if you would like a Beef Cattle Research Report CD, please contact Lois at [lschrein@ksu.edu](mailto:lschrein@ksu.edu); 785-532-1267.

↵ **Shelterbelts** - It has been established that there is a correlation between dust and odor emission. Dust particles absorb and concentrate odorous compounds. Therefore, minimizing dust will reduce odor leaving a livestock operation. One such management practice that farms, regardless of size, can implement is the development of tree shelterbelts.

Wind breaks of trees correctly positioned near the facility not only create a visual barrier but can also provide a large filtration surface for dust and odorous compound removal. Trees can adsorb odorous compounds and create turbulence that enhances odor dispersion and dilution. Trees can create a cooler microclimate around the facility, which can reduce odors. Producers should begin thinking about planting trees in the upcoming months to establish shelterbelts for their operations. For more information contact Joel DeRouchey ([jderouch@ksu.edu](mailto:jderouch@ksu.edu); 785-532-2280)

↵ **Kansas State Fair/Kansas Junior Livestock Show Update** – Some of the rule changes for 2006 include:

- **1)** The addition of a Meat Goat Show to KJLS. Wether goats must weigh a minimum of 60 pounds and can be any breed or combination of breeds. There will be no maximum weight. Must be nominated with ear tag by June 15.
- **2)** The addition of a Goat Show to the KSF. They will have an Open Show with the breeding show in the morning and a junior open wether show in the afternoon. This will not be a 4-H show, but 4-H members will be able to enter. No nominations required for this show.

For more information, please refer to the March 7 letter sent by Julie Voge.

↵ **All market animals, commercial gilts, and commercial heifers** must be nominated to be eligible for the Kansas State Fair and/or Kansas Junior Livestock Show.

- 1. Steers and Market Heifers nominated with noseprint by May 1
- 2. Lambs nominated with noseprint by June 15
- 3. Hogs (Market hogs and Commercial Gilts) nominated with ear notches by June 15

- 4. Meat Goats nominated with ear tag by June 15
- 5. Commercial Heifers nominated with tattoo by June 15

Initial nominations will again require a postmark by May 1 for steers and market heifers and June 15 for lambs, pigs, wether dam ewes, commercial breeding heifers and meat goats. All nominations must be complete within one month of nomination due date.

The Extension Youth Web Site is available to double check your records. It can be accessed at [http://www.oznet.ksu.edu/pr\\_eyas/](http://www.oznet.ksu.edu/pr_eyas/). Then click on nominated livestock. For more information, contact Julie Voge ([jvoge@ksu.edu](mailto:jvoge@ksu.edu) or 785-532-1264).



**KS Pork Facts:** There are 1,500 hog farms in Kansas. Of these operations, 310 produce over 95% of the state's pork. Kansas is the number 9 state in hog and pig inventory producing about 2.7% of the nation's total. In 2004, Kansas producers sold 3,060,040 market hogs, feeder pigs and seedstock with a gross market value of \$392,058,730. These hogs produced over 450,000,000 pounds of Pork (The Other White Meat®), which helped feed over 10 million people both in the U.S. and abroad. Kansas pork operations consume nearly 30 million bushels of grain. Primarily, these operations utilize Kansas-grown dryland milo, but they also feed significant amounts of corn and soybean products. (Source Kansas Pork Association; KSpork.org).



### **Insuring Proper Heifer Development - Sandy Johnson**

Heifer development is a long and expensive process so it is important to control costs and optimize reproductive outcomes. The October 2005 KSU replacement heifer budget shows a break even cost of \$1250 for a springer heifer. The budget reflects the total economic cost of development which includes opportunity costs of labor and feed resources.

General recommendations are that heifers should achieve a target weight of 60% of mature body weight by the onset of the first breeding season. Since mature cow size has increased over time, it is important to have a realistic estimate of the heifer's future mature weight.

While age and weight are key determinates of timing of puberty in heifers, there are no absolutes. It is common to hear about heifers that should have been big enough and seemed to be cycling, yet heifer pregnancy rate is lower than expected. In these cases there is rarely any hard evidence of actual reproductive maturity. Reproductive maturity can be assessed by palpation prior to the breeding season. Each heifer is palpated by a trained veterinarian during which the size and tone of the tract is evaluated as well as the ovaries and any structures on the ovaries. The reproductive tract score is a scale from 1 to 5 with 1 being infantile to 5 a cycling heifer with a corpus luteum. This system is a true evaluation of reproductive maturity and has repeatedly been shown to be related to heifer pregnancy rates.

Data from the Missouri Show Me Select heifer program illustrates the relationship between reproductive tract scores and weights. While the average weight of heifers increases from the most immature tract score to the most mature, there are still 1050 to 1100 lb heifers with tract scores of 1 and 2. For the most immature score, weight prior to breeding ranged from 375 lbs to 1100 lbs, for a 725 lb spread. Similar weight ranges exist for other scores. Depending on how far in advance of the breeding season the scores are taken and how long the breeding season lasts, some tract score 1 and 2 heifers may mature enough to conceive before the end of the breeding season. Knowledge of actual reproductive tract maturity prior to breeding allows time for ration adjustments, breeding adjustments or additional culling based on the number of heifers and the distribution of scores.

So while we do need to pay attention to weight gain in developing heifers, weight alone may not tell us all we need to know. If reproductive tract scores are taken 40 to 60 days prior to breeding, when pre-breeding vaccinations are given, an accurate assessment of heifer maturity can be made and adjustments made accordingly. This may be especially worthwhile for those that plan to synchronize and AI heifers and want to reduce the risk of a poor response from pre-pubertal heifers. In situations where heifers of unknown or unfamiliar genetics are being developed, this would be a valuable tool to reduce risk. If we are short of grass again this year, reproductive tract scores could be an early culling tool to reserve pasture space for heifers most likely to get pregnant. Using a fairly short 30 to 45 day breeding season will naturally sort out those immature heifers, but will not conserve early pasture resources.

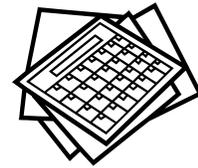
## UPCOMING EVENTS >>>>>>>>>>

- ✦ The 2006 **Annual Meeting of the Midwestern Sections of the American Dairy Science Association and the American Society of Animal Science** will be held March 20 to 22, 2006, in Des Moines, IA. Some excellent symposia and invited presentations are planned. For more information, visit the website at [www.asas.org/midwest/2006/](http://www.asas.org/midwest/2006/).
  
- ✦ The agenda for the upcoming **Livestock Inservice Agent Training** is as follows:
  - March 29
  - 1:00 Forces Shaping Change in the Beef Industry – Jim Mintert  
Economics of animal identification – Kevin Dhuyvetter
  - 2:15 Quality System Assessment Programs and New Marketing Opportunities – Sandy Johnson
  - 3:00 Break
  - 3:30 Technology of animal identification – KSU Beef Team  
Understanding Sire Selection information – Dan Moser and Twig Marston
  - 5:00 Dinner at Stocker Unit – Animal identification technology will be showcased
  - March 30
  - 8:00 Review of the estrous cycle and how synchronization protocols work – Sandy Johnson  
Q&A Fact Sheet on beef nutrition – Chris Reinhardt
  - 9:30 Break
  - 10:00 Testing and Utilizing off-quality grains – Leland McKinney and Joel DeRouchey
  - 10:40 Forage Sampling and variability – Twig Marston
  - 11:10 Veterinary Considerations from KSU – Larry Hollis and Co. from KSU Vet School
  
- ✦ **AI Refresher Course, April 8, 2006**, Colby Community College Farm, 9 am to 3 pm. Morning will be spent in classroom activities and afternoon will include semen handling and palpation. Registration will be limited and includes noon meal, supplies and palpation lab. Send \$50, payable to Kansas State University to Sandy Johnson, NW Research & Extension Center, PO Box 786, Colby, KS 67701 by March 31st to reserve a place. For more information contact Sandy Johnson, [sandyj@ksu.edu](mailto:sandyj@ksu.edu) 785-462-6281 or Marcy Ward, [marcy@colbycc.edu](mailto:marcy@colbycc.edu) 785-462-3984 Ext. 256. Sponsored by K-State Research and Extension and Colby Community College.
  
- ✦ **2006 Roundup will be held April 6th** beginning at 4 pm at the Agricultural Research Center in Hays. Research updates will be presented by John Brethour, Keith Harmony, Brittany Howell and Sandy Johnson. This will also serve as a chance to meet and hear from the newest additions to the center, Director, Bob Gillen (formerly a USDA Range Scientist in Oklahoma) and beef scientist John Jaeger. For more information contact 785-625-3425, ext 200 or [pball@ksu.edu](mailto:pball@ksu.edu).
  
- ✦ Plans are underway for the **2006 KSU Equestrian Camps**. The English Boot Camp will be held June 7-9 and the Western Boot Camp will be held June 14-16 at Kansas State University. In the Boot Camp, campers will work with their horse to improve their overall riding ability with a special emphasis on equitation. In addition, campers will learn horsemanship and gain a better understanding of the horse through presentations, demonstrations and videos. Camp highlights include a picnic trail ride, scavenger hunt, horse games and a camp horse show.

The Introduction to College Riding camp will be held June 23-24 at KSU. This camp will give talented riders and their parents an overview of what it is like to ride in IHSA and Varsity Equestrian competitions. Emphasis will be placed on riding a variety of horses and becoming more adjustable. Coaches, athletes and athletes' parents will be on hand to talk to parents at a special informational session held on Friday evening.

## CALENDAR OF UPCOMING EVENTS

Date	Event	Location
March 28-30, 2006	Livestock In-service Agent Training	KSU Student Union
April 1, 2006	Kansas Wildlife Habitat Contest	Fall River
April 6, 2006	Hays Roundup	Hays
April 8, 2006	KSU Judging Team Reunion	Alumni Center, Manhattan
June 13-15, 2006	HACCP Workshop	Manhattan
August 26, 2006	State 4-H Livestock Judging Contest	Weber Arena, Manhattan



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

### BEEF -- Cowherd Tips by *Twig Marston*

- Breeding season is beginning or continuing for many operations; therefore, both females and males must be reproductively fit.
  - 1) Several estrus synchronization procedures have been developed. To determine the correct synchronization program to use, consider the following: age group of females (yearling replacement heifers vs. cows), commitment of time and efforts for heat detection, potential number of females that are anestrous (days post partum, body condition, calving difficulty), labor availability, and the return on investment for total commitment to the breeding program.
  - 2) Handle semen properly and use correct AI techniques to maximize fertility.
  - 3) Natural service bull should have body condition, eyes, feet, legs and reproductive parts closely monitored during the breeding season. Resolve any problems immediately.
  - 4) All bulls should have passed a breeding soundness examination prior to turnout.
- Begin your calf preconditioning program. Vaccination, castration and parasite control at a young age will decrease stress at weaning time. This is a time to add value to the calf crop.
- Implanting calves older than 60 days of age will increase weaning weight.
- Properly identify all cows and calves. Establish premises numbers for compliance with state and national programs.
- Use best management practices (BMPs) to establish sustainable grazing systems.
- Use good management practices when planting annual forage sources and harvesting perennial forages.
- Maintain records that will verify calving season, health programs, and management practices.

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.