



News from KSU Animal Sciences

February, 2016

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In This Issue

- Upcoming Events
- Management Minute
- Feedlot Facts
- 2015 KSU Cattlemen's Day Article Featured
- 2015 KSU Swine Day Articles Featured
- Faculty Spotlight
- What Producers Should Be Thinking About...

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UPCOMING EVENTS...

↪ The **KSU Dairy Days** will be held on February 23, 2016 and February 25, 2016. The Kansas Dairy Commission is the lunch sponsor for both meetings. The Reno County meeting will be held in conjunction with the Reno County DHIA Annual Meeting.

The program will be held on Tuesday, February 23 at the Seneca Community Center in Seneca, KS. To pre-register for this event, contact the Meadowlark Extension District Office at 785-336-2184 or 785-364-4125 or email jholthau@ksu.edu. On Thursday, February 25, the program will be held at the Whiteside Amish Community Building in Whiteside, Kansas. Please pre-register by contacting the Reno County Extension Office at 620-662-2371 or darrenbusick@ksu.edu. Both days will begin at 9:45 a.m. and adjourn at 3:00 p.m.

For a complete schedule for each of the days or more information, contact Mike Brouk (mbrouk@ksu.edu; 785-532-1207) or Luis Mendonca (mendonca@ksu.edu; 785-532-2652).

↪ **KSU Cattlemen's Day slated for Friday, March 4, 2016.** The 103rd annual KSU Cattlemen's Day will be held on March 4 in Weber Hall on the KSU Campus. The schedule includes:

- 8:00 a.m. Commercial Trade Show (Weber Arena)
 - 10:00 a.m. Morning Presentations (*moderated by Jim Drouillard*):
 - Welcome** – *Dr. Ken Odde, Department Head, AS&I*
 - Feature Presentation** – *Paul Heinrich, CEO, Encore Food Solutions*
 - Cattle Industry Economic Outlook** – *Glynn Tonsor and Ted Schroeder, KSU*
 - 12:00 noon Lunch - Commercial Trade Show
- Afternoon Break-out Sessions:

Weber Hall Room 111

- 1:00 p.m. Impact of Beef Branding Programs on Consumer Perceptions of Beef Quality – *Travis O'Quinn*
- 2:00 p.m. E. coli in the Beef System – *Randy Phebus*

Weber Hall Room 123

- 1:00 p.m. State-of-the-Art Beef Production in Brazil – *Luis Xacarias Schineider and Marcelo Zandonardi*
- 2:00 p.m. Reproduction: It's All about Timing – *Sandy Johnson*

Weber Hall Room 146

- 1:00 p.m. Weather as a Consideration for Long-term Beef Selection Programs – *Megan Rolf*
- 2:00 p.m. The New Veterinary Feed Directive: Implications for Beef Producers – *Bill Brown*

Call Hall Room 205

- 1:00 p.m. Control of Sericea Lespedeza using Late-Season Grazing and Prescribed Burning – *KC Olson*
- 2:00 p.m. Conservation in Practice – *Bill Sproul*

The day will conclude with a Celebration Social immediately following the conclusion of the Legacy Sale at the Stout Center. The complete program and registration information are available at www.ksubeef.org. For more information, contact Jim Drouillard (jdrouill@ksu.edu; 785-532-1204) or Dale Blasi (dblasi@ksu.edu; 785-532-5427).



- ↪ **KSU Legacy Bull and Female Sale offers proven genetics balanced in many traits.** The KSU Legacy Bull and Female Sale will be held on March 4, 2016, at the Stanley Stout Center. The sale will begin at 3:30 p.m. The sale will include 80 bulls, 2 elite show heifer prospects, 30 registered females, and 5 ranch broke performance horses. A complete listing can be found at www.asi.ksu.edu/bullsale. For more information or a sale catalog, contact Tyler Leonhard (785-565-1881 or john56@ksu.edu).
- ↪ **The 2016 KSU Sheep Day will be held March 5** – Mark your calendars and watch for more details on the 2016 KSU Sheep Day which will be held March 5, 2016 at the Stanley Stout Center. A complete schedule and registration information will be coming soon. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).
- ↪ **Kansas Junior Beef Producer Day – March 5, 2016** - The 2016 Kansas Junior Beef Producer Day is scheduled for Saturday, March 5, 2016 in Weber Hall on the Kansas State University campus. This event will be a fun filled, educational day of activities in which youth, parents, beef project leaders, and adults can increase their knowledge and experience of beef production and management. Presentations and demonstrations by K-State faculty, staff, and guest speakers will cover topics such as nutrition, project management, meat science, reproduction, health, leadership, communication, showmanship, and show ring etiquette. This interactive, hands-on educational event will stimulate enthusiasm and provide a foundation for the management and care of youth beef projects. The early registration deadline has passed, but participants may still sign up. The cost will be \$20/person and late registrants will not receive a t-shirt. More information, a promotional flyer, and registration information may be found on the K-State Youth Livestock Program website: www.youthlivestock.ksu.edu under Kansas Junior Producer Days. Participants may still register online at <https://commerce.cashnet.com/KSUASIND>. An event for this program has been created on the Animal Sciences Pulse calendar.
- ↪ **Kansas Junior Sheep Producer Day – March 19, 2016** - The 2016 Kansas Junior Sheep Producer Day is scheduled for Saturday, March 19, 2016 in Weber Hall on the Kansas State University campus. This event will be an interactive, educational day in which youth, parents, sheep project leaders, and adults can increase their knowledge about youth sheep production and management. K-State faculty, staff, and guest speakers, the Teague family, will cover topics such as market and breeding project selection, health and wellness, feeding, nutrition and management, wool education and judging, meat science, breed identification, showmanship, and grooming. All ages and skill levels are invited to attend. A complimentary lunch and t-shirt will be provided for all participants. Registration is due by February 24, 2016 and is \$15/person. Registrations received after February 24, 2016 cannot be guaranteed a t-shirt and will be \$20/person. More information, a promotional flyer, and registration information may be found on the K-State Youth Livestock Program website: www.youthlivestock.ksu.edu under Kansas Junior Producer Days. Participants may register online at <https://commerce.cashnet.com/KSUASIND>. An event for this program has been created on the Animal Sciences Pulse calendar.
- ↪ **Dates set for Livestock Fair Management Clinics.** Every other year, K-State Research and Extension and the Department of Animal Sciences and Industry hosts a Livestock Fair Management Clinic for county fair board members, Extension Agents, and other adult volunteers involved in local livestock fair management and leadership. This professional development opportunity consists of an activity filled day to increase awareness and how different county fairs operate and provide a forum for open communication for individuals with local livestock fairs across Kansas.
- There will be two different locations on two different days with the same general agenda. Thursday, April 7, will be at the Greenwood County Fairgrounds in Eureka. Friday, April 8, will be at the Trego County Fairgrounds in WaKeeney. Lunch and refreshments will be provided. The agenda includes:
- | | |
|--------------------|---|
| 8:45 – 9:15 a.m. | Registration |
| 9:15 – 9:30 a.m. | Welcome |
| 9:30 – 11:00 a.m. | County Fair Management & Facilities - insurance, liability, budget, fair board duties, extension/fair board relationships |
| 11:00 – 11:15 a.m. | Break |
| 11:15 – 12:00 p.m. | Biosecurity Efforts for Animals and Fair Patrons |
| 12:00 – 12:45 p.m. | Lunch (provided) |
| 12:45 – 1:30 p.m. | Judges for County Fairs - locating, compensation, & expectations |
| 1:30 – 2:15 p.m. | Premium Sale Structure and Marketing Options for Animals |
| 2:15 – 2:45 p.m. | Open Forum Questions and Discussion |
| 2:45 – 3:00 p.m. | Wrap-up and Adjourn |

Registration is \$15/person and is due by March 18. Checks can be made payable to "KSU-ASI" and mailed to Livestock Fair Management Clinic, Attn: Lexie Hayes, 214 Weber Hall, KSU, Manhattan, KS 66506." For a registration form and a detailed agenda, please visit the website, www.YouthLivestock.KSU.edu. Information is linked to the event on the calendar at the top of the page. If you have any questions please contact Lexie Hayes at (785)532-1264 or adhayes@ksu.edu; or Joel DeRouchey at 785-532-2280 or jderouch@ksu.edu.

- ↳ **K-State Animal Sciences Leadership Applications being Accepted – Due April 1, 2016.** Kansas State University will host two sessions of the K-State Animal Sciences Leadership Academy in 2016 for young livestock industry leaders! They will be held June 8-11 and June 29-July 2. This four-day event will focus on increasing young leaders' knowledge of Kansas' diverse livestock industry as well as building participant's leadership skills. Students will stay in university housing with event staff for the duration of the event. Forty high school students (20 in each session) will be selected to participate based upon educational, community, and agricultural involvement; as well as through an extensive essay application. Applications can be found under the K-State Animal Science Leadership Academy tag on the youth livestock website (www.YouthLivestock.KSU.edu) and must be submitted by April 1, 2016. For more information, please contact academy director, Sharon Breiner at (785) 249-8719 or sharonjbreiner@gmail.com.
- ↳ An **Adult PQA Plus Training**, will be held on Thursday, April 21, 2016, from 9:00 a.m. – 3:30 p.m. at the Stanley Stout Center in Manhattan. Whether you are a current PQA+ advisor or would like to become certified, you must attend this or a similar training in another state in order to conduct PQA+ trainings. Some of the changes to the program require you to go through the training process in person and successfully compete an examination for certification. If you are interested in the training, please contact Lois at lschrein@ksu.edu or 785-532-1267. For more information, contact Mike Tokach (785-532-2032; mtokach@ksu.edu) or Joel DeRouchey (785-532-2280; jderouch@ksu.edu).
- ↳ **Kansas State University will be hosting the 2nd annual Barbecue 101 workshops this May and June.** These one day workshops will focus on teaching the basics of grilling and smoking for consumers of all ages and experience levels. The topic areas will cover the basics of grill selection and use, the fundamentals of meat selection and preparation, discussion of new and innovative cuts for barbecue, and the science of smoking. Additionally, these workshops will include several hands-on demonstrations, tastings of different sauces, meat cooked with different woods, spices, and rubs. The day will conclude with a question and answer session with several barbecue experts. Watch for more details about dates, times, locations, and registration in the coming months. For more information, contact Travis O'Quinn (travisquinn@ksu.edu; 785-532-3469).

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
February 23, 2016	KSU Dairy Days	Seneca, KS
February 25, 2016	KSU Dairy Days	Whiteside, KS
March 4, 2016	KSU Cattlemen's Day	Manhattan
March 4, 2016	Legacy Bull Sale	Manhattan
March 5, 2016	KSU Sheep Day	Manhattan
March 5, 2016	Junior Beef Producer Day	Manhattan
March 19, 2016	Junior Sheep Producer Day	Manhattan
April 7, 2016	Livestock Fair Management Clinic	Eureka, KS
April 8, 2016	Livestock Fair Management Clinic	WaKeeney, KS
April 21, 2016	PQA+ Advisor Training	Manhattan
June 7-9, 2016	HACCP Workshop	Manhattan
June 8-11, 2016	Animal Sciences Leadership Academy	Manhattan
June 29 – July 2, 2016	Animal Sciences Leadership Academy	Manhattan

WHAT'S NEW.....

Management Minute "The Right Thing and The Easy Thing"

↳ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **"The Right Thing and The Easy Thing"**

When we look back over the decades of the 20th century, it is abundantly apparent that animal agriculture has made tremendous strides forward in the areas of food product wholesomeness and safety, animal nutrition, animal health, and animal well-being. And this process of continuous improvement carries on today.

There is a term used to describe one of the pillars of manufacturing excellence, called "kaizen". Kaizen is a Japanese word that simply means "improvement", but when used to describe business practices, has come to mean "the process of continuous improvement".

When we look back at the food production industries, we can clearly track the arc of this continuous improvement. However, there are numerous causes which initiate change in any business or industry.

The immediate profit motive is the most pervasive, prevalent, and persistent. There always has been and always will be a desire by businesses to improve production efficiency either by decreasing the cost of inputs or by increasing the output per unit of input. This is self-evident.

However, there are other, often sporadic and unpredictable (or less predictable) motivations for change and improvement.

In the 1990's the U.S. beef industry, amidst the continuously flowing stream of profit- and efficiency-motivated change, conducted a series of quality audits which shone light on glaring failures in end product quality and consistency, which were the direct result of a management practice (injection of needles and health care products into the animal's round) which (a) adversely affected product quality and (b) was accepted by virtually the entire industry as "normal" and "acceptable".

Consider these last two points: a universally accepted standard operating procedure was consistently and predictably harming product quality. An industry-wide and concerted effort was placed on identifying an acceptable compromise alternative to this practice (injections were moved to the neck just in front of the shoulder, where lower-value meat is derived compared to the rear of the carcass), and in a very short span of time, the incidence rate of product quality failure due to this practice plummeted to nearly zero.

This true industry story provides at least two valuable lessons. 1. An industry which has over 700,000 producers can change, for the better, when all parties agree to move in the same direction. 2. That unified direction required a prior in-depth, intentional assessment of product quality and production practices. However, the hidden reason for the rapid industry-wide adoption of change was that the compromise solution (moving injection site to the neck) resulted in no loss in production or increased cost of production or reduction in production efficiency. The solution didn't inconvenience the producers.

But what if there was a problem with product quality or production practices which was universally acknowledged by an industry as being unacceptable, but the most obvious solution resulted in increased production costs or labor inputs? It is doubtful this solution would be eagerly or rapidly or universally adopted without some external motivation to initiate the change. That external motivator may be consumers changing buying habits or even a governmental agency tasked with ensuring safe product or acceptable production practices.

In the 1990's the U.S. beef industry successfully worked from within to make substantive change which improved the product and the industry at once. But the solution was relatively "painless". We currently have other production practices in food animal production which some industry pundits have indicated are potentially harmful to product wholesomeness or not providing optimal animal care, but which also have not been universally agreed upon by producers to be worth the "cost" of change.

Kaizen, or continual improvement requires more than a simple profit motive. Kaizen requires deep introspection into both product quality and into standard production practices and a long-range lens through which to view the future of product perception and acceptance. If we only adapt when change is thrust upon us, the lost opportunity costs can be tremendous.

For more information contact Chris at cdr3@ksu.edu.

Feedlot Facts "A Pinch of Salt"

↪ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist

“A Pinch of Salt”

For ranchers who live in areas where grass tetany is common, the fear of suddenly losing a good cow and prevention planning is a normal part of the ranching calendar.

Grass tetany, often referred to as “grass staggers”, causes cows to become highly agitated, develop a staggering gait, collapse, convulse, and, ultimately, die. Grass tetany is caused by insufficient magnesium in the blood stream. This deficiency is normally caused by a combination of low magnesium in forages coupled with elevated potassium in forages. The elevated potassium hinders absorption of magnesium in the animal.

This combination of nutritional circumstances occurs most commonly in the spring of the year, while cows (most often lactating) are grazing cool-season pastures, when abundant moisture and warm temperatures result in rapid, lush, growth of pasture grasses. Grass tetany is most commonly observed in cows grazing cool-season forages in the spring of the year; however, it also has been reported in cows grazing small grain pastures. It can also happen during the fall and winter months if there is a magnesium deficiency or excessive potassium.

Fortunately, if caught during the early stages, grass tetany can be successfully treated. Unfortunately, however, we often do not observe the symptoms until it is too late. Therefore, knowledge is power, and we know when cows are most likely at risk and can prepare our herd for this potentially deadly issue.

The most common grass tetany prevention practice is to provide cows with a free-choice mineral mix with an elevated level of magnesium (8-12% is commonly recommended), starting 2-3 weeks prior to the lush growing season. However, the elevated magnesium, along with the lush grazing conditions, often results in poor palatability and limited intake of high-magnesium mineral mixes. Therefore, producers should encourage consumption by placing mineral feeders near water sources.

In addition, because magnesium absorption by the animal is actually dependent on the animal having adequate available sodium, it is essential that cows have access to free-choice loose salt during this same time frame. Place salt near water sources to encourage consumption, and to ensure that abundant good, clean water is available in conjunction with the elevated salt intake.

For best results, provide a high-magnesium free-choice mineral, in conjunction with a separate source of loose, free-choice salt, both placed near a quality, abundant water source, shortly before and during any periods of lush grass growth, particularly if cows are grazing predominantly cool-season forages.

For more information, contact Chris Reinhardt at cdr3@ksu.edu.

↪ **Kansas 4-H EID Tag Information** - As the season for county/extension unit spring weigh-in approaches for youth livestock projects, a variety of resources and reminders regarding 4-H EID tags are available from the youth livestock website (or via email from Dave Kehler). Please check the Kansas 4-H EID Tag page on the website (<http://www.asi.k-state.edu/students-and-programs/youth-programs/kansas-4-h-eid-tags.html>) for current and updated tag order summaries and application tips. This information is also available on the Butler County Extension website under the 4-H EID tag information link (<http://www.butler.k-state.edu/eid/>). Kansas EID tags MUST be used for all state nominated livestock projects. In addition to using the EID tags for state show management, several units have been using the technology for county show management, some for 10 years. If you are interested in learning about the technology, contact Dave. Please also note that the tag/button used for swine, sheep, and meat goats will change and require a different application method this year. Detailed instructions will be included with each tag order. For questions regarding 4-H EID tags, contact Dave Kehler (dkeehler@ksu.edu). It has been reported that some of the emails distributed about the EID program are going to some agents' clutter folder. Please help make sure that the person(s) within a county/extension unit who needs to see these emails, does so.

↪ **Effects of Postmortem Aging Time and Muscle Location on Objective Measures of *Semitendinosus***

Steak Tenderness- The objective was to evaluate the effects of aging and anatomical location on the tenderness of *Semitendinosus* steaks collected from steers fed two levels of zinc and two levels of Optaflexx (Elanco Animal Health, Greenfield, IN). The *Semitendinosus* was collected after harvest from 60 cross-bred steers fed for 28 days to test two levels of zinc supplementation and two levels of Optaflexx supplementation. Steaks were fabricated from each sample and assigned to 7, 14, 21, or 42 days of aging. Following each aging time, objective tenderness measurements were collected. Warner-Bratzler shear force of steaks originating from 10 different locations within the *Semitendinosus* (eye of round) were measured. Steaks were cut from the proximal (steak 1) to distal (steak 10) end of the muscle, aged for 7, 14, 21, and 42 days, and cooked to 160°F. Data presented represent the average shear values of steaks aged over all four periods. The solid horizontal line indicates the threshold value of Warner-Bratzler shear that is considered “tender” for consumers

Bottom Line... Steaks from the proximal and distal ends of the *Semitendinosus* are tougher than steaks from the middle locations of the muscle. . View the complete report at www.asi.ksu.edu/cattlemensday. For more information, contact John Gonzalez (785-532-3448; johngonz@ksu.edu) or Travis O'Quinn (785-532-3469; travisquinn@ksu.edu)

↪ **Utilizing Feed Sequencing to Decrease the Risk of Porcine Epidemic Diarrhea Virus (PEDV) Cross-contamination During Feed Manufacturing** - Understanding key points of potential cross-contamination during the feed manufacturing process is important to developing efficacious methods to control or prevent transmission of pathogens into swine diets. In this study, an experiment was conducted involving 30 crossbred 10-d-old pigs that were used as a bioassay model for Porcine Epidemic Diarrhea Virus (PEDV) to determine the effects of feed batch sequencing on PEDV cross-contamination and subsequent infectivity. PEDV with a PCR cycle threshold value (Ct) of 11 was uniformly mixed into 4.5 kg of swine diet using a stainless steel bench top mixer validated for mixing efficiency. The inoculated feed was then added to 45 kg of swine diet and mixed using a 4 ft³ electric paddle mixer validated for mixing efficiency to form the positive experimental treatment. Feed was discharged, carried into a bucket elevator, and exited through a downspout. Subsequent treatment batches were formed when 50 kg of PEDV-free swine diet was sequenced immediately after the PEDV-inoculated batch without cleaning the equipment to replicate the batching process used in commercial feed mills. The subsequent sequence batches (1-4) mixed, discharged, and sampled similar to the PEDV-positive batch. Feed samples were analyzed for the presence of PEDV using PCR and bioassay. Pigs were then orally challenged with harvested supernatant. Fecal swabs were collected for PEDV PCR testing. At seven days after challenge, all pigs were necropsied. Cecum contents, ileum, and jejunum were collected for PCR, histologic, and immunohistochemistry (IHC) evaluation. Overall, the results indicate that sequencing reduced but did not eliminate the risk of PEDV transmission. All pigs (9/9) challenged with the positive treatment were infected with PEDV with feed that had a Ct mean of 31.7. The discharge for the first sequence had a Ct value of 38.1 and infected pigs were noted in pigs from one of three rooms used to bioassay the feed. The second sequence did not have detectable PEDV RNA by using PCR. Interestingly, feed from the second sequence was infectious as verified by infection in pigs from one of three rooms used for bioassay.

This study is the first to demonstrate feed without detectable PEDV RNA can be infective but is similar to other research using tissue homogenates and cell culture as bioassay material.

Bottom Line...In summary, feed batch sequencing should be considered a risk mitigation strategy that can be incorporated into feed mill biosecurity programs but should not be considered a risk elimination strategy. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org (*This study conducted by L. L. Schumacher, R. A. Cochrane, J. C. Woodworth, C. R. Stark, C. K. Jones, R. G. Main, J. Zhang, P. C. Gauger, S. S. Dritz, and M. D. Tokach*)

↪ **Effect of Fish Meal Source on Nursery Pig Performance** A total of 600 pigs (Exp. 1, n=250, PIC 327 × 1050; Exp. 2, n=350, DNA Line 200 × 400 with an initial BW of 15.6 ± 0.1 and 14.3 ± 0.2, respectively) were used in two 14-d experiments to determine the effects of fish meal source on nursery pig performance. Each experiment had 10 pens per treatment and five pigs per pen. In Exp. 1, pigs were allotted to pens at weaning (d 0) and were fed a common starter diet for 5 d. On d 5, pens of pigs were allotted by BW to experimental diets that were corn and soybean meal-based and contained 10% dried whey. Dietary treatments included a corn and soybean meal-based diet, a diet containing 8.3% HP 300 (Hamlet Protein, Findlay, OH), or diets containing 6% fish meal from one of three sources (IPC 790 Fish Meal, The Scoular Company, Minneapolis, MN; Special Select Menhaden Fish Meal, Omega Proteins, Houston, TX; and Daybrook LT Prime Menhaden Fish Meal, Daybrook Fisheries, Morristown, NJ). The Special Select Menhaden fish meal was from the 2014 catch year, while the LT Prime and IPC 790 were from the 2015 catch year. Samples of each fish meal source were analyzed for total volatile N (New Jersey Feed Laboratories, Inc., Trenton, NJ); a measure of fish meal quality or freshness. All samples of fish meal contained less than 0.15% total volatile N indicating high quality. Results from Exp. 1 indicated that there were no differences observed in ADG or ADFI between any of the treatments. However, pigs fed IPC 790 fish meal had poorer F/G from d 7 to 14 and overall compared to pigs fed all other treatments. In Exp. 2, pigs were allotted to pens at weaning (d 0) and were fed a common starter diet for 7 d and then pens were allotted by BW to experimental diets. Fish meal sources were the same as in Exp. 1, except they were all from the 2014 catch year. Dietary treatments included the same corn and soybean meal-based diet and diets with 6% fish meal from Exp. 1. In addition, diets with 3% fish meal were included. From d 0 to 14, a fish meal source × level interaction was observed for ADG and F/G.

Bottom Line...Pigs fed increasing IPC 790 fish meal had a linear improvement in ADG and F/G; however, for pigs fed either Special Select Menhaden or LT Prime Menhaden fish meals, there was no improvement in performance beyond the 3% inclusion. Traditional measures of fish meal quality (total volatile N) did not appear to be correlated with pig performance in these studies. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (*This study conducted by A. M. Jones, J. C. Woodworth, R. D. Goodband, M. D. Tokach, S. S. Dritz, and J. M. DeRouchey*)

AS&I Faculty Spotlight



Scott Schaake (simmi@k-state.edu; 785-532-1242)

Associate Professor/Beef Cattle Production and Management

Dr. Scott Schaake was raised on a cow-calf ranch/row crop operation near Lawrence Kansas. He graduated from Kansas State University in 1984 with a B.S. in Animal Sciences and Industry. He earned his M.S. at Clemson University and Ph.D. at the University of Kentucky, specializing in the area of Meat Science.

He served as the coach of the Livestock Judging Team from 1992 to 2013. His teams won five National Championships during his tenure as a coach at Kansas State University. He is also involved with teaching Foundations in Animal Science, Introductory Animal Science Lab, and Livestock and Meat Evaluation. In addition to his teaching responsibilities he advises around 40 undergraduate students each year.

Dr. Schaake has judged livestock shows in 32 states, Canada, South America and Mexico. His personal interest includes all types of sports, hunting, fishing and attending his sons' sporting events. His family includes wife, Kandi, and sons Shane and Shilo.



K C Olson (kcolson@k-state.edu; 785-532-1254)

Professor/Range Beef Cattle Nutrition and Management

KC is a professor of range beef cattle nutrition and management. He is actively involved in the undergraduate and graduate teaching mission at KSU and takes great pride in the privilege of helping to train the next generation of Great Plains ranchers and farmers. KC's research program is designed to address questions that directly affect beef industry profitability. Specific areas of research include: nutritional management of cattle grazing native range; management of invasive range plants; effects of calfhod nutritional management on carcass quality and value; and factors influencing grazing behavior.

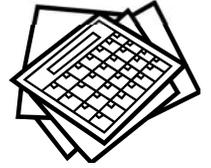
KC holds advanced degrees from Kansas State University and North Dakota State University. Prior to coming to KSU, he was on the faculty at the University of

Missouri - Columbia. KC is active in the American Society of Animal Science, the Society for Range Management, the American Registry of Professional Animal Scientists, and the American College of Animal Nutrition.

KC, his wife Karli, and sons Charles and Theodore live on a beautiful ranch in North Lyon County. In his off-time, KC enjoys spending time with his family, being active in his church, and coaching youth sports.

What Producers Should Be Thinking About.....

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



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

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.*