



Newsletter from the Department of Animal Sciences and Industry
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April 2012

News from KSU Animal Sciences

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We Need Your Help!

Please send questions, comments or ideas for future newsletter topics to lschrein@ksu.edu or call (785) 532-1267.

UPCOMING EVENTS...

- ✦ The 2011 **K-State Cattle Feeders College** will be held on May 2nd at the Gray County Fair Grounds in Cimarron, Kansas, and on May 3rd at the Logan County Fair Grounds in Oakley, Kansas.
- Registration begins at 4:30 p.m. followed by dinner at 5:00 p.m. There will be an introduction of speakers and presentation of the "Top Hand" awards at 5:30 p.m. Break-out sessions include:
- Managers and Human Resources Session
 You're a Good Communicator, is Anybody Listening? – *Dr. Chris Reinhardt, KSU*
- Navigating Immigration – *Michael Feltman, Jr., Attorney, Feltman Law Offices*
- Cattle Crew Session
 Trimming and Shoeing the Equine Foot – *Mr. Vince Vesely, Certified Journeyman Farrier*
- Drugs, Bugs, and Vaccines – *Dr. Larry Hollis, KSU*
- Mill and Maintenance Crew Session
 Feed Mixer Technology – *Mark Cooksey, Toto-Mix LLC*
 Truck Service and Maintenance – *Mr. Mark Holderness, Dodge City International*
- There is no cost to attend, but registration is required by April 27, 2012. To register, please contact Dr. Justin Waggoner (620-275-9164; jwaggon@ksu.edu); Kurt Werth (620-855-3821; kwert@ksu.edu) or Julie Niehage (785-671-3245; julienie@ksu.edu). For more information, go to www.southwest.ksu.edu.
- ✦ Kansas State University's Southeast Agricultural Research Center will host the **2012 Beef Cattle and Forage Crops Field Day** at the center's Mound Valley Unit on Thursday, May 3. The unit is located 2-1/2 miles west of Mound Valley on U.S. Highway 160 (formerly K-96 Highway), then 1/4 mile south on Elk Road.
- The day begins with coffee, donuts and registration from 8:30 – 9 a.m., and features presentations by K-State specialists, as well as industry displays. Presentations and speakers include:
- Weather 2011-2012, What's the Pattern? – *Mary Knapp, KSU climatologist*
 - KSU Beef Stocker Unit Research Update – *Anna Siverson, KSU graduate student and Dale Blasi, KSU beef specialist*
 - Pasture Weed and Brush Control Update – *Doug Shoup, KSU extension crops and soils specialist*
 - Getting the Most from Bermudagrass – *Joe Moyer, forage agronomist, K-State SE Agricultural Research Center*
 - Grazing Steer Performance from Tall Fescue Infected with Nontoxic Endophyte – *Lyle Lomas, animal scientist and head, K-State Southeast Agricultural Research Center*
- Lunch will be provided, courtesy of various companies that will have exhibits available. In case of rain, the field day will be held indoors. More information is available by calling 620-421-4826. Information about K-State's Southeast Ag Research Center is available on its website: <http://www.ksre.ksu.edu/search/>.



UPCOMING EVENTS...

- ↙ K-State University will host a **Sheep and Goat Conference** on May 4-6, 2012 on the KSU campus. This conference is open to everyone and will begin Friday, May 4, at 1:00 pm and conclude at 12:00 noon on Sunday, May 6. This program is designed as an intensive learning opportunity for commercial and purebred sheep and goat producers. Subject areas will include alternative feed stuffs, use of small ruminants to control seresia lespedeza, live animal and carcass evaluation, health, predation, marketing, parasitism, crossbreeding/composite genetics, and more. Breakout sessions will also be available related to specific species, types, and/or breeds. A conference agenda, registration and speaker bio information as well as on-line registration are available at www.ksusheepandgoats.org under "Educational Programs." If you have any questions or would like to participate, please contact Dr. Brian Faris at 785-532-1255 or brfaris@ksu.edu.
- ↙ **Developing and Implementing Your Company's HACCP Plan** for meat, poultry, and food processors will be held June 5-7, 2012 in Weber Hall, Kansas State University, Manhattan. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://animalscience.unl.edu/web/anisci/ANSCEExtensionMeatScienceHACCPInformationandCoursesRegistration>. The workshop fee is \$325 per person, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Dr. Liz Boyle at lboyle@ksu.edu or 785-532-1247.
- ↙ The **K-State Animal Sciences Leadership Academy** is planned for June 6-9 on K-State's Manhattan campus. This academy will spotlight 20 high school students from across the state wishing to learn more about leadership and production in the animal science industry. Students will receive interactive leadership training and tour facilities in K-State's Department of Animal Sciences and Industry. The second portion of the program will allow students the opportunity to tour businesses and organizations within Kansas' livestock industry. More information is available at www.YouthLivestock.KSU.edu under K-State Animal Sciences Leadership Academy.
- ↙ The **2012 KSU Youth Horse Judging Camps** will be held in Weber Arena on the KSU Campus. The Advanced Section, which will be held June 7-8, is designed for youth that have had some experience judging horses and would like to learn more about note taking and oral reasons. The Beginning Section will be held June 11, and is designed for youth that have had very little experience judging horses. For more information, contact Teresa Douthit (785-532-1268; douthit@ksu.edu).
- ↙ **"Champions" Livestock Judging Camp** – A three day, intense judging camp 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 this camp. Workouts will be conducted similar to those at a collegiate level. Dr. Scott Schaake, coach of five consecutive National Collegiate Championships will conduct the training for each camp. The camp will focus primarily on the proper format, terminology, and presentation of oral reasons. Camp participants will also be exposed to livestock evaluation skills and incorporating performance records in the decision making process. The following dates are set for the 2012 camps: June 12-14 (Tuesday-Thursday); June 15-17 (Friday-Sunday); June 19-21 (Tuesday-Thursday).
Registration forms and more information are available at www.asi.ksu.edu/livestockjudgingcamp. The registration deadline is May 14. For more information, contact Scott Schaake (simmi@ksu.edu; 785-532-1242) or Kristi Hagemen (klsmith@ksu.edu; 785-532-2996).
- ↙ The **2012 Dr. Bob Hines' Kansas Swine Classic** will be held July 13-14, 2012 at Cico Park in Manhattan, KS. The 2 day event involves a Prospect Hog Show, Barrow and Gilt Market Hog Show, Swine Showmanship, photography contest, and educational demonstrations for youth and parents. Entries close July 1. More information is coming soon to www.YouthLivestock.KSU.edu or by calling 785-532-1267.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
May 3, 2012	Beef Cattle and Forage Crops Field Day	Mound Valley, KS
May 2, 2012	K-State Cattle Feeders College	Cimarron, KS
May 3, 2012	K-State Cattle Feeders College	Oakley, KS
May 4-6, 2012	KSU Sheep and Goat Conference	Manhattan
June 5-7, 2012	HAACP Workshop	Manhattan
June 6-9, 2012	K-State Animal Sciences Leadership Academy	Manhattan
June 7-8, 2012	KSU Youth Horse Judging Camp – Advanced Section	Manhattan
June 11, 2012	KSU Youth Horse Judging Camp – Beginning Section	Manhattan
June 12 – 14, 2012	Champions Livestock Judging Camp	Manhattan
June 15 – 17, 2012	Champions Livestock Judging Camp	Manhattan
June 19 – 21, 2012	Champions Livestock Judging Camp	Manhattan
July 13-14, 2012	Dr. Bob Hines' Kansas Swine Classic	Manhattan

WHAT'S NEW

Management Minute **“You’re a Great Communicator, But is Anybody Listening?”**

↙ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **“You’re a Great Communicator, But is Anybody Listening?”**

It’s been said by experts many times, “Catch your team doing something RIGHT!” But do you?

This is something that seems so simple to say, and seems like exactly the right way to keep people motivated, but it just doesn’t seem to be all that popular. I’ve even heard a suggestion that we should catch the team doing something right 7 times for every criticism we make. I’m not sure I manage a 1:1 ratio, let alone 7:1.

But what if your supervisor followed this principle? Would you feel better about the choices you made, feel more successful in your duties, and feel motivated to get after it and improve the 1 thing out of 8 that needed improvement? Of course you would---we all would.

Just like many practices for effectively managing people, this is something that requires vigilance and intentionality on your part. It may not be “who you are”, but that doesn’t matter if it’s the right thing to do. Set your ego aside and say to yourself, “I can do better.” Make a point to catch your team doing things RIGHT, instead of always simply looking for things they’re doing wrong.

This shouldn’t just be a mechanism to get people to do what you want, this is how we treat human beings when we genuinely care about them.

If we have good people on the team, they’re not going to storm off the job because you didn’t give them their daily warm-and-fuzzy. But they may quit listening to the constant “constructive criticism”, simply because they’re numb. They can probably finish your sentences for you because you’ve corrected their work hundreds of times. Not that your comments are off-target, but if they’re not heard, are you even getting through?

We all have a different “language” in which we prefer to communicate. Unless you hire clones of yourself, it’s a pretty sure bet that someone, if not most people, on your team may want to communicate differently than you do.

So your simple choice is to keep communicating how YOU prefer and risk being tuned out by your team, or stop and listen to the signals your team is sending. I guarantee that they’ll be loud and clear, if you care enough to listen for them.

For more information, contact Chris at 785-532-1672 or cdr3@ksu.edu.

↙ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **“Heat Stress Time Already?”**

For folks in agriculture, last summer seems like only minutes ago. Between the drought and the heat, none of us want a heavy dose of 2011 again.

But the other thing about agriculture is that we deal with what nature doles out. And last year we in the feedlot business learned something about heat stress. We learned it costs performance, it costs a lot of time and human energy to alleviate, and it can even cost animal lives.

So what if we actually anticipated that it could get hot this summer? Summer and heat in Kansas go hand-in-hand. It shouldn’t be a surprise to anyone if temperatures soar above 90 and cattle start to stress. Frankly, it surprises me every time anyone acts surprised.

So we know it’s going to get hot, and thanks to folks like Dr. Terry Mader of the University of Nebraska, we know what factors contribute to heat stress and what factors we can mitigate. High temps by themselves don’t cause a great deal of stress, but combine high temperatures with high humidity, lack of wind, and solar radiation, and you’ve got a recipe for disaster.

The good news is that it’s still April and the real challenge is still a couple months away, giving everybody plenty of time to prepare. PRE-pare: it means getting ready BEFORE the event happens. There’s not much we can do about temperature or humidity, but we can work on airflow and solar exposure.

If feedlot pens are properly mounded (8 feet high; 10 feet across the crown; 20-25 square feet of mound surface per animal on each side of the mound) and air movement outside the pen is not restricted with trees, cattle will use the mounds to catch what breezes may come through. The other area that we can affect heat stress is the construction of shades.

Feedlot Facts **“Heat Stress Time Already?”**

Feedlot Facts – “Heat Stress Time Already?” (cont.)

The beauty of this is that shades don't just keep us out of a wreck---they can add performance! Shades during the summer---even in a dry climate---are worth:

ADG	0.31 lb	0.42 lb
dry matter intake	0.66 lb	1.45 lb
F:G	0.33	0.36
hot carcass weight	13 lb	35 lb
marbling	22 points	17 points
Source:	(Gaughan et al., Journal of Animal Science, 2010)	(Mitlohner et al., Journal of Animal Science, 2001)

To make this work, shades should be: (1) taller than your loader, (2) provide 20-25 sq. ft. of shade per head, and (3) be oriented lengthwise North-South so that the shaded area moves throughout the day to allow the previously shaded area to dry.

It's time.

For more information, contact Chris at 785-532-1672 or cdr3@ksu.edu.

↳ **Extension Assistant, Youth Livestock Coordinator** - The Department of Animal Sciences and Industry is looking for an Extension Assistant, Youth Livestock Coordinator. This position is a full time, non-tenure track, term position. B.S. in Animal Science or closely related discipline required. M.S. preferred. Possibility exists for Youth Livestock Coordinator to work on an advanced degree while in this position. Review of applications will begin April 23, 2012, and continue until the position is filled. View complete position announcement at: <http://www.asi.ksu.edu/positions>

↳ **Assistant Professor, Extension Specialist, Beef Systems** – Kansas State University is looking for an Assistant Professor/Extension Specialist, Beef Systems Specialist for the Southeast Ag Research Center. This is a full-time, 12-month, tenure-track position, 0.8 extension, 0.2 research. Ph.D. degree in Animal Science or related area is required. Knowledge and experience of grazing management and forage utilization is preferred. View complete position announcement at: <http://www.asi.ksu.edu/positions>. Review of applications begins May 4, 2012, and continues until a suitable candidate is identified.

↳ **“Top Hand” Cattle Feeding Industry Employee Awards** - Here is your chance to tell the story of individuals who make Kansas the best place to feed cattle in the nation. The “Top Hand” Cattle Feeding Industry Employee Awards are being presented in conjunction with the K-State Cattle Feeders College. Top hands will be recognized in both the cattle and milling/maintenance divisions. A representative of the nominating feedyard and the award recipient must be present at the K-State Cattle Feeders College to accept the awards.

This is a great opportunity to honor those “Top Hands” who symbolize the values of hard work, honesty, reliability, integrity and animal stewardship that the Kansas Cattle Feeding Industry was built on. To nominate an employee, please tell us what makes these individuals stand out from the herd in 100 words or less. Nominations are due by April 27, 2012, to Justin Waggoner and may be sent via e-mail (jwaggon@ksu.edu) or by regular mail to Dr Justin Waggoner, K-State Extension Beef Systems Specialist, 4500 E. Mary Street, Garden City, KS 67846.

↳ **Post-Arrival Processing Causes Lameness** – During July and August of 2009, 3,243 steers in a commercial feedlot were observed for lameness prior to processing, immediately following processing, and for 3 weeks after processing. Animals were recorded as lame based on altered gait. The proportion of cattle observed as lame before processing was 1.6% and was less than the proportion of cattle observed as lame after processing (2.5%). Post-processing lameness peaked immediately after processing; most lameness cases were resolved by the end of 3 weeks on feed. Cattle observed as lame at any time tended to have lower average daily gain than cattle that were not lame.

Bottom Line...The majority of lameness appeared to be associated with handling events. Further study is warranted to determine if improved facilities or handling techniques can reduce incidence of lameness. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Dan Thomson (785-532-4844; dthomson@vet.ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

↳ **Increasing Protein Supply to Pregnant Beef Cows When Energy is Limited Does Not Improve Cow or Calf Performance** – Pregnant Angus x Hereford Cows (1,160 lb) were used to examine the effects of supplemental ruminally degraded protein on cow and calf performance. Cows were assigned to receive 1 of 3 supplements. Supplements supplied similar amounts of ruminally degraded protein (0.09% of body weight) and increasing amounts of ruminally degraded protein: 0.05% (LOW), 0.07% (MOD), or 0.09% of body weight (HI). Cows grazed native tallgrass pasture. Supplements were fed daily from November 25 until all cows had calved.

Bottom Line... Additional protein supplementation beyond what is needed to maximize ruminal digestion of fiber is not beneficial to mature cows before calving when energy supply is limiting. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Bob Weaber (785-532-1460; bweaber@ksu.edu) or KC Olson (785-532-1254; kcolson@ksu.edu).

↳ **Effect of Sample Size and Method of Sampling Pig Weights on the Accuracy of Estimating the Mean Weight of the Population** - Producers have adopted marketing strategies such as topping to help cut economic losses at the processing plant. Even though producers are implementing these strategies, they are still missing target weights and receiving substantial discounts. To assess this situation, we must first determine the accuracy of sampling methods producers use to estimate the mean weight of the population. The standard sampling procedure that has been adapted by many producers is to weigh a subsample of pigs in multiple pens (i.e., 5 pigs from 6 pens). Using a computer program developed in R (R Foundation for Statistical Computing, Vienna, Austria), we were able to generate 10,000 sample means for different sampling procedures on 3 different datasets. Using this program we evaluated taking: (1) a completely random sample of 10 to 200 pigs from the barn, (2) an increasing number of pigs per pen from 1 to 15 or the entire pen, and (3) increasing the number of pens until all pens had been sampled in the 3 separate datasets. This allowed us to provide tables for producers to decide on the sampling method and size necessary to achieve an acceptable estimation of pig weight in the barn. The analysis indicated that the number of pigs can be decreased by increasing the number of pens; however, the confidence interval (range in which 95% of weight estimates would fall) was still as high as 23 lb (242 to 265 lb) when only 30 pigs were sampled. Increasing the number of pens reduced the range between the upper and lower confidence interval, but not enough to make increasing pen sample size a practical means of estimating mean pig weight of the barn.

Bottom Line... Other methods of analysis must be designed to improve the accuracy of estimating pig mean weight in a facility other than random sampling of pigs within the barn. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by C. B. Paulk, G. L. Highland, M. D. Tokach, J. L. Nelssen, S. S. Dritz, R. D. Goodband, and J. M. DeRouchey.)

↳ **The Effects of Feeder Design (Conventional Dry vs. Wet-Dry) in the Nursery and in the Finisher on Growth Performance of Finishing Pigs** - A total of 1,296 pigs (PIC 1050 x 337; initially 36 lb) were used in a 102-d study to determine the effects of feeder type (conventional dry vs. wet-dry) on nursery and finishing pig growth performance for pigs reared under commercial conditions. In the nursery, pigs were housed in rooms with either conventional dry or wet-dry feeders. At movement to the finisher, 312 barrows and 336 gilts from a room with conventional dry feeders and an equal number of pigs from a room with wet-dry feeders were randomly selected and distributed to have a similar number of barrows and gilts in each finisher pen. At the start of the trial, pens of pigs were weighed and randomly allotted to the 2 feeder types in finishing barn to arrange the treatments as a 2 x 2 factorial with main effects of feeder type in nursery and feeder type in finisher. All pigs were fed the same corn-soybean meal diets containing 20 to 40% dried distillers grains with solubles (DDGS) during 6 dietary phases. For the finisher period (d 0 to 102), pigs fed with the conventional dry feeder during the nursery phase and wet-dry feeder during the finisher phase tended to have greater ADG compared with pigs fed with the other feeder regimens. An interaction occurred between nursery and finisher feeder type for F/G. Within pigs provided feed with the conventional dry feeder in the nursery phase, pigs provided feed with the conventional dry feeder in the finisher phase had poorer F/G compared with those fed with the wet-dry feeder. In contrast, for pigs provided feed with the wet-dry feeder in the nursery phase, F/G during the finisher phase was the same regardless of feeder type in the finisher phase. Pigs previously fed using a conventional dry feeder in the nursery had greater ADG and ADFI compared with those on wet-dry feeder in the nursery phase regardless of the effect of feeder types in finishing period. Pigs fed with wet-dry feeders in the finisher phase had greater finisher ADG and improved F/G compared with those fed with conventional dry feeders in the finishing period. Also, the final BW of finishing pigs previously fed using conventional dry feeders in the nursery was greater than those previously fed on wet-dry feeders; however, pigs fed using wet-dry feeders in finisher phase had greater final BW compared with those fed with conventional dry feeders.

Bottom Line... These results indicated that using dry feeder in nursery and wet-dry feeder in finisher gave the most benefit in terms of growth performance. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by S. Nitikanjana, S. S. Dritz, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, and J. L. Nelssen.)

AS&I Faculty Spotlight



Daniel Y.C. Fung (dfung@k-state.edu; 785-532-1208)
Professor/Microbiology of Food Processing

Dr. Daniel Y. C. Fung is an internationally known microbiologist in the field of Rapid Methods and Automation in Microbiology. He has published extensively in Food Microbiology, Applied Microbiology and Rapid Methods with more than 800 Journal articles, meeting abstracts, proceeding papers, book chapters and books in his career. Currently he holds a 40% teaching and 60% research appointment in the department.

He has taught more than 20,000 students in classroom teaching and has completed 83 M.S. and 33 Ph.D. graduate students as the major professor and another 80 M.S. and 38 Ph.D. as a committee member of other professors. The Kansas State University Rapid Methods and Automation in Microbiology Workshop, directed by Dr. Fung, has attracted more than 4,000 participants from 60 countries and 46 states to the program in the past 30 years.

Dr. Fung teaches Food Microbiology, Food Fermentation, Food Toxicology, and the Rapid Methods courses regularly since 1978. He truly enjoys working with students and professionals to advance food safety and security for the benefit of citizens of the world.

Dr. Fung is a Fellow of the American Academy of Microbiology (ASM), Institute of Food Technologists (IFT), International Academy of Food Science and Technology and Institute for Food Science and Technology (UK). He has won more than 30 professional awards which included the International Award from IFT (1997), Waksman Outstanding Educator Award from The Society of Industrial Microbiology (2001), KSU College of Agriculture Excellence in Graduate Teaching Award (2005), and the Exceptional Achievement and Founder of the KSU International Workshop on Rapid Methods and Automation in Microbiology (1980-2005) Award given by the Director of the Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration, 2005.

Dr. Fung received the B.A. degree from International Christian University, Tokyo, Japan in 1965, M. S. P. H. at University of North Carolina-Chapel Hill in 1967 and the Ph.D. in Food Technology from Iowa State University in 1969. He was the chair of the KSU Food Science Graduate Program from 1979-1987 and currently is Professor of Food Science, Professor of Animal Sciences and Industry and Ancillary Professor of Biology at KSU.



Deanna Retzlaff (retzlaff@k-state.edu; 785-532-2202)
Assistant Professor

Deanna Retzlaff earned her B.S. degree in Animal Sciences from the University of Tennessee (Martin, TN). She then continued her education at Kansas State University, earning a Ph.D. in Food Science, with a focus on food safety. Deanna left the university to manage a commercial analytical laboratory for three years before returning to K-State in 2002.

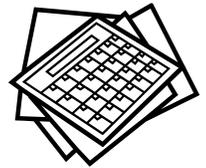
Deanna assists faculty members in the development and implementation of food science and animal science distance education courses and modules. She is also the Bachelor Degree Completion Program Advisor for Food Science and Animal Science majors completing their degrees via distance education. There are currently more than 125 advisees in this program.

Deanna is a member of the University Continuing Education Association, the American Society for Microbiology, the International Association for Food Protection, and the Institute of Food Technologists. In 2005 she received the Support Specialist Award for the Great Plains Region of the University Continuing Education Association.

Deanna, her husband Robert, and their two young daughters (Abby and Elle) reside outside of Westmoreland with their horses and dogs.

What Producers Should Be Thinking About.....

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



BEEF -- *Tips by Dale Blasi, Extension Beef Specialist*

June is a month to let Mother Nature take her course. **Assuming timely precipitation**, 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, or phone 785-532-1267.*