



News from KSU Animal Sciences

January, 2016

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UPCOMING EVENTS...

- ↳ The 2016 **Winter Ranch Management Series** will be held in multiple locations in January/February 2016. The format of the 2016 Winter Ranch Management Seminar Series is a face-to-face meeting with a series of short presentations focused on beef production management and a 'Town Hall' Question and Answer session where producers can ask their questions to local/district and state extension specialists. Producers are encouraged to bring their questions on cow/calf animal health, nutrition, genetics, reproduction and management to the session! Meeting registration costs vary by location. Meeting registration begins at 5:00 or 5:30 PM depending on site.

Meeting location:	Meeting Date/Time:	RSVP by:
Concordia	January 20, 2016; 5-8:30 PM	January 13, 2016
Lawrence	January 21, 2016; 5-8:30 PM	January 14, 2016
Alta Vista	February 2, 2016; 5-8:30 PM	January 26, 2016
Greensburg	February 4, 2016; 5:30-9:00 PM	January 28, 2016

Please RSVP to your selected location contacts by close of business one week before the event. 40 RSVP'd attendees requested for each location. Locations with fewer than 40 confirmed attendees may be cancelled. Registration fees and payment forms may vary by site. Contact your local host contact for registration/ RSVP details. Meal is included in the registration fee. For more information, contact Bob Weaver (785-532-1460; bweaber@ksu.edu).

- ↳ The 2016 **KSU Swine Profitability Conference** will be held on Tuesday, February 2, 2016, in Forum Hall of the K-State Student Union. The schedule for the event includes:

- | | |
|------------|--|
| 9:15 a.m. | Coffee and Donuts |
| 9:30 a.m. | Special Lecture: Jack and Pat Anderson Lecture in Swine Health Management: Future Direction of the Midwest Land-Based Swine Businesses - <i>Dr. Steve Henry, Abilene Animal Hospital</i> |
| 10:30 a.m. | My Vision for our Swine Business – What Changes will be Important for our Future Success - <i>Michael Springer, Independence, Kansas</i> |
| 11:15 a.m. | Staying Competitive in a Changing Swine Industry – <i>Bart Beattie, F.L. Beattie, Sumner, NE</i> |
| 12:00 noon | Lunch |
| 1:15 p.m. | What We've Learned during the Past Two Years about the Pork Sector - <i>Glynn Tonsor, Kansas State University</i> |
| 2:15 p.m. | My Journey from KSU Back-up Quarterback to Heisman Trophy Finalist - <i>Collin Klein, K-State Athletics</i> |
| 3:00 p.m. | Adjourn |

For registration information, visit www.KSUswine.org. For more information, contact Jim Nelssen (785-532-1251; jnelssen@ksu.edu).

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Kansas State University
218 Weber Hall
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↳ The **SowBridge Breeding Herd Education Series** is being offered for 2016-2017. For ten years, SowBridge has provided producers and other industry professionals across the U.S. and around the world with relevant and timely information related to boars, sows, and their litters.

This year-long program is offered by subscription only with a January 10, deadline to ensure participants will receive materials for the first session on February 3, 2016. Sessions are held the first Wednesday of each month and will begin at 11:30 a.m. central time and last approximately 45 minutes.

The SowBridge Series cost of \$250 (U.S.) includes all 12 sessions and supporting materials. Additional subscriptions from same operation are half that cost. For a complete schedule and registration form, visit www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

↳ **2016 PorkBridge Grow-Finish Education Series** now available. Since the first session in 2005, PorkBridge has provided relevant and timely information to producers and other industry professionals across the U.S. and around the world. It combines electronic presentations with live presentations from topic experts by teleconference six times each program year on an every-other-month basis and offers access to the recorded audio of all sessions to ensure subscribers don't miss a thing!. 2016 dates include February 4; April 7; June 2; August 4; October 6; and December 1. Sessions begin at noon Central time and last about 90 minutes.

The cost is \$125 (U.S.) for the entire 2016 PorkBridge program year. Additional subscriptions from the same operation are half that cost. Subscription deadline is January 10. For a complete schedule and registration form, visit www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

↳ **Plan to attend the 39th Annual Midwest Meat Processing Workshop on February 12 at K-State**. Join us at the workshop and see, hear, taste and ask questions as state award winners share their expertise and demonstrate the manufacture and techniques used to make award winning products. Justin Stroot from Stroot Locker will demonstrate making his award winning summer sausage, and Brandon Smith from Mound City Butcher Block, will demonstrate production of his award winning bacon. Dr. Greg Aldrich, President of Pet Food & Ingredient Technology and Research Associate Professor at KSU will bring his years of experience with the pet food industry to discuss considerations that you should know when producing pet treat/food products. Dr. Houser will share his insights and experience on humane handling; Dr. O'Quinn will discuss recent research on the advantages of enhancing beef cuts to improve customer eating experience and how branding influences consumer perceptions; Dr. Gonzalez will outline a process for linking meat source to specific animals; Dr. Gragg will discuss the impact of Salmonella in lymph nodes and contamination in meat; and Dr. Carter will provide guidance on reducing energy costs for your operation and exciting opportunities for energy assessments in your facilities. Mark your calendar and come to this workshop to learn techniques to improve business strategies, product quality, and safety that could result in tastier product, longer shelf life, and greater sales and business opportunities. For more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).

↳ **Make plans to attend Cattlemen's Day 2016** –The 103rd annual Cattlemen's Day will be held Friday, March 4, 2016. All events for Cattlemen's Day will be held in Weber Hall. The Trade show and educational exhibits will open at 8:00 a.m. in Weber Arena.

Registration for KSU Cattlemen's Day will be \$20 per person in advance or \$30 per person at the door. Morning refreshments and lunch are included with registration. For more information and a schedule, visit www.asi.ksu.edu/cattlemensday or call 785-532-1267.

If you are interested in exhibiting at Cattlemen's Day or have any questions, please contact Dale Blasi (dblasi@ksu.edu; 785-532-5427) or Jim Drouillard (jdrouill@ksu.edu; 785-532-1204).

↳ The **39th annual Legacy Bull and Heifer Sale** will be held on March 4, 2016, at the conclusion of KSU Cattlemen's Day. The sale will begin at 3:30 p.m. at the Stanley Stout Center. For more information or a sale catalog, contact Tyler Leonhard at 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 (bfaris@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. A complimentary lunch and t-shirt will be provided for participants. The tentative schedule includes:

- 8:45 a.m. Registration
- 9:30 a.m. Welcome/Opening Remarks
- 9:45 a.m. Nutrition & Management
- 10:45 a.m. Meat Science Rotations
- 12:15 p.m. Lunch
- 1:00 p.m. Leadership & Communication
- 2:00 p.m. Health, Reproduction, & Showmanship Breakout Sessions
- 3:45 p.m. State Livestock Nomination Process
- 4:00 p.m. Wrap-up & Evaluation

Registration is due by February 10, 2016 and is \$15/person. Registrations received after February 10, 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>. This event has been created in the Animal Sciences Pulse calendar. For more information, contact Lexie Hayes (785-532-1264; adhayes@ksu.edu).

↳ **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. The tentative schedule includes:

- 8:45 a.m. Registration
- 9:30 a.m. Welcome & Opening Remarks
- 9:45 a.m. Breeding & Market Lamb Selection
- 10:45 a.m. Break
- 11:00 a.m. Health & Wellness
- 11:45 a.m. Lunch
- 12:30 p.m. Feeding, Nutrition, & Management
- 1:15 p.m. Break
- 1:30 p.m. Breakout Sessions (select 3 total)
 - Wool Education & Judging
 - Lamb Meat Cuts, Grading, & Cookery
 - Breed ID & Function
 - Showmanship & Grooming
- 3:45 p.m. State Livestock Nomination Process
- 4:00 p.m. Final Questions, Wrap-up, & Evaluation

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>. This event has been created in the Animal Sciences Pulse calendar. For more information, contact Lexie Hayes (785-532-1264; adhayes@ksu.edu).

↳ **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 Academy Planned for June.** 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 must be submitted by April 1, 2016. More information is available at www.YouthLivestock.KSU.edu, and the application will be posted on the website soon. For more information, please contact academy director, Sharon Breiner at (785) 249-8719 or sharonjbreiner@gmail.com.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
January 20, 2016	Winter Ranch Management	Concordia, KS
January 21, 2016	Winter Ranch Management	Lawrence, KS
February 2, 2016	K-State Swine Profitability Conference	Manhattan
February 2, 2016	Winter Ranch Management	Alta Vista, KS
February 4, 2016	Winter Ranch Management	Greensburg, 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
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 "Investments"

↳ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist “Investments”

Every well-managed and proactively-thinking business carefully considers the fundamental difference between a “cost” and an “investment”. A “cost” simply ensures the luxury of getting the job done today. Costs would include purchasing raw materials, paying the production team wages, paying the rent, paying the utility bill, etc. “Investments” are places in which we put our capital which we hope or expect that capital to be returned, and then some. Investments may be anything from buying a new fork truck for the warehouse to constructing a new, expanded, or updated production facility.

Many smart managers will say, “People are our greatest asset.” However, how many managers are truly viewing their people as an asset or simply a cost? We invest in assets, we simply pay our costs. To that point, how and how much are you investing in your human assets?

At the end of the day, we have only two resources: time and money. How are you expending those two precious resources on your human assets---what some claim to be their “greatest assets”?

You may be investing an hour or so every month for one-on-one mentoring and evaluations. You cannot expect to know the professional and personal needs and goals of your direct reports if you’re not spending regular quality time with them; anything less and you risk losing valuable “assets” simply because you were out of touch.

You may be providing technical training or paying for someone to attend professional development. Enhancing the skills of your team will yield great rewards, directly by improving their productivity and effectiveness, and indirectly by improving their connection to you as an employer who cares enough to invest in people.

You may be encouraging and even paying for classes or training in some aspect of personal development. This is where employers move to the next level. There are “table stakes” in employee retention: competitive salary and benefits, livable work hours and time off, etc. However, when you make a point to enhance the quality of life for your people, you’ve transcended traditional, bare-minimum, human resources management; you’ve truly raised the bar and raised the stakes. If your team connects this personal development with you, the employer, and knows that this development can and will be encouraged in the future, it will be very difficult---and costly---for a competitive employer to attract this employee.

If you want to attract and retain the truly exceptional employees, those who will provide value-added leadership for your organization for years and decades to come, you need to cover all the bases and fulfill all their needs. Seek out ways in which your organization may NOT be providing the most favorable workplace, and fix them. Then, seek out ways in which your organization can meet deeper professional and personal needs. Are there ways an employee could be a better financial planner with his personal finances? Would an employee’s spouse benefit from some training that would improve the quality of life at home? Do all your employees fully grasp all the benefits you provide? Would there be value in bringing in expert training (perhaps bilingual training) for the employees and their spouses on all the financial planning, health insurance, dental insurance, and other benefits your company provides?

In short, there are many ways to become the preferred employer in your field and in your geographical area; however, you may need to INVEST in your people to find them.

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

Feedlot Facts “Feeding Cows to Maintain Body Condition Score”

↳ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist “Feeding Cows to Maintain Body Condition Score”

The “optimum” or “target” body condition score for beef cows, at the time of calving, is a Body Condition Score (BCS) of 5 on a 9-point scale. BCS of 1-3 and 7-9 are rarely seen in most herds. A “5”, or moderate body condition, is typically considered an ideal target BCS at the time of calving. A BCS 5 shows no obvious fat deposits, but shows full expression of muscle through the round and shoulder, and has only 2-3 ribs obviously visible prior to morning feeding.



Feedlot Facts – “Feeding Cows to Maintain Body Condition Score” (cont.)

The reason this level of body condition is important to lifetime productivity is that energy is the first limiting nutrient when the cow's biological systems are trying to determine whether there are sufficient nutrients available after calving to: (1) maintain her own body, (2) provide milk for the calf, and (3) begin to cycle prior to the breeding season.

A BCS “4” typically has no obvious fat deposition anywhere on her body, has less than complete muscle deposition in the round and shoulder, and clearly has 4-5 ribs showing prior to morning feeding. A cow in BCS “4” will typically delay cyclicity and may breed late in the breeding season. Unfortunately, if a thin cow calves late in the calving season she may miss the breeding season entirely. This is possibly the primary cause of infertility in the beef herd.

A BCS “6” is what most producers would consider a slightly “fleshy” cow. This cow has small but obvious fat deposits around the tail head, in the brisket, and in her flanks. She will have sufficient fat cover over the round and shoulder so that separate muscle groups are not clearly defined. The reason a cow is a BCS “6” at the end of the grazing season would be an “easy keeper”. But a cow that maintains a BCS “6” throughout the winter feeding season is probably a boss cow and is probably eating more than her given allotment of supplemental energy and protein every day.

Young cows often do not winter well for a number of reasons. Two-year-olds are still growing so some of the nutrient intake is going to growth of frame and muscle, in addition to maintenance. Also, they do not have the size, strength, or social status to out-compete older cows for feed and may be pushed out of the supplement line or the feeding area. Older cows may come out of the grazing season in poor body condition, and may lack the strength to compete in the feeding area. For these reasons, it is often recommended to find a way to separate thinner and younger cows from fleshier older cows to provide the thinner cows with additional supplemental feed.

Some producers worry about creating “welfare cows” who chronically require additional feed resources during the winter to simply stay up with their herd mates. Although this is logical, good record-keeping will help you to identify those individuals who simply cannot complete a production cycle without this “welfare”. Use good records to get one more calf out of her, then move her out of the herd. Simply allowing cows to fall out of the herd because of malnutrition cheats you out of several months of feed, and forces you to sell an open female rather than a bred female or a pair.

Finally, be prepared for the next storm or cold snap because cows can drop in body condition very quickly if we're not prepared or vigilant. For 1,300 lb cows with a good, dry, winter hair coat, the thermoneutral zone is about 30-32°F. That's the wind chill temperature, not simply air temperature. For every 10°F that the effective temperature (wind chill) drops below 32°, the cow's energy needs increase by 10%. So if the effective temperature drops from 30° to 10°, we'll need to supply an additional 5 lbs of hay. If temperature drops from 30° to 10° below zero, we need to supply an additional 10 lbs of hay. But there's a limit to how much hay even a big cow can pack away. So be prepared to increase the supplemental feed proportionally.

Keep an eye on slipping body condition, on the weather forecast, and on the thermometer, and you'll be able to fend off most anything Mother Nature throws at you and your herd.

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



Using Estrus-Detection Patches to Vary Time of Insemination Improves Pregnancy Rates Compared With One Single Timed Insemination

- The objective was to examine whether delaying insemination from 60 to 75 hours after the CO-Synch + CIDR (controlled internal drug release) synchronization program would improve pregnancy rates of suckled beef cows. A total of 1,311 beef cows were studied. Cycling status and body condition scores were determined before the start of a standard 7 day CO-Synch+ CIDR program. Cows in estrus by 60 hours after CIDR removal as determined by estrus-detection patches were inseminated and injected with gonadotropin-releasing hormone (GnRH). Remaining cows were allocated to 3 treatments at 60 hours: artificial insemination (AI) and GnRH injection at 60 hours, GnRH injection at 60 hours with AI at 75 hours, or AI and GnRH injection at 75 hours. More cows that showed estrus conceived to AI (67.5 vs 43.1%) than cows not showing estrus. Early estrus cows inseminated at 60 hours had a greater pregnancy rate to AI compared with treatments. Cows that did not display estrus by 60 hours had a greater pregnancy rate per AI when they were inseminated at 75 than at 60 hours (69.8 vs 41.3%). Pregnancy rate was greater in cows that calved more than 79 days before AI (56.8 vs. 47.8%) compared with later-calving cows (<79 days from calving) to AI.

Bottom Line...Delaying insemination to 75 hours in cows that have not demonstrated estrus by 60 hours after CIDR removal improved pregnancy rates. View the complete report at www.asi.ksu.edu/cattlemenstday. For more information, contact Jeff Stevenson (785-532-1243; jss@ksu.edu) or Bob Weaber (785-532-1460;bweaber@ksu.edu)



Effects of Standardized Ileal Digestible Lysine on Nursery Pig Growth Performance - Lysine is the first limiting amino acid in swine diets, thus providing the appropriate level in the diet is critical to growth performance. Therefore, the objective of this study was to determine the standardized ileal digestible (SID) Lys requirement of nursery pigs from 15 to 35 lb. A total of 300 maternal line barrows (200×400 , DNA, Columbus, NE; initially 14.9 ± 0.5 lb BW) were fed six experimental diets as part of a 21-d trial. Pigs were randomly allotted to pens at weaning based on BW, and were fed a common pelleted diet for 9 d after weaning. Pens were then randomly assigned to dietary treatments (10 pens/treatment with 5 pigs/pen) based on average pig weight. The six dietary treatments had increasing SID Lys (1.05, 1.15, 1.25, 1.35, 1.45, and 1.55%) and were achieved by increasing the inclusion of crystalline AA, allowing soybean meal to stay constant across dietary treatments. Experimental data were analyzed using general linear and non-linear mixed models with heterogeneous residual variances. Competing models included linear (LM), quadratic polynomial (QP), broken-line linear (BLL), and broken-line quadratic (BLQ). For ADG, F/G, and IOFC, the best-fitting model was selected using Bayesian information criterion. Overall, increasing SID Lys improved ADG and F/G. There was also a tendency for a quadratic response for ADG with increasing SID Lys. The ADFI increased from 1.05 to 1.25% SID Lys with little improvement thereafter. For ADG, the best-fitting comparable models were BLL and BLQ, in which the maximum mean ADG was estimated at 1.29% (95% CI: 1.23, 1.35%) and 1.47% (95% CI: 1.31, > 1.55%) SID Lys, respectively. For F/G, the best-fitting model was the LM where F/G was improved up to at least 1.55% SID Lys. For income over feed cost (IOFC), the best-fitting model was the BLL, in which the maximum mean IOFC was estimated at 1.25% (95% CI: 1.14, 1.36%).

Bottom Line...In conclusion, the estimated SID Lys required for maximum mean ADG of these maternal line barrows was lower than the estimated mean SID Lys required for maximum mean F/G. This study provides evidence that different response variables can result in different estimates of the requirements; however, at least 1.25% SID Lys was needed to maximize IOFC. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by C. M. Vier, I. B. De Souza, J. A. De Jong, M. A. D. Gonçalves, A. M. Jones, R. D. Goodband, M. D. Tokach, J. M. DeRouchey, J. C. Woodworth, and S. S. Dritz)



Effects of Creep Feed Pellet Diameter on Suckling and Nursery Pig Performance - A total of 26 litters of pigs (PIC 327 \times 1050; initially 7.1 lb and 10 d of age) were used in a 31-d growth trial to evaluate the effects of creep feed pellet diameter on suckling pig and subsequent nursery pig growth performance. On d 10 of the suckling phase, sows and their litters were allotted to one of two dietary treatments by parity and pig weight in a completely randomized design with 13 replications per treatment. Starting on d 10, pigs were fed the same creep feed formulation, but pelleted using either a 1/8 in. (small) or 1/2 in. (large) die. Chromic oxide was included in the diets as a fecal marker, and fecal swabs were taken twice a day on d 14, 17, and 21 to determine the percentage of pigs that were consuming creep feed. On d 21, pigs were weaned, re-allotted to nursery treatments for 21 d, and fed in two phases. Phase 1 (d 0 to 7 post-weaning) treatment diets were the same diets as fed during the suckling period, with 50% of the pigs remaining on their previously allotted pellet diameter treatment. The other 50% of pigs were re-allotted to the opposite pellet diameter treatment in the nursery, creating a 2×2 factorial with the main effects of pellet diameter during suckling and pellet diameter during the nursery phase. A common meal Phase 2 diet (d 7 to 21) was fed to all pigs. During the suckling phase (d 10 to 21), litters of pigs fed the large creep feed pellet had decreased pre-weaning mortality and tended to have greater litter BW gain and litter ADG. There were no significant differences observed in pig BW, pig BW gain, litter CV, or pigs identified as creep feed eaters. From d 17 to 21 of suckling, pigs fed the large creep feed pellet had increased average daily creep feed intake. During the nursery phase, no interactions were observed for Phase 1 (d 0 to 7) when experimental diets were fed. Feeding a large pellet during the nursery phase, regardless of previous creep feed treatment, increased ADFI from d 0 to 4, 4 to 7, and 0 to 7. Pigs fed the large pellet in the suckling phase, regardless of pellet diameter fed during the nursery phase, had improved ADG from d 0 to 7 after weaning.

Bottom Line...Results from this study indicate that feeding a large creep feed pellet may be correlated with reduced pre-weaning mortality. However, there is no improvement on individual suckling pig growth performance or percentage of pigs eating creep feed between feeding either a small or large diameter pellet. Feeding a large creep feed pellet improved F/G for the entire nursery phase, and feeding a large nursery pellet increased ADFI during the first week in the nursery. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by A. B. Clark, J. A. De Jong, J. M. DeRouchey, M. D. Tokach, S. S. Dritz, R. D. Goodband, and J. C. Woodworth)

AS&I Faculty Spotlight



Tim Rozell (trozell@k-state.edu; 785-532-2239) Associate Professor/Physiology

Dr. Rozell grew up in Garrison, Missouri and then went on to complete his B.S. and M.S. degrees at the University of Missouri. From Missouri he moved to Washington to complete his Ph.D. at Washington State University. Following a three-year postdoctoral fellowship at the University of Iowa, Dr. Rozell was hired at Kansas State University in 1997 with a 70% teaching and 30% research appointment. His initial task was to develop and teach a course in anatomy and physiology. Because of his unique combination of skills and interests in physiology and dairy cattle, Dr. Rozell also took over teaching a course on the physiology of lactation. In addition he co-teaches a lambing class in the spring that offers students hands-on experience with livestock. Dr. Rozell has also developed an active research program in reproductive physiology, and more recently, in physiology of exercise and production performance in cattle.

Dr. Rozell's research program is focused towards the physiological implications of exercise in dairy cows. He has found that pregnant cows that undergo an exercise regimen prior to giving birth and initiating the lactation process spend less time feeling stressed during hot temperatures, and also make milk that has greater quantities of protein and lactose. Future work will involve examining the link between heat stress and exercise training, as well as determining the impacts of exercise on basic health parameters of dairy cows and heifers. Dr. Rozell believes that happy cows are exercised cows.

During the 2004-2005 school year, Dr. Rozell went on sabbatical in Scotland to help develop new research techniques. There he collaborated with the University of Glasgow's College of Veterinary Medicine.

Dr. Rozell resides in Manhattan with his wife Marcia and his two children Sam (currently a Junior in Electrical Engineering at KSU) and Josie (a sophomore in English Education at Emporia State University).



J. Scott Smith (jsschem@k-state.edu; 785-532-1219) Professor/Chair, Food Science Graduate Program

J. Scott Smith is a professor of food chemistry on the faculty of the Animal Sciences Department and Food Science Institute at Kansas State University with a 70% research and 30% teaching appointment. He is a native of Owensboro in western Kentucky with degrees from Brescia College (BS, Biology), Kansas State University (MS, Biochemistry) and the Penn State University (PhD, Food Science). He been a faculty member at K-State since 1989. Before he was a faculty member at Penn State in the Food Science Dept.

He is a member of IFT including past chair of the Food Chemistry and Toxicology and Safety Evaluation divisions, and past chair of graduate student poster competition for the Food Chemistry divisions. He is a member of the American Chemical Society (Agricultural and Food Chemistry division), AOAC International, American Association

for the Advancement of Science, and Phi Tau Sigma Honorary Society.

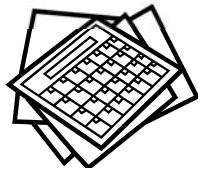
His research programs are in the areas of food analysis and toxicology. Major research areas are Fusarium mycotoxin contaminating of grains, and the formation of heterocyclic amines (HCA) in cooked muscle foods products, factors involved in the formation of AGE products in carbohydrate-rich foods. He is studying methods to evaluate irradiation dose exposure in irradiated meat products, toxicity of unique radiolytic products (the 2-ACBs), and ammonia contamination of foods from refrigeration leaks. Recent research on spice inhibition of HCA formation in muscle food products has received worldwide coverage in numerous news reports.

He currently teaches courses in Food Chemistry, Advanced Food Chemistry, Food Analysis, Food Toxicology and has several offered by Distance Learning.

What Producers Should Be Thinking About.....

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

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



- Manage calving pens and pastures to minimize human, cow and calf stress. Stay organized.
- An observation schedule should be implemented for calving first-calf heifers and cows. First-calf heifers should be checked every 2 to 3 hours.
- Sanitation is key to reducing and/or eliminating calf scours. An excellent calving pasture management plan by Dr. David Smith from the University of Nebraska - Lincoln, can be found at <http://beef.unl.edu/beefreports/symp-2003-19-XVIII.pdf>.
- Make sure every calf consumes adequate colostrum during the first 4-12 hours after birth.
- Keep accurate calving records, including cow identification (ID), calf ID, birth date, calving difficulty score and birth weight. Other traits to consider recording are teat and udder scores, calf vigor score, and other pertinent information. This information along with Angus sire information is vital for enrolling cattle into the AngusSourceSM program.
- Calving books are essential sources of information; make sure you have a backup copy.
- Body condition score (BCS) cows. Thin and young cows will need extra energy to maintain yearly calving interval.
- If cow diets are going to be shifted from low- (poor quality forage or dormant grass) to high-quality forage (lush green grass) programs, begin a grass tetany prevention program at least 3 weeks prior to the forage switch.
- Given the high price of mineral supplements, conduct a needs assessment of your cowherd. Moreover, closely monitor daily intake to insure that it is consistent with label directions.
- When making genetic selections, use the most recent National Cattle Evaluation (NCE) and herd records judiciously.
- If new bulls are purchased, now is the time to start preparing them for their first breeding season. Bulls need to be properly vaccinated and conditioned to be athletic. Moderate body condition with abundant exercise is ideal.
- After calving and before breeding, vaccinate cows as recommended by your veterinarian.
- Plan to attend beef production meetings.

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.