

News from KSU Animal Sciences

February, 2008



Newsletter from the Department of Animal Sciences and Industry
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785-532-6131 - www.asi.ksu.edu

WHAT'S NEW...

- ↙ Did you know that regardless of how many pigs you care for, whether it's a single show pig or thousands of market hogs, you are part of the pork industry? And, just as you are responsible for keeping your show pig or pigs healthy, you share the responsibility of keeping all of the pigs in the United States healthy as well.

Biosecurity and Your Pig Project is a youth swine publication now available online at <http://www.pork.org/PorkScience/SwineHealth/BY.pdf>. This booklet is intended for youth exhibitors of all ages and levels of experience. In it, you will find recommended biosecurity guidelines to follow at your farm and when taking pigs to exhibitions.

- ↙ **KSU Market Pig Weight Tape** - Marketing pigs at the correct weight is critical to capture the most dollars from the packer. Estimating market weights visually is very difficult for even the most trained eye. Ideally, pigs would be weighed on a scale; however, scales aren't available in all situations and are cumbersome to move from barn to barn. We developed a "Market Pig Weight Tape" to aid producers in determining the average weight of a group of pigs. The weight tape should not be used to determine the weight of an individual pig. There can be error of as much as 20 to 30 lb in the measurement of a single pig. If you measure the flank-to-flank measurement on 20 to 30 pigs, however, the measurement becomes quite accurate. The tape will allow you to determine the average weight of a group of pigs very well.



The best application for the tape is to either: 1) measure the flank measurement on the 20 heaviest pigs in the group to determine whether they are ready to market; or 2) measure the flank measurement on 30 randomly chosen pigs to determine the average weight of pigs in the barn before starting to market. If average pig weight is 220 lb or greater, 10 to 11% of the barn will be 30 lb greater than the average weight and 4 to 5% will be 40 lb greater than the average weight. For example, if a group of 600 pigs averages 245 lb, approximately 66 pigs will weigh more than 275 lb and 30 of those pigs will weigh more than 285 lb.

Procedures for using the flank tape are similar to those used with the tape for gestating sows. The measurement is from the bottom of the flank on one side of the pig over the highest point of the back to the bottom of the flank on the other side. The tape should be loosely placed over the back and not pulled down tightly. Tapes can be ordered by emailing Lois Schreiner at lschrein@ksu.edu or calling Lois at 785-532-1267.

- ↙ The Department of Animal Sciences and Industry is seeking applications for the position of **Extension Assistant, Youth Livestock Coordinator** - The Youth Livestock Coordinator provides leadership and administrative actions to coordinate all aspects of youth livestock programs for the Department of Animal Sciences and Industry. Full job description is available at www.asi.ksu.edu/position. For more information, contact Mike Tokach, 785-532-2032; mtokach@ksu.edu.

↵ **The Department of Animal Sciences and Industry is seeking applications for the position of Assistant Professor, Animal Behavior.** This position is a full time 12-month, tenure-track position, 60% Research, 40% Teaching. A PhD in Animal Science or related area, or equivalent, is required by employment date. View the complete position announcement at <http://www.asi.k-state.edu/position>. For more information, contact Dr. Ernie Minton, (785-532-1238; eminton@ksu.edu).

↵ **Effects Of Dried Distillers Grains With Solubles And Extruded Expelled Soybean Meal On Growth Performance And Carcass Characteristics Of Grow-Finish Pigs** - A total of 120 barrows (maternal line PIC 1050) with an initial BW of 105.7 lb were used in an 83-d trial to study the effects of dried distillers grains with solubles (DDGS) and extruded expelled soybean meal (EESM) on growth performance and fat quality. Pigs were blocked by weight and randomly allotted to one of six treatments with two pigs per pen and 10 pens per treatment. Diets were: a corn-soybean meal control diet with no added fat, corn-EESM diet with no added fat, corn-EESM diet with 15% DDGS, corn-soybean meal diet with 15% DDGS, and 1.55% choice white grease (CWG), corn-soybean meal diet with 3.25% CWG, and corn-soybean meal diet with 4.7% CWG. Diets were formulated to have three dietary iodine value (IV) levels (42, 55, and 62) to compare the impact of fat source within dietary IV levels. On d 83, jowl and backfat samples were collected. Pigs fed the control diet, EESM, or 4.7% CWG had increased ADG compared with pigs fed the diet containing EESM with 15% DDGS. Pigs fed the control diet had increased ADFI compared with all other treatments. Pigs fed EESM with 15% DDGS and the diets with 4.7% CWG had improved F/G compared with pigs fed the control and pigs fed DDGS with CWG. Pigs fed high CWG had greater loin depth compared with pigs fed low CWG. Pigs fed either of the diets with 15% DDGS had increased backfat IV compared with pigs fed diets without DDGS. Pigs fed EESM had increased backfat IV when compared with the control diet or diets with 3.25 or 4.7% CWG. Adding DDGS to the diet or using EESM increased IV of jowl fat. Adding CWG to the control diet also increased IV of jowl fat. Feeding ingredients with higher levels of unsaturated fat, such as EESM and DDGS, had a greater impact on fat IV than CWG even when diets were formulated to similar IV levels. More information is available on this experiment and others in the KSU Swine Day Report at www.ksuswine.org. (*This study conducted by J. M. Benz, M. D. Tokach, S. S. Dritz, J. L. Nelssen, J. M. DeRouchey, and R. D. Goodband.*)

↵ **Ability Of Low Profile Cross-Ventilated Freestall Barns To Improve Environmental Conditions For Dairy Cattle** - Recently, there has been interest in constructing mechanical ventilation with evaporative pads to improve the environmental conditions for cows during periods of heat stress. Low profile cross-ventilated freestalls with evaporative pads (LPCV) have become a popular system. The purpose of this study was to evaluate how well these LPCV systems improve the temperature-humidity index (THI) under different ambient conditions. As ambient humidity increases, ability of the LPCV to reduce THI is decreased. Producers wishing to construct LPCV barns should carefully evaluate the climate in which they want to construct LPCV structures. For more information on this experiment, contact John Smith (jfsmith@ksu.edu; 785-532-1203) or Mike Brouk (mbrouk@ksu.edu; 785-532-1207).

↵ **Aging, Blade Tenderization, and Enzyme Injection Impacts Tenderness of Muscles from Fed Cull Cows** - Whole muscle cuts were removed from both sides of 31 cow carcasses ranging from 3 to 15 years of age. Cuts from each side were vacuum aged for 7 or 28 days, then frozen. Frozen, aged beef was thawed, then blade tenderized and injected with a typical industry enhancement containing bromelin. Round tip, top sirloin, and top blade (flat iron) steaks were measured for package loss, cook loss, and tenderness.

The Bottom Line ... For blade tenderized, enhanced beef, vacuum aging round tip and top blade steaks for 7 days is sufficient to improve tenderness. Additional aging of top sirloin steaks enhances tenderness without impacting packaging or cooking loss. For more information, contact John Unruh (junruh@ksu.edu; 785-532-1245) or Liz Boyle (lboyle@ksu.edu; 785-532-1247).

↵ Available now on the Extension NAIS Resource Center website is a **National Animal Identification System (NAIS) 4-H Powerpoint** -This presentation is focused on the National Animal Identification System for use with 4-H programs and is available on the Extension/NAIS website at <http://animalid.aphis.usda.gov/nais/extension/> This website provides NAIS information and resources for Extension educators to enhance their outreach initiatives.

This 4-H presentation is for youth producers and exhibitors and explains what NAIS is, why it is important, and how they can get involved. It details:

- The speed in which animal disease can spread
- The importance of premises registration
- How animal ID helps prevent the spread of disease
- How they, as youth producers and exhibitors, can set up their own animal travel log

You can also order copies of this presentation which includes an audio portion, by email to Wayne Maloney at wayne.maloney@aphis.usda.gov.

↵ **The Beef Cattle Institute at Kansas State University** - Beef is King in Kansas. In Kansas, calf production yields \$600 million in gross receipts to ranchers, stocker production adds \$1 billion to calf value, feedlots market \$5.8 billion worth of fed cattle, and Kansas slaughter plants market over \$8 billion in beef annually. No other agricultural industry comes close to Beef in terms of economic impact.

Kansas State University has the overarching goal of becoming a Top-10 university. In 2007, the Office of the Provost provided funding to create the Beef Cattle Institute at Kansas State University (BCI) to elevate Beef programs at KSU to national and international prominence. Members of the BCI include 36 faculty from 14 colleges and departments across the KSU campus. Coordinators of the BCI are from Animal Sciences and Industry, the College of Veterinary Medicine, the Food Science Institute, and the Division of Continuing Education.



We are seeking to make something that K-State already does well and make it World Class. K-State is a nationally recognized leader in Beef Production teaching, research, and outreach. The BCI exists to coordinate and consolidate knowledge and resources to increase the productivity of existing K-State people and programs. Briefly, the 3 main objectives of the BCI are as follows:

1. To unify and leverage the combined abilities of various departments across campus to conduct collaborative, production driven Beef research
2. To develop on-campus and on-line courses and curricula to provide Cow-calf and Feedlot Certification programs to both traditional students as well as off-campus, non-traditional students already employed throughout the Beef industry.
3. To continue development of online, multilingual, training modules for use by beef production workers throughout Kansas, the U.S., and abroad.

Beef programs of most immediate interest include:

- Food Safety
- Animal Health and Well-Being
- Production efficiency
- Human Resources
- Workplace safety
- Meat quality
- Economics
- Technology transfer

The BCI seeks to synergize existing resources and personnel, increase exposure of existing Beef-focused programs, and create new programs as directed by the Beef industry where none may exist. One such new program is the upcoming International Symposium on Beef Cattle Welfare scheduled for May 28-30, 2008 in Manhattan. Speakers and participants are coming from throughout the U.S. and abroad and from all sectors of the beef industry, the supporting media, and allied industries to discuss the latest scientific findings, consumer perceptions, and policy directions in the field of beef cattle welfare. For registration information, visit the official website at www.isbcw.beefinstitute.org. For more information on BCI coordinated programs, contact Wrenn Pacheco at wpacheco@vet.k-state.edu.

UPCOMING EVENTS...

- ↳ A **High Plains Biofuels Co-Product Nutrition Conference** has been scheduled for February 20, 2008 at the Plaza Hotel in Garden City, Kansas. The conference will begin at 8:30 a.m. with registration. This conference is a great opportunity to get the latest information on biofuel co-products. Cost of registration for the conference is \$40 before February 15 and \$55 after that date. A registration form and complete schedule are available at www.ksubeef.org under "Upcoming Events." For more details, contact Chris Reinhardt (cdr3@ksu.edu; 785-532-1672).
- ↳ Make plans to attend the **Goat Production and Marketing Conference** to be held on March 1, 2008, at the Phillips County Fairgrounds in Phillipsburg, Kansas. The conference will begin at 9:00 a.m. with registration. Speakers for the conference include: Dave Sparks, Oklahoma State University; Steve Hart, Langston University; and Bonnie Lapke, Iowa Healthy Edge Meats. The day will also include hands-on demonstrations, vendors displaying various goat products; and a hearty goat meat lunch. Pre-registration for the event is due by February 22. For a brochure or more information, contact the Phillips-Rook District Office at 785-425-6851 or e-mail rboyle@ksu.edu.
- ↳ The **2008 High Plains Dairy Conference** will be held March 6-7, 2008 in Albuquerque, New Mexico. Topics for the conference include: *Accelerated Growth Programs for Milk-Fed Calves; Corn Processing Co-Products Practical Utilization in Lactating Dairy Cow Diets; Economics of Making Nutritional Decisions with Volatile Feed Prices, Economic Impact of Dairies in the High Plains*, and much more. For a complete list of conference topics and a registration form, visit <http://www.highplainsdairy.org>. For more information, contact John Smith (jfsmith@ksu.edu; 785-532-1203).
- ↳ The **1st Southwest Women in Dairy Conference** will be held in conjunction with the High Plains Dairy Conference on March 6-7, 2008 in Albuquerque, New Mexico. Some of the best speakers will be present to discuss issues that affect women in the dairy industry. This conference is offered free of charge, thanks to industry support from DMI, DairyMAX and Southwest Dairy Farmers and Museum, however, pre-registration is required. Due to the interactive nature of the program, space is limited to 30 registrants. For complete details on this conference, including a schedule and registration form, visit <http://www.highplainsdairy.org>. For more information, contact John Smith (jfsmith@ksu.edu; 785-532-1203).
- ↳ **Cattlemen's Day 2008** –The 95th annual Cattlemen's Day will be held Friday, March 7, 2008. All events for Cattlemen's Day will be held in Weber Hall this year including the commercial trade show and educational exhibits. The Trade show and educational exhibits will open at 8:00 a.m. Registration for KSU Cattlemen's Day will be \$15 per person in advance or \$25 per person at the door. Morning refreshments and lunch are included with registration. Invited speakers for 2008 will be Temple Grandin, Colorado State University and Dell Allen, Cargill Meat Solutions. For more information visit www.asi.ksu.edu/cattlemensday or call 785-532-1267.
- ↳ The **KSU "Legacy" Bull & Female Sale** will offer leading genetics for the Angus, Hereford & Simmental breeds. Be sure to join us for the 31st Annual Performance Bull, Elite Show & Donor Quality Heifer Sale & the opportunity to finish any KSU owned female. You are welcome to stop by and view the cattle at your convenience at the KSU Purebred Beef Teaching Unit. The Sale will be held March 7, 2008, at the conclusion of KSU Cattlemen's Day. The sale will begin at 3:30 p.m. at the Purebred Beef Unit. A complete catalog is available online at <http://www.asi.ksu.edu/DesktopDefault.aspx?tabindex=999&tabid=955>. For more information or a sale catalog, contact Ryan Breiner (rbreiner@ksu.edu; 785-532-6127) or Megan McClure (mcclurem@ksu.edu; 785-532-2996).

↳ The **South Central Goat Conference** is scheduled for the evening of March 7, and all day Saturday, March 8, at the Hutchinson Sale Barn. Dr. Terry Gibson and Dr. Steve Hart from Langston University are the featured presenters along with Dr. Deb Mangelsdorf of Manhattan and Brian Faris, K-State Research & Extension Sheep/Goat Specialist. For more information, contact Jonie James at 316-284-6930, or Kent McGinnis at 620-662-2371.

↳ The **2008 KSU Sheep Day and Symposium** has been scheduled for March 15 in Weber Hall. This event is a great opportunity to hear the latest updates on sheep management and nutrition. Registration fee is \$15 per couple or adult over college age and will begin at 8:00 a.m. A tentative schedule is as follows:

- 9:00 a.m. Welcome and Introduction–
Dr. Ken Odde, Animal Sciences and Industry Department Head
- 9:30 a.m. Lamb – Livestock Risk Protection (LRP)
- 10:15 a.m. *BREAK*
- 10:30 a.m. Lamb – Livestock Risk Protection (LRP)
- 11:15 a.m. Practical Uses of the Dorper Sheep & Boer Goat in today's Livestock Industry –
Warren Cude, President Dorper Sheep Breeders' Association
- 11:55 a.m. *Door Prize Drawing and Lamb LUNCH*
- 1:00 p.m. Kansas Sheep Ambassador Introductions and Announcement of Winners
- 1:15 p.m. KSA Business Meeting, Kansas Sheep Council Annual Meeting and Report
- 2:15 p.m. Latest Nutritional Strategies for Sheep Production
Larry Mrozinski
- 2:45 p.m. Goals and Ideas for the Kansas Sheep Industry
Dr. Brian Faris, Extension Sheep and Meat Goat Specialist
- 3:15 p.m. Drawing for Door Prizes and Adjourn

Watch for more details at www.asi.ksu.edu under Upcoming Events. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).

↳ New for this year is the **2008 KSU Youth Sheep and Meat Goat Day** which has been scheduled for March 15 in Weber Hall in conjunction with KSU Sheep Day. This year's program will include events for sheep and meat goat junior producers. We are honored to bring in Larry Mrozinski, Indiana, to cover the sheep area and Terry Burks, Kentucky, to discuss meat goats. Both gentlemen bring many years of experience to the sheep and meat goat project areas.

Registration will begin at 8:30 a.m. with the program kicking off at 9:15 a.m. and concluding at 3:30 p.m. This year we will have simultaneous speakers covering many topics concerning preparing and selecting your lamb or meat goat for the show ring. Paid participants can attend any session they prefer or rotate from sheep to meat goats as they desire. Participants will be able to get hands on experience learning how to show, shear, clip and select animals for their projects. A highlight of the event will be the drawing for show lamb and meat goat gift certificates and other great prizes.

Registration fee for this event will be \$15 per participant if postmarked by February 22. After that date, the fee will be \$20 per participant. Visit www.youthlivestock.ksu.edu for a complete schedule of the day's activities. For more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).

↳ A **Livestock Fair Management Clinic** will be held March 26 at Emporia and March 27 at Scott City. This clinic is designed for Extension agents and local volunteers involved in livestock fair management and leadership. This professional development opportunity consists of an activity filled day to increase awareness and knowledge and provide a forum for open communication for individuals working with livestock fairs across Kansas. Both Agriculture and 4-H agents are invited to attend, as well as a local volunteers if appropriate.

Registration fee for the clinic is \$10 per participant and is due by March 18. For an agenda and registration form, visit the Research and Extension page on our website at www.asi.ksu.edu under Upcoming Events. For more information, contact Joel DeRouchey (jderouch@ksu.edu; 785-532-2280).

↪ The **Kansas Wildlife Habitat Evaluation Contest** will be held Wednesday, April 9, 2008, at the Maxwell Wildlife Refuge, Canton, Kansas. For more information, contact Charles Lee (785-532-5734; clee@ksu.edu)

↪ The National Junior Swine Association will hold its 7th annual national **Youth Leadership Conference** in San Antonio, Texas on May 9-11, 2008. Youth ages 14-21 will be challenged to make the most of their opportunities in life while broadening their knowledge in important swine industry issues at this conference.

The conference fee is \$125 which includes rooms, meals, activities and a t-shirt. Applications are due to the NSR office by April 9. For an application form or more details visit, www.nationalswine.com. For more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).

↪ An **International Symposium on Beef Cattle Welfare** has been scheduled for May 28-30, 2008, at the Kansas Farm Bureau Building in Manhattan, Kansas. This symposium is a direct function of the Beef Cattle Institute at KSU. The mission of this symposium is to understand the strides that have been made by the beef industry for the welfare of cattle and discuss new areas of opportunities for improvement. Make plans now for this landmark event.

This symposium is proud to provide a venue to highlight the world's experts on beef cattle welfare. Speakers for the symposium range in areas of expertise and responsibility. Speakers will include producers, nutritionists and veterinarians that speak on current issues in the beef industry. The speaker list also includes people in policy making positions within the federal government, professional societies and industry commodity groups. Lead research specialists from around the globe will discuss current research findings and future research needs in beef cattle behavior and welfare.

The deadline for submitting an abstract for the conference is March 15, 2008. For more information, click on the "Abstract Guidelines" at <http://isbcw.beefcattleinstitute.org>.

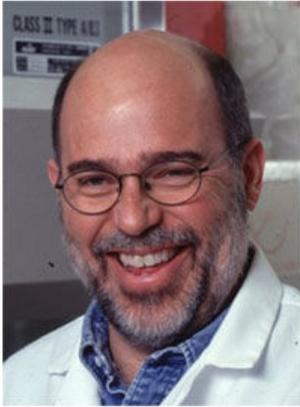
For a complete schedule of events and registration form, visit <http://isbcw.beefcattleinstitute.org>. For more information, contact Wrenn Pacheco at the Beef Cattle Institute (785-532-4844; wpacheco@vet.ksu.edu) or Chris Reinhardt (785-532-1672: cdr3@ksu.edu).

↪ Dates have been changed for the **2008 Dr. Bob Hines Swine Classic**. The Classic will be held July 11-12, 2008 at CiCo Park in Manhattan. Watch for more information.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
February 20, 2008	High Plains Biofuels Co-Product Nutrition Conference	Garden City
March 1, 2008	Goat Production and Marketing Conference	Phillipsburg
March 6-7, 2008	High Plains Dairy Conference	Albuquerque, New Mexico
March 6-7, 2008	1 st Southwest Women in Dairy Conference	Albuquerque, New Mexico
March 7, 2008	KSU Cattlemen's Day	Manhattan
March 7, 2008	KSU Legacy Bull and Heifer Sale	Manhattan
March 7-8, 2008	South Central Goat Conference	Huthinson
March 15, 2008	KSU Sheep Day	Manhattan
March 15, 2008	KSU Youth Sheep and Meat Goat Day	Manhattan
March 26, 2008	Livestock Fair Management Clinic	Emporia
March 27, 2008	Livestock Fair Management Clinic	Scott City
April 5, 2008	High Plains Horseman's Day	Oakley
April 9, 2008	Kansas Wildlife Habitat Evaluation Contest	Canton, Kansas
May 9-11, 2008	NJSA Youth Leadership Conference	San Antonio, Texas
May 28-29, 2008	Symposium on Beef Cattle Welfare	Manhattan
July 11-12, 2008	Kansas Swine Classic	Manhattan

AS&I FACULTY SPOTLIGHT



Ernie Minton (eminton@ksu.edu; 785-532-1238)
Professor/Research Coordinator & Graduate Program Director

Following graduate degrees at Oklahoma State University, Dr. Minton joined the K-State faculty in August, 1983. He currently holds a 70% research, 30% teaching position, and serves as Graduate Program Director and Research Coordinator in the Department of Animal Sciences and Industry.

Dr. Minton's teaching responsibilities are at the graduate level. He teaches both ASI 710 Physiology of Reproduction in Farm Animals and ASI 825 Stress Physiology of Livestock. In addition, Dr. Minton coordinates the Animal Science Academic Quadrathlon for undergraduate students in the spring semester. Dr. Minton was recognized with the College of Agriculture Outstanding Graduate Teaching Award in 2004.

Although Dr. Minton's graduate training was in reproductive endocrinology, his research focus has migrated over the past 15 years to focus on mucosal immunology and stress physiology of swine. Recently, his laboratory has concentrated on innate immune events resulting from the interaction of the swine gut mucosa with *Salmonella*. Dr. Minton's laboratory has also focused on applied studies in weaned pigs that probe alternative in-feed antimicrobials that might substitute for growth promoting antibiotics. Finally, over the past couple of years, Dr. Minton has been involved in a collaboration looking at anti-inflammatory effects of dietary omega-3 fatty acids in the equine athlete.



Twig Marston (twig@ksu.edu; 785-532-5428)
Professor/Extension Beef Specialist

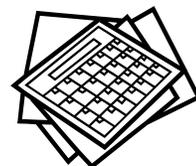
Twig Marston grew up in central Kansas, and has advanced degrees from Kansas State University (BS, MS) and Oklahoma State University (PhD). Twig has managed a family farm and ranch operation, held the position of Senior Beef Nutritionist for a major Midwestern feed company, was the SW Kansas Area Extension Livestock Specialist, and is presently the State Beef Extension Specialist in Cow/Calf Management for Kansas with a 15% teaching and 85% extension appointment. His on-campus responsibilities include team teaching the Advanced Beef Production class and implementing a state-wide extension program. He has instigated an outreach educational program designed to network not only Kansas cattle producers but national and international beef producers as well. Twig has spoken at numerous cattle events across the United States, and has published several scientific and popular press articles. Twig currently serves as the Executive Director of the Beef Improvement Federation. Research interests include beef production systems that decrease cost of beef production and enhancement of beef quality. Studies have been completed in the areas of immune function, post partum interval, puberty, weaning age, genetic selection, and feed efficiency.

His family has maintained a small registered herd of Shorthorns for many years. They enjoy breeding and showing cattle on local, state, and national levels. Twig and Mary have two children: Andee, a KSU graduate in Animal Science, and Katie, a KSU graduate in Baking Science and Food Science.

Twig recently accepted the position of District Director for the University of Nebraska Northeast Research and Extension Center. In his new role he will provide administrative leadership for the University of Nebraska-Lincoln (UNL) Northeast Research and Extension Center (NEREC) and the 28 counties that comprise the Northeast Extension District. He will be leaving KSU sometime this summer. He would like to sincerely thank everyone he has worked with through his years at Kansas State University.

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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



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

Many producers should consider calving in this month. Stress is minimized and forage/grass management may be optimized.

- Keep calving areas as clean and dry as possible. Give each calf a dry, comfortable and clean environment.
- Supplement and feed cows to maintain or improve body condition prior to the breeding season (cows should be in moderate body condition by the start of the breeding season to maximize fertility).
- For thin, young cows, consider feeding fat to improve rebreeding rates. Research indicates that when feeding about 0.4 lb. per head per day of a plant source (soybean, sunflower, safflower oils), fat can increase first-service conception and pregnancy rates (0% to 15%). Feeding fat can be effective both before and after calving. Consult your nutritionist.
- Mineral supplementation should include greater levels of magnesium (intake should be between 15 to 30 grams (g) per head per day, or at least 11% of the mineral mix) for grass tetany prevention.
- Plan your breeding season, both AI and natural service. Make sure all supplies and semen are on hand prior to the breeding season. For natural-service programs assign yearling bulls to 10-15 cows, 2- and 3-year-old bulls to 20-25 cows, and older bulls to 25-40 cows. Breeding for 65 days should be long enough; less than 90 days is a key sign of good management. Some suggest the service capacity of a yearling bull (less than 24 months) is equal to his age in months at turn out.
- Bulls should be in good body condition prior to the breeding season. Thin bulls can run out of stamina. Now is the time to make sure bulls are physically capable of performing for the upcoming summer breeding season.
- Breeding soundness examinations are recommended for all bulls!
- Consider using estrus synchronization and AI. Several synchronization systems to overcome anestrus are available. Selection depends on labor, facility and implementation costs.
- Consider breeding heifers three weeks prior to the mature cow herd to give them a greater chance to rebreed.
- Maintain top management concerning calf scours (sanitary conditions, early detection, electrolyte/dehydration therapy).
- Vaccinate calves as per veterinarian consultation. Castrate males that are not candidates for breeding stock prior to pasture turnout. Implant calves that will be sold at weaning.
- Wait for fly control until critical numbers are reached (100 to 200 horn flies per animal).
- Deworm cows and bulls if needed. Expect performance response to be variable dependent on location, weather, grazing system, history, infestation level and management.
- Use prescribed burning techniques to eradicate Eastern Red Cedar trees and improve forage quality.
- Good fences make good neighbors. Summer pastures should have had fences checked, repaired or replaced by now.
- Check equipment (sprayers, dust bags, oilers, haying equipment) and repair or replace as needed. Have spare parts on hand; downtime can make a large 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, or phone 785-532-1267.