



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

November 2012

News from KSU Animal Sciences

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- What Producers Should Be Thinking About...

We Need Your Help!

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

- ☞ The **2012 KSU Swine Day** will be held Thursday, November 15, at the KSU Alumni Center. The schedule includes a presentation by Governor Sam Brownback. Visit www.KSUswine.org for complete schedule. For more information, contact Jim Nelssen (jnelssen@ksu.edu; 785-532-1251).
- ☞ The **2012 Applied Reproductive Strategies in Beef Cattle Workshop** will be held in Sioux Falls, SD on December 3rd and 4th. This year's conference will focus on how we utilize advancing technologies to improve reproductive efficiencies, profitability, and the product that we all enjoy so well (BEEF)! This is a tremendous opportunity to hear 27 speakers from across the U.S. and Canada speak on topics including how to profit from implementing these technologies, and the latest research in the fields of reproduction, nutrition, and genetics. This conference is geared to veterinarians and producers, so all the speakers will be addressing how you can use these areas on cattle operations. The full program and list of speakers is available at <http://muconf.missouri.edu/ARSBC-SouthDakota>. In addition to the outstanding speakers we have on the program, there will also be a large tradeshow with booths from all sponsors. For more details, contact Sandy Johnson, sandyj@ksu.edu.
- ☞ The **PorkBridge Grow-Finish Educational Series** is being offered for 2012-2013. The PorkBridge program is a distance education method that offers relevant and timely information for people involved with grow-finish swine operations. It consists of six teleconference sessions conducted by industry experts. Session content addresses daily decisions related to the grow-finish process, including swine management, heat stress, production efficiency and feed cost reduction strategies.
There are six sessions in the program year, beginning in December 2012 and ending in October 2013. All sessions begin at noon Central Time and last for approximately 1½ hours. The first sessions will be held on December 6, 2012 with John Patience, Iowa State University, presenting on "Strategies to Reduce Feeding Costs."
The PorkBridge Series cost of \$125 includes all sessions and supporting materials. No internet access is needed to participate in the scheduled sessions. For a complete schedule and registration form, visit KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

☞ Make plans now to attend the **K-State Winter Ranch Management Seminar** to be held on Tuesday, January 8, 2013, from 4:00 – 8:30 p.m. Locations for the event include Manhattan (Kansas State University), Ellsworth, Belleville, Oakley, K-State Olathe Campus, Erie, Phillipsburg, Hutchinson and Emporia. Featured webinar speakers will include Donnell Brown, R.A. Brown Ranch, Throckmorton, TX, and Rick Funston, University of Nebraska-Lincoln.

The webinar speakers will be addressing the audiences at all nine locations simultaneously. Local speakers at each location will address “Protection and Restoration of Forage and Range Resources” and “Tips and Tools to Reach Your Management Goals”.

Registration fee is \$25 and due by January 2, 2013. Brochures for the event will be available through your local county office shortly and will be available at www.KSUbeef.org. For additional information, contact Larry Hollis (lhollis@ksu.edu; 785-532-1246) or Eve Clark (evvec@ksu.edu; 785-532-1280).

☞ The 2013 **KSU Swine Profitability Conference** will be held on February 5, 2013, in Forum Hall of the K-State Student Union. Featured speakers include Dr. Jeff DeMint, Bern-Sabetha Veterinary Clinic; Roy Henry, Longford, KS; Chris Novak, CEO, National Pork Board; Ron Plain, University of Missouri; and Trent Loos, Loos Tales. Watch for more information at www.KSUswine.org. For more information, contact Jim Nelssen (785-543-1251; jnelssen@ksu.edu).

☞ Mark February 16, 2013 on your calendar for the **KSU Junior Swine Producer Day**. Watch for more details. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Kristine Clowers (785-532-1264; clowers@ksu.edu).

☞ Make plans now to attend the 100th anniversary of KSU **Cattlemen’s Day** (previously known as Livestock Feeders Day) which will be held on Friday, March 1, 2013. Mark your calendars and watch for more details. The program and registration information will be coming soon to www.asi.ksu.edu/cattlemensday. For more information, contact Jim Drouillard (jdrouill@ksu.edu; 785-532-1204) or Dale Blasi (dblasi@ksu.edu; 785-532-5427).

☞ The **2013 KSU Sheep Day** will be held on Saturday, March 2, 2013. Mark the date on your calendars and watch for more details. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).

| CALENDAR OF UPCOMING EVENTS | | |
|------------------------------------|---|-----------------|
| Date | Event | Location |
| November 15, 2012 | KSU Swine Day | Manhattan |
| December 3-4, 2012 | Applied Reproductive Strategies in Beef Cattle Workshops | Sioux Falls, SD |
| December 6, 2012 | PorkBridge Grow-Finish Educational Series Session 1 | |
| January 8, 2013 | K-State Winter Ranch Management Seminar | |
| February 5, 2013 | KSU Swine Profitability Conference | Manhattan |
| February 16, 2013 | Junior Swine Producer Day | Manhattan |
| March 1, 2013 | KSU Cattlemen’s Day – 100 th Anniversary | Manhattan |
| March 2, 2013 | KSU Sheep Day | Manhattan |
| April 5, 2013 | Midwest Processed Meats Workshop | Manhattan |
| June 11-13, 2013 | Developing and Implementing HACCP in Meat, Poultry and Food Processing Establishments | Manhattan |
| October 2-4, 2013 | Developing and Implementing HACCP in Meat, Poultry and Food Processing Establishments | Olathe |

WHAT'S NEW

Management Minute **“On Pruning Roses”**

↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **“On Pruning Roses”**

There is a book by Dr. Henry Cloud called “Necessary Endings”(© 2010 HarperCollins, New York, NY) that I recommend for anyone who wants to start moving forward in their business or personal lives.

The primary theme of the book is about identifying areas of our work or personal life that need to end. By intentionally moving away from those areas we have the opportunity to control and improve the outcome of the ending, and of what comes after.

Cloud uses the metaphor of pruning a rose bush. A rose bush will make many, perhaps hundreds of beautiful roses, but to allow the bush to create a few truly spectacular, award winning roses, something has to go. So the gardener prunes the dead growth, and the diseased growth. But they must also prune otherwise healthy roses which do not have the ability to become great, but which are sapping resources from those roses that do have the potential for greatness.

We are all adept at pruning dead or sickly areas from our lives---those areas are usually easy to identify. But how many of us are able or willing to cut away areas that are actually healthy and thriving but which may be using precious resources that are needed by other areas of activity? Those activities may actually be wholesome and beneficial, but may not be moving us toward what we ultimately want our lives or business to be about.

Every person and every business is fully using 100% of their available resources; few of us would say that at the end of the week, month, or year, we've got a big, healthy reserve left over for more activities. The first step then is to critically evaluate what we want to be about: our core competency. Then evaluate what activities are moving us in that direction and which are not. Then we have the opportunity---and the obligation---to practice the precious gift of the art of saying “no”.

We all have limited resources. And we all have a vision for what we want to become, personally and professionally. By pruning the dead, the diseased, and even some healthy but distracting activities, we actually improve the likelihood of achieving that grand vision.

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

Feedlot Facts **“Turning Over Rocks”**

↪ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **“Turning over Rocks”**

This has been a year of constant challenges for beef producers. Forage and grain costs are historically high. But for the creative producer, these challenges also hide opportunities.

A recent study conducted across Kansas demonstrated that ammoniation of low quality forage dramatically improves the nutritional value of wheat straw. A \$20/ton investment can yield an increase of \$60 in forage value and reduce supplemental protein needs by \$30 per cow this winter.

Ionophores have been around for decades but haven't been used extensively in beef cows. But with elevated forage costs, this may be the perfect time to consider change. Research shows an improvement of 10% forage utilization when Rumensin® is included in beef cow diets. That could reduce forage costs this winter by \$10-15 per cow.

Feedlot Facts – “Turning over Rocks” (cont.)

Another often overlooked factor is feed wastage. Again, when forage was cheap, this wasn't a huge deal, but when poor quality forage is costly and good quality forage almost non-existent, every savings is important. Bale feeders are not all created equal. A bale feeder with a cone insert prevents the bale from wicking moisture from the ground and molding. Angled stanchions encourage the cow to remain in the feeder once inside and not turn and fling hay backwards and also prevent the boss cow from moving laterally to push other cows aside. Research suggests bale feeder with the cone insert can save feed wastage by \$10-20 per cow for the entire winter feeding season

Taken individually, these aforementioned savings are certainly worth considering. But taken in concert, the \$50-70 in total feed savings may mean the difference between culling even deeper and keeping more productive females, and may help producers keep the factory together until better days return.

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

↪ **IRM Redbooks for Sale** – The 2013 IRM Redbooks are in and will be sold on a first come first serve basis. The price of the redbooks 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 (lschrein@ksu.edu; 785-532-1267).

↪ **Vaccinating with SRP *E. coli* Vaccine Technology Does Not Affect Feeder Cattle Performance, Health, or Carcass Characteristics** – Sixty pens of feeder cattle (4,869 head; initial body weight = 728 ± 12.7 lb) housed at 4 commercial feedlots in Kansas and Nebraska were vaccinated three times (3 weeks apart) with either SRP *E. coli* O 157:H7 vaccine or with sterile saline. Animal health was observed by trained feedlot personnel. Pen closeout data were provided by each respective feedlot, and carcass traits were evaluated by trained personnel at a commercial abattoir.

Bottom Line...Vaccinating feedlot cattle three times with *E. Coli* vaccine did not hinder performance, health or carcass traits. 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).

↪ **Presynchronizing PGF_{2α} Injection Before Timed Artificial Insemination CO-Synch + CIDR Program** – Suckled beef cows (n=1537) at nine locations in four states were inseminated artificially after a 7-day CO-Synch + CIDR protocol (control). Half of the cows received a PG injection 3 days (PG treatment) before initiating the synchronization programs. Blood samples were collected on days -23, -13, -10, -3, and 0 to determine progesterone concentration and cycling status of cows before treatments. Body condition was scored on day -13.

Consistent acceptable timed artificial insemination pregnancy rates >50% were achieved at all but one location in both treated and control cows. More multiparous cows in the PG treatment showed estrus after both PG injections, indicating that more multiparous cows were cycling and responded to PG. Timed artificial insemination pregnancy rates at day 35 were 55.6% for the PG treatment and 52.2% for the control. Pregnancy rates at the end of the breeding season did not differ between treatments. If desired, an alternative breeding option with the PG treatment could include inseminating cows detected in estrus after the PG treatment and apply the timed artificial insemination option to all remaining cows.

Bottom Line...PG treatment was equally effective as the control even in herds that have a large percentage of anestrous cows (35 to 84%) at the onset of the breeding season. For more information contact, Jeffrey Stevenson (785-532-1243; jss@ksu.edu) or Larry Hollis (785-532-1246; lhollis@ksu.edu).

↪ **Influence of Standardized Ileal Digestible Tryptophan:Lysine Ratio on Growth Performance of 13- to 21-lb Nursery Pigs** - A total of 255 nursery pigs (PIC 327 × 1050, initially 13.8 lb and 3 d postweaning) were used in a 28-d growth trial to determine the minimum standardized ileal digestible (SID) tryptophan:lysine ratio for 13- to 21-lb pigs. A 2-phase diet series was used with treatment diets fed from d 0 to 14 and a common diet fed from d 14 to 28. The 6 SID tryptophan:lysine ratios were 14.7, 16.5, 18.4, 20.3, 22.1, and 24.0%. Pigs were allotted on d 3 after weaning with 6 or 7 pigs per

pen and 7 replications per treatment. Weight and feed disappearance were determined on d 0, 7, 14, 21, and 28 to calculate ADG, ADFI, and F/G. From d 0 to 14, increasing SID tryptophan:lysine ratio improved ADG and generated a tendency for improved ADFI and F/G. Although ADG and ADFI were linear, the greatest response was observed at a SID tryptophan:lysine ratio of 20.3%. From d 14 to 28, when the common diet was fed, ADFI increased as SID tryptophan:lysine ratio increased in the previous period, but no differences were found in ADG and F/G. For the overall trial (d 0 to 28), ADG and ADFI increased with increasing SID tryptophan:lysine ratio, with the greatest response observed at 20.3%. Feed/gain was unaffected by SID tryptophan:lysine ratio.

Bottom Line... Thus, the optimal SID tryptophan:lysine ratio for 13- to 21-lb nursery pigs in this study appears to be at least 20.3%. This ratio is greater than the minimum ratio currently using in many practical diet formulations in the United States, indicating an importance of tryptophan in diet formulation of low-protein amino acid-fortified diets in the swine industry. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by S. Nitikanchana, M. D. Tokach, S. S. Dritz, J. M. DeRouchey, R. D. Goodband, J. E. Nemecheck, J. L. Nelssen, and J. Usry.)

↳ **Effects of XFE Liquid Energy and Choice White Grease on Nursery Pig Performance** - Two

experiments were conducted to evaluate the effects of XFE Liquid Energy (XFE Products, Des Moines, IA) and choice white grease (CWG) on growth performance of nursery pigs. In Exp. 1, a total of 150 nursery pigs (TR4 × 1050, initially 27.0 lb) were used in a 21-d experiment. Pens of pigs were balanced by initial BW and randomly allotted to 1 of 5 dietary treatments with 6 replications per treatment. The 5 dietary treatments included a control corn-soybean meal-based diet, the control diet with 2 or 4% CWG, or the control diet with 2 or 4% liquid energy. Overall (d 0 to 21), pigs fed diets containing liquid energy had improved ADG and ADFI with no change in F/G compared with control pigs. Pigs fed CWG had greater ADG and improved F/G compared with pigs fed the control diet. The responses tended to be linear for liquid energy and were linear for CWG. Finally, pigs fed CWG had improved F/G compared with pigs fed liquid energy.

In Exp. 2, a total of 228 nursery pigs (TR4 × 1050, initially 14.1 lb and 3 d postweaning) were used in 30-d trial. Pigs were randomly allotted to 1 of 6 dietary treatments with 7 pens per treatment. Treatment diets were fed in 2 phases, with Phase 1 diets all containing 4.5% fishmeal and 10% dried whey. The 6 dietary treatments were in a 2 × 3 factorial arrangement with main effects of either 0 or 4% CWG and 0, 2, or 4% liquid energy. Diets were formulated to equal standardized ileal digestible (SID) lysine:ME for each phase. From d 0 to 14, a CWG × liquid energy interaction was observed for ADG, which was the result of 2% liquid energy decreasing ADG when added to diets without CWG but increasing ADG when added to diet containing CWG. Pigs fed CWG had decreased ADG and ADFI compared with the pigs fed diets without CWG. Growth in pigs fed liquid energy did not differ. From d 14 to 30, a CWG × liquid energy interaction occurred for ADFI. Pigs fed 2% liquid energy without CWG had lower ADFI compared with other no-CWG treatments; however, pigs fed the CWG diet with 2% liquid energy had greater ADFI than other CWG treatments. The addition of CWG decreased ADFI but improved F/G compared with pigs fed no CWG. Growth for pigs fed liquid energy did not differ. Overall (d 0 to 30), CWG × liquid energy interactions were observed for ADG and ADFI. Feeding liquid energy in diets without CWG resulted in lower ADG and feed intake; however, addition of liquid energy to diets containing CWG improved ADG and feed consumption compared with the 4% CWG diet without liquid energy. Pigs fed CWG had reduced ADFI and improved F/G compared with pigs fed diets without CWG. Feeding liquid energy had no significant influence on any growth criteria. Feeding CWG improved F/G as expected in both experiments.

Bottom Line... Although ADG was improved in one experiment for pigs fed liquid energy, no differences were found in feed efficiency. These trials indicate additional research is needed to understand the effects of XFE liquid energy in nursery diets. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by W. Ying, J. M. DeRouchey, M. D. Tokach, S. S. Dritz, R. D. Goodband, and J. L. Nelssen.)

AS&I Faculty Spotlight



Jaymelynn Farney (jkj@ksu.edu; 620-421-4826 ext. 17)
Assistant Professor/Extension Beef Systems Specialist

Jaymelynn Farney grew up in Fort Sumner, New Mexico where her family had a cow-calf operation. Jaymelynn was very active in 4-H and FFA and because of this after graduating high school she went to El Dorado, KS to be a member of the livestock judging team at Butler Community College. She completed her A.S. in Agriculture degree and then continued her education at Kansas State University in Animal Science. Jaymelynn then went to Oklahoma State University to complete her M.S. in Ruminant Nutrition with an emphasis on receiving calf management. She then returned to Kansas State University to complete her PhD in Ruminant Nutrition, using the dairy cow as the model for how inflammation impacts production.

Jaymelynn plans to focus her applied research programs on dealing with issues pertaining to Southeast Kansas cattle producers. Subsequently, she plans on researching fescue management, heifer and bull development programs, and stocker/backgrounding management systems. Additionally, Jaymelynn plans on using her extension appointment to provide producers with knowledge of new technologies, feeds, and management strategies to improve efficiency of production in both cow-calf and stocker/backgrounder operations.

Jaymelynn lives in Southeast Kansas with her husband Gareth, and works at the Southeast Agricultural Research Center in Parsons.



Scott Beyer (sbeyer@k-state.edu; 785-532-1201)
Associate Professor/Poultry Nutrition and Management

Originally from Galveston, Texas, Dr. Scott Beyer attended Texas A&M University and received an undergraduate degree in Biochemistry in 1983. He obtained his Masters and Ph.D. degrees in the Animal Nutrition Program from the University of Georgia. He then worked as a Post-Doctoral Research Associate for Harvard University in the Department of Nutrition. In 1993, he accepted an Assistant Professor position at Kansas State University where he currently has a 50% teaching, 25% research and 25% extension appointment.

Dr. Scott Beyer has 20 advisee undergraduate students and 3 graduate students. He teaches 7 different courses in the Department, which includes ASI 106, Dairy/Poultry Science; ASI 107, Companion Animal and Equine Lab; ASI 310, Poultry/Production Evaluation; ASI 520, Companion Animal Management; ASI 640, Poultry Product Technology; ASI 645, Poultry Management; and ASI 676, Avian

Nutrition.

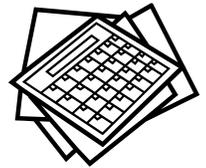
Dr. Beyer is coach of the KSU Collegiate Poultry Judging team, which won the national championship in 2002 and 2003, and has finished in the top of every contest since then. He also works with numerous 4-H volunteers and FFA instructors and teams. He is involved with poultry judging at counties fairs and supervisor of the poultry division at the Kansas State Fair.

Dr. Beyer is also the Poultry Extension Agent for the state of Kansas and maintains extramural funding for his research program related to poultry and companion animals. His research focuses on feed manufacturing and poultry nutrition. He has been an invited speaker at every nutrition conference in the US. He has been an invited speaker at international conferences in Mexico, Tunisia, Egypt, China, Malaysia, South Korea, and Morocco.

Dr. Scott Beyer resides in Manhattan with his wife Amy, and their three boys, Travis, Eric, and Nick, all of whom play baseball on different traveling teams. When he has some spare time and isn't doing something poultry or watching baseball, he enjoys woodworking, fishing, and gardening.

What Producers Should Be Thinking About.....

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



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

Cow herd management

- Historically, cull cow prices have increased during the next 2 or 3 months. Contrary to tradition, feeding cull cows this year may not be a profitable venture due to higher input costs. Check your breakevens.
- Continue feeding or grazing programs started in early winter. Weather conditions may require wrapping up grain sorghum and cornstalk field grazing. Severe winter weather may begin to limit crop residue utilization, so be prepared to move to other grazing and feeding systems
- Supplement to achieve ideal BCS at calving.
 - ↳ Use this formula to compare the basis of cost per lb. of crude protein (CP):
Cost of supplement, \$ per hundredweight (cwt.) ÷ (100 X % CP) = cost per lb. of CP.
 - ↳ Use this formula to compare energy sources on basis of cost per lb. of TDN:
Cost, \$ per ton ÷ [2,000 X % dry matter (DM) X % TDN in DM] = cost per lb. of TDN.
- Control lice; external parasites could increase feed costs.
- Provide an adequate water supply. Depending on body size and stage of production, cattle need 5-11 gallons (gal.) of water per head per day, even in the coldest weather.
- Sort cows into management groups. BCS and age can be used as sorting criteria. If you must mix age groups, put thin and young cows together, and feed separately from the mature, properly conditioned cows.
- Use information from forage testing to divide forage supplies into quality lots. Higher-quality feedstuffs should be utilized for replacement females, younger cows, and thin cows that may lack condition and that may be more nutritionally stressed.
- Consult your veterinarian regarding pre- and post-partum vaccination schedules.
- Continue mineral supplementation. Vitamin A should be supplemented if cows are not grazing green forage.
- Plan to attend local, state and regional educational and industry meetings.
- Develop replacement heifers properly. Weigh them now to calculate necessary average daily gain (ADG) to achieve target breeding weights. Target the heifers to weigh about 60%-65% of their mature weight by the start of the breeding season. Thin, lightweight heifers may need extra feed for 60-80 days to "flush" before breeding.
- Bull calves to be fed out and sold in the spring as yearlings should be well onto feed. Ultrasound measurements should be taken around one year of age and provided to your breed association.
- Provide some protection, such as a windbreak, during severe winter weather to reduce energy requirements. The LCT is the temperature at which a cow requires additional energy to simply maintain her current body weight and condition. The LCT for cattle varies with hair coat and body condition. Increase the amount of dietary energy provided 1% for each degree (including wind chill) below the LCT.

*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.*