



Newsletter from the Department of Animal Sciences and Industry
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UPCOMING EVENTS...

October 2013

News from KSU Animal Sciences

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- Management Minute
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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.

➤ **Applied Reproduction in Beef Cattle Event in Staunton, Virginia, October 15-16, 2013** - Cattle producers, veterinarians and other industry personnel from across the country will have the opportunity to participate in an outstanding educational event called "Applied Reproductive Strategies in Beef Cattle". This year's meeting will be held at the Stonewall Jackson Hotel in Staunton, VA on October 15-16, 2013.

Some of this year's sessions will address profiting from reproduction, achieving success with estrus synchronization and artificial insemination programs, managing factors to improve pregnancy rates, and using genetic tools to get the most from reproductive efforts. The program qualifies for 16 Continuing Education hours for veterinarians. Registration and information on Continuing Education can be found at the conference website www.appliedreprostrategies.com. For more information, contact Sandy Johnson, sandyj@ksu.edu.

➤ **Webinar - History and Future of Zilmax**. Zilmax is a highly effective beta-agonist used to increase lean carcass weight in fed cattle that underwent a rigorous process to receive USDA approval. In early August, Tyson announced it would suspend buying cattle fed Zilmax on Sept. 6, 2013 due to animal welfare concerns. Merck, the manufacturer has pulled the product from the market to collect more data. Chris Reinhardt, extension feedlot specialist, will discuss the history and future of Zilmax and the implications for the industry during a webinar on Oct. 29, 2013 at 10 am. There is no need to register. The webinar site will be <http://connect.ksre.ksu.edu/asi>. Make sure your adobe connect add ins are up to date and enter as a guest.

➤ The **2013 Dairy Cattle Reproduction Council Annual Meeting** will be held November 7-8, 2013 at the Westin Indianapolis in Indianapolis, Indiana. The two-day event will continue to expand the DCRC's reach to producers, veterinarians, academia and industry professionals, presenting usable information that can be implemented on the dairy. To register for the convention and more information, go to www.dcrcouncil.org.

The Dairy Cattle Reproduction Council (DCRC) is focused on bringing together all sectors of the dairy industry-producers, consultants, academia and allied industry professionals-for improved reproductive performance. DCRC provides an unprecedented opportunity for all groups to work together to take dairy cattle reproduction to the next level.

For more information, contact Dr. Jeff Stevenson (jss@k-state.edu; 785-532-1243).

↳ **Make plans now to attend the 2013 KSU Swine Day.** The 2013 KSU Swine Day will be held Thursday, November 21, at the KSU Alumni Center. The schedule for the day includes:

- 8:00 a.m. – 3:30 p.m. Trade Show
- 9:45 a.m. Welcome - *Dr. Ken Odde, Department Head, Animal Sciences and Industry*
- 10:00 a.m. Current K-State Swine Research to Help Improve Net Return of a Swine Business
KSU Swine Team
- 11:00 a.m. Recent Disease Challenge to our Industry – Porcine Epidemic Diarrhea
Dr. Dick Hesse, KSU Diagnostic Medicine and Pathobiology
Dr. Steve Henry, Veterinary Clinician, Abilene Animal Hospital
- 11:45 a.m. Lunch with Trade Show
- 1:15 p.m. Recent On-Farm and Commercial Feedmill Innovations to Improve Whole Herd Feed Efficiency –*Dr. Charles Stark, KSU Grain Science and Industry*
- 2:00 p.m. Current K-State Swine Research to Help Improve Net Return of a Swine Business
KSU Swine Team
- 3:30 p.m. Tour of the O.H. Kruse Feed Technology Innovation Center Feed Mill and Reception with K-State Ice Cream

Pre-registration fee is \$25 per participant by November 9; with registration at the door \$35 per participant. There is no charge for any students if they are pre-registered. More details and on-line registration is available at www.KSUswine.org. For more information, contact Jim Nelssen (jnelssen@ksu.edu; 785-532-1251).

↳ The **Range Beef Cow Symposium (RBCS)** will be held at the Rushmore Convention Center in Rapid City, South Dakota on December 3 to 5, 2013. The RBCS is a bi-annual educational event designed as "In-Service Training for Cow-Calf Ranchers." The event will feature well-known speakers who will provide updates on production topics in the areas of beef industry issues, genetics, reproduction, range and forage management, cattle health, beef nutrition, and more. For more information, contact Sandy Johnson, sandyj@ksu.edu.

↳ The 2014 **KSU Swine Profitability Conference** will be held on February 4, 2014, in Forum Hall of the K-State Student Union. Featured speakers include Dennis DiPietre, Knowledge Ventures; Larry Coleman, Vet Care, Broken Cow, NE; Craig Christensen, Ogden, IA; Craig Good, Olsburg, KS; and Grady Bishop, Elanco Swine Operations. Watch for more details at www.KSUswine.org. For more information, contact Jim Nelssen (785-532-1251; jnelssen@ksu.edu).

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
October 15-16, 2013	Applied Reproduction in Beef Cattle	Staunton, VA
October 29, 2013	History and Future of Zilmax Webinar	
November 7-8, 2013	Dairy Cattle Reproduction Council Annual Meeting	Indianapolis, IN
November 21, 2013	KSU Swine Day	Manhattan
December 3-5, 2013	Range Beef Cow Symposium	Rapid City, SD
February 4, 2014	KSU Swine Profitability Conference	Manhattan

WHAT'S NEW.....

Management Minute "Flex Time!"

↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist "Flex Time"

Recently, I had an interesting conversation with a friend and former student who now is a line manager for a large agricultural enterprise. He told me they had a critical opening because they had lost a good shift manager to a competing industry where he was certain the employee would earn less money, but have more time off, work shorter days, and work a shorter week.

Unfortunately, this is not an uncommon story, and becomes more normal every year. As the economy works its way back into the black ink, job opportunities improve and increase, making for some very tempting situations for good employees.

Here is the age-old challenge for employers in any industry: your good, conscientious, hard-working, dedicated employees are going to have options; your less reliable, marginal team members probably don't. The good ones leave and the bad ones stay.

If your salary and compensation package is "in the ball park" with the rest of the industry and competing industries, keeping good employees won't be about the money. And if they say it's about the money, it's not. Workplace satisfaction and quality of life can't be bought for another couple of bucks an hour. It will be about something else entirely.

The reason my friend lost a good worker is for more time with his family. If the worker had been the sole bread-winner in a household with children, leaving for a pay cut might not have been an option at all. But if Mom had a decent paying job, even if it's only part-time, the family might not feel pressed for disposable income, but definitely will feel pressed for family time. In order to both have time with his family and be flexible to work around his wife's work schedule, time was worth more than money. Wow, what a concept.

If you want to get ahead of the game and keep good employees around, there are 2 admonitions here: (1) you've got to start getting creative with scheduling, and (2) you've got to be proactive. If the employee is loyal to your team and really doesn't want to leave but feels pulled, he'll likely give you a chance to tweak your system. The problem is that this will be an uncomfortable experiment for all involved and will likely experience some hiccups. Start experimenting now. As The Great Jack Welch said, "Change before you have to."

This isn't easy stuff; nobody said management was easy. It's lonely at the top. And times have changed from just two decades ago when another 25 cents an hour would steal a good employee from the neighbor and buy their loyalty for another couple years. Chances are your lowest paid employee has a car, cable television, microwave oven, warm clothes and good shoes on the kids. A few bucks won't change their life.

You can play this game and win. But the rules have changed. Take the time to learn what the playing field looks like today, spend time with your people to know what their needs are outside of your operation, and bend your own rules to make them fit the new reality we live and operate in.

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

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

For cattle feeders young and old, it's important, albeit a little academic, to recognize that commodity prices have likely been the most volatile in history. Certainly there have been brief periods of volatility---checkmarks in a relatively stable curve, but since 2005, it seems like the only thing that has been consistent has been change.

From a nutritionist's perspective, the first element to consistent cattle performance is a constant diet. In the 1960's and 70's nutritionists learned the nutritional value of different grains, by-products, and roughages and liberally and frequently alternated between them. If a few loads of an alternative could be had on the cheap, it was snapped up and squeezed into the diet, often leading to weekly changes in the diet. However, throughout the 1990's and 2000's, because feed ingredient prices became fairly stable, the finishing diet in a feedyard changed little---if at all---for months at a time.

Feedlot Facts "Be Flexible"

Feedlot Facts – “Be Flexible” (cont.)

From a performance and predictability standpoint there is something to be said for stability. But in business there are two kinds of operators: the Quick and the Dead. If you have sufficiently deep pockets, you can ride out price fluctuations. Or if you're in a very favorable long-term contract, you can ignore opportunity ingredients. But for the cattle feeder who is feeding fairly hand-to-mouth, it can definitely pay to keep one's eyes open for opportunity.

Unfortunately, this kicks open the back door on performance predictability. Although our USDA Grading standards ensure that grains are fairly consistent, there is no such thing for by-products and roughages---buyer beware. And even if the ingredient is consistent from load to load, it will be different from what it replaces, so nutritional adjustments will likely be needed in terms of roughage percentage or the makeup of the supplement.

There is value in consistency, and there is opportunity in remaining nimble. When something is gained, something is often lost. Remain attuned to the marketplace to capture pricing advantages, but make sure you trust your nutritionist to make the appropriate, timely, adjustments in the remainder of the diet to keep cattle on track.

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

- ↪ **IRM Redbooks for Sale** – The 2014 IRM Redbooks will be arriving soon and will be sold on a first come first serve basis. The price will be: For orders of less than 10 = \$5.25/book; Orders of 10 or more = \$5.00/book which includes postage. To order your supply of redbooks, please contact Lois (Ischrein@ksu.edu; 785-532-1267).
- ↪ **Assistant Professor, Meat Science** – The Department of Animal Sciences and Industry at Kansas State University seeks applicants for an Assistant Professor, Meat Science position. This position is full-time, 12-month, tenure track, 60% Extension, 40% Research. A Ph.D. or equivalent at time of hire in Meat Science, Animal Science or Food Science with emphasis in the area of fresh meat quality and composition is required. View complete position announcement at: www.asi.ksu.edu/about/job-announcements.html. Review of applications begins November 4, 2013, and continues until a suitable candidate is identified.
- ↪ **Removal of Supplemental Dietary Calcium Does Not Influence Beef Tenderness** - Heifers (n = 96; 864 lb) were sorted by body weight and assigned to treatments. Treatments consisted of: (1) a diet containing supplemental calcium in the form of limestone (Calcium), and (2) a diet in which the limestone had been removed (No Calcium). Prior to Zilmax (Merck Animal Health, Summit, NJ) supplementation, all cattle were fed the control diet. The experimental diets were fed for a period of 21 days in conjunction with Zilmax. After 21 days, Zilmax was removed, and cattle were placed back onto a common diet containing limestone for 3 days before harvest. Carcass data were collected at harvest, and loin sections were collected for Warner-Bratzler shear force determination after a 10-day period of wet aging.
The Bottom Line: Removing calcium from the diet had no effect on feedlot performance, carcass quality, or beef tenderness. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact Jim Drouillard (785-532-1204; jdrouill@ksu.edu) or Elizabeth Boyle (785-532-1247; lboyle@ksu.edu).
- ↪ **Hydrated Lime Matrix Decreases Ruminal Biohydrogenation of Flaxseed Fatty Acids** - Encapsulation of fats has been proposed as a method for improving efficiency of transfer of omega-3 fats into beef. Yearling steers (45 head; 557 ± 40 lb) were blocked by weight and randomly allocated to three treatments: a Control diet (no flaxseed), a group fed a diet containing ground flaxseed (Flax), and another group fed a diet containing ground flaxseed that had been embedded within a protective matrix consisting of dolomitic lime hydrate (L-Flax). Diets (50% roughage/50% concentrate) were fed for 14 days. Blood samples were taken on days 0, 7, and 14 of the study and analyzed for concentrations of major long-chain fatty acids, including alpha-linolenic acid, which is a key omega-3 fatty acid.
The Bottom Line: Embedding ground flaxseed into a protective matrix consisting of dolomitic lime hydrate is an effective method for delivery of omega-3 fatty acids to improve their efficiency of transfer from the diet into tissues of cattle. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact Jim Drouillard (785-532-1204; jdrouill@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@k-state.edu).

↪ **The Effects of Corn- or Sorghum-Based Diets with or without Sorghum Dried Distillers Grains with Solubles on Lactating Sow and Litter Performance** – A total of 140 sows (PIC 1050) and their litters were used to determine the effects of corn-or sorghum-based diets with or without 20% sorghum dried distillers grains with solubles (DDGS) on lactating sow and litter performance. On d 110 of gestation, sows were allotted to 1 of 4 dietary treatments arranged in a 2 × 2 factorial with main effects of grain source (corn vs. sorghum) and sorghum DDGS (0 vs. 20%; 32.1% CP and 9.2% crude fat as-fed). All diets were formulated to 0.97% standardized ileal digestible lysine but were not balanced for energy. Litters were equalized to at least 12 pigs per sow after farrowing. Two sows and one sow were removed from the study for the sorghum and sorghum-DDGS treatments, respectively, because of initial feed refusal.

Overall (d 0 to 21), a tendency for a DDGS × grain source interaction was observed as ADFI increased in corn-based diets when DDGS were added, but this tendency decreased in sorghum-based diets. Sows fed the sorghum-based diets had decreased lactation BW loss compared with those fed corn-based diets. Litter weaning weights tended to be lower for sows fed the diets containing DDGS compared with those fed the diets without DDGS. Sows fed the sorghum-based diet with 20% sorghum DDGS had the lightest litter weaning weight at 155 lb, with weaning weights averaging 161 to 162 lb for the other dietary treatments. Following this trend, litter weight gain tended to decrease when sorghum DDGS were added to corn- or sorghum-based diets. No differences were observed in piglet survivability among dietary treatments.

The Bottom Line...Overall, feeding sows corn- vs. sorghum-based diets (without DDGS) in lactation did not affect litter performance; however, the 5% decrease in litter weaning weight of sows fed sorghum with 20% sorghum DDGS needs to be taken into account when selecting ingredients for lactating sows. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by K. M. Sotak, R. D. Goodband, M. D. Tokach, S. S. Dritz, J. M. DeRouchey, and J. L. Nelssen.)

↪ **Effects of Source and Level of Added Zinc on Growth Performance and Carcass Characteristics of Finishing Pigs Fed Ractopamine HCl** - A total of 312 pigs (PIC 327 × 1050; initially 206.1 lb) were used in a 27-d study to determine the effects of increasing added Zn from zinc oxide (ZnO; Zinc Nacional S.A., Monterrey, Mexico) or Availa-Zn (Zinpro, Eden Prairie, MN) on growth performance and carcass characteristics of finishing pigs fed Ractopamine HCL (RAC; Paylean; Elanco Animal Health, Greenfield, IN). Pigs were allotted to 1 of 6 dietary treatments in a completely randomized design with 2 pigs per pen and 26 pens per treatment completed over 2 consecutive groups of finishing pigs (13 pens per treatment per group). Dietary treatments consisted of (1) a corn-soybean meal-based negative control diet (0.66% standardized ileal digestible [SID] lysine); (2) a positive control diet (0.92% SID lysine) containing 10 ppm RAC; (3), (4), and (5) RAC plus 50, 100, and 150 ppm added Zn from ZnO, respectively; and (6) RAC plus 50 ppm added Zn from Availa-Zn. The trace mineral premix provided a basal level of 83 ppm Zn from Zn Sulfate (ZnSO₄) in all diets.

Overall, pigs fed the positive control RAC diet had improved ADG, F/G, income over feed cost (IOFC), final BW, HCW, carcass ADG, carcass F/G, carcass IOFC, carcass yield, boneless loin weight, and a tendency for reduced ADFI compared with pigs fed the negative control diet. Pigs fed RAC with up to 150 ppm added Zn from ZnO had numerically improved F/G, IOFC, caloric efficiency on an ME and NE basis, and a tendency toward increased boneless loin weights. In addition, carcass ADG tended to increase with increasing ZnO, with little improvement beyond feeding 50 ppm added Zn. Overall, pigs fed diets with 50 ppm added Zn from Availa-Zn had increased IOFC, carcass ADG, and a tendency for increased ADG compared with pigs fed positive control, RAC diet. No differences were observed in performance among pigs fed diets with 50 ppm added Zn from ZnO or Availa-Zn.

The Bottom Line...These data indicate that adding up to 150 ppm Zn from ZnO or 50 ppm Zn from Availa-Zn in finishing pig diets containing RAC can improve performance and IOFC; however, more research is needed to better define the response and understand the mechanism responsible for the improved performance from added Zn. 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, M. D. Tokach, J. L. Nelssen, J. M. Gonzalez, J. M. DeRouchey, R. D. Goodband, and S. S. Dritz.)

AS&I Faculty Spotlight



Bob Weaber (bweaber@ksu.edu; 785-532-1460)

Associate Professor/Extension Specialist, Beef Breeding & Genetics

Dr. Bob Weaber's nationally recognized extension programming has resulted in more than 145 publications and more than \$13 million from 42 awards of grants and gifts for research and extension programming. Weaber's extension program leadership has been recognized with MU Provost's Innovative Extension Programming by New Faculty, the MU CAFNR J.W. Burch State Extension Specialist Award, and the Beef Improvement Federation's Continuing Service Award.

Weaber grew up on a cow-calf operation in southern Colorado and went on to earn a BS in Animal Science followed by a Master of Agriculture degree in the Beef Industry Leadership Program at Colorado State University. He completed his doctoral studies in the Animal Breeding and Genetics Group at Cornell University.

While there, he served as the Interim Director of Performance Programs for the American Simmental Association for three and a half years. Previously, Weaber was Director of Education and Research at the American Gelbvieh Association. Bob, his wife, Tami, and their young children, Maddie, Cooper and Wyatt, reside near Wamego, KS.



Andrea Sexten (aksexten@ksu.edu; 785-532-1450)

Assistant Professor

Dr. Andrea Sexten was raised on a commercial cow-calf and tobacco farm in Nicholasville, KY, where she was very involved from a young age. Growing up, Andrea also showed registered Tennessee Walking Horses and was very active in her local FFA chapter. She earned two B.S. degrees from the University of Kentucky in 2005 in Animal Science and Agricultural Biotechnology. She also completed her M.S. in Animal Science at the University of Kentucky in 2007. From there she went on to Oklahoma State University where she earned her Ph.D. in Ruminant Nutrition in 2010. As part of her Ph.D. program she had the opportunity to complete a research internship at the U.S. Meat Animal Research Center in Clay Center, NE during the fall of 2009. After earning her Ph.D., she accepted a postdoctoral research associate position with Oklahoma State University and

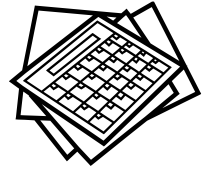
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In the summer of 2011 Andrea joined the Kansas State University faculty with an 80% teaching and 20% research appointment. Dr. Sexten's responsibilities include developing and serving as the faculty coordinator for the KSU Department of Animal Sciences and Industry Undergraduate Research Program and teaching ASI 300/FDSCI 330 Introduction to the Graduate Experience (spring), ASI 320 Principles of Feeding (fall and spring), and ASI 561/FDSCI 630 Undergraduate Research in Animal and Food Sciences (fall and spring). She also advises approximately 60 undergraduate students and serves on the graduate faculty. Her research interests include the interaction of nutrition and gene expression in cattle and sheep.

Andrea and her husband, Austin, enjoy cheering on their favorite college teams, spending time with family and friends, and being active in church.

What Producers Should Be Thinking About.....

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



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

Cow herd management for spring-calving cows

- In late fall and early winter, start feeding supplement to mature cows using these guidelines:
 - Dry grass — 1-2 pounds (lb.) per day of a 40% crude protein (CP) supplement
 - Dry grass — 3-4 lb. per day of a 20% CP supplement
 - Dry grass — 10 lb. good nonlegume hay, no supplement needed
- Compare supplements based on cost per pound of nutrient.
- Utilize crop residues.
- Strip-graze or rotate cattle to improve grazing efficiency.
- Cows in average body condition can be grazed at 1-2 acres per cow for 30 days, assuming normal weather. Available forage is directly related to grain production levels.
- Limiting nutrients are usually rumen degradable protein, trace minerals and vitamin A.
- Control lice.

General management

- Document your cost of production by participating in Standardized Performance Analysis (SPA) programs.
- Review management decisions; lower your costs per unit of production.
- Check your financial management plan and make appropriate adjustments before the end of the year.

*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.*