

News from KSU Animal Sciences

June, 2008



Newsletter from the Department of Animal Sciences and Industry
213 Weber Hall, Kansas State University, Manhattan, KS 66506
785-532-6131 - www.asi.ksu.edu

WHAT'S NEW...

- ↳ **Weber Hall** was among the structures damaged in the tornado that hit Manhattan on Wednesday night, June 11. We have been in the recovery process since that point in time and are currently working to assess damages. We are fortunate to now have power and air conditioning on in most of the building and are getting back to business as usual. We sincerely appreciate your patience and understanding as we begin all the repairs that are needed. – Ken Odde (kenodde@ksu.edu; 785-532-1227)
- ↳ We are pleased to announce that Sharon Breiner has joined our Animal Sciences and Industry team on May 19, 2008 as the **Extension Assistant/Youth Livestock Coordinator**. Sharon is located in Weber Hall, Room 212. We would like to welcome Sharon to the team.
- ↳ **New Web Site Helps Swine Producers** – K-State Research and Extension has recently updated its swine web page to offer more information and easier navigation for users. “The old web page was hard to find and information was not as user friendly as we thought it could be” says Bob Goodband, Swine Extension specialist. The web site can now be found with the URL of “www.KSUswine.org” making it easier to remember and log on to. Some of the changes include the addition of several spreadsheets that allow producers to evaluate economics of different fed ingredients as well as marketing spreadsheets to determine the optimal market weight. Other features available include proper feeder adjustment cards, premix recommendations, and the recently updated Swine Nutrition Guide. “The reports in our Swine Day publication have also been categorized so data can be easier to find” says Goodband. Producers can log on to KSUswine.org to see the updated material.
- ↳ **Effects of Phytobiotics (BIOMIN® P.E.P.) on Nursery Pig Performance** – A total of 192 weanling pigs (initially weighing 12.9 lb and 22 ± 2 d of age, PIC) were used in a 42-d growth assay to determine the effects of phytobiotic (Biomin® P.E.P. 125 and 125T) addition to nursery pig diets on post-weaning growth performance. Pigs were blocked by initial weight and randomly allotted to one of four treatments: 1) negative control (feed containing no antibiotic or phytobiotic); 2) negative control + phytobiotic 1 (125 g/ton of Biomin® P.E.P. 125); 3) negative control + phytobiotic 2 (125 g/ton of Biomin® P.E.P. 125T), and 4) positive control (feed containing 140 g/ton of neomycin sulfate and 140 g/ton of oxytetracycline HCl; Neo/OTC). Each treatment had six pigs per pen and eight replications (pens).

Phase 1 and Phase 2 diets were fed from d 0 to 14 and d 14 to 42 post-weaning, respectively. Pigs were weighed and feed intake was determined weekly to calculate ADG, ADFI, and F/G. Data were analyzed as a randomized complete block design using the MIXED procedure of SAS with pen as experimental unit. Overall (d 0 to 42), pigs fed Neo/OTC had greater ADG and ADFI than pigs fed the negative control or diets with phytobiotics. Addition of phytobiotics to the nursery diet also increased daily gains (5.3 to 6.1%) and reduced F/G (3.5 to 4.0%) compared to pigs fed diets without antibiotics. No differences were observed in ADFI between pigs fed the negative control diet and pigs fed either phytobiotic. Pigs fed diets containing either phytobiotic had improved F/G compared with pigs fed diets with Neo/OTC. However, pigs fed diets with Neo/OTC had similar F/G compared to pigs fed diets without antibiotics. No differences were observed in ADG, ADFI, and F/G between pigs fed diets with phytobiotic 1 and 2. In conclusion, phytobiotics in nursery diets improved post-weaning growth performance compared to pigs fed diets without antibiotics. However, the improvement in growth rate was intermediate between diets fed with and without in-feed antibiotics. Further research is needed to elucidate specific modes of action that caused positive effects in post-weaning growth and efficiency. More information is available on this experiment and others in the KSU Swine Day Report at www.ksuswine.org. (This study conducted R.C. Sulabo, J.Y. Jacela, J.M. DeRouchey, M.D. Tokach, F. Neher, R.D. Goodband, S.S. Dritz, and J.L. Nelssen.)

↳ **An Evaluation of Dextrose, Lactose, and Whey Sources in Phase 2 Starter Diets for Weanling Pigs**

– Two experiments were conducted to evaluate the effects of various dextrose, lactose, and whey sources on weanling pig performance. In Exp. 1, a total of 228 pigs (initially 17.1 lb) were used in a 14-d experiment. There were six treatments consisting of a control (corn-soybean meal diet) or the control diet with 7.2% lactose, 7.2% dextrose anhydrous, 7.2% dextrose monohydrate, 10% feed-grade whey, or 10% food-grade whey. Pigs were blocked by weight and randomly allotted to treatment after being fed SEW and Transition diets for the first seven days post-weaning. Overall, ADG and d 14 weight were improved for pigs fed lactose or food-grade whey when compared to pigs fed feed-grade whey. There were no other differences in ADG or d 14 weights among the treatments. Average daily feed intake was improved for pigs fed lactose, dextrose monohydrate, or food-grade whey when compared to those fed feed-grade whey. Feed efficiency was improved for pigs fed food-grade whey rather than dextrose monohydrate. For the economic analysis, pigs fed the control diet had the lowest cost per pound of gain, followed by pigs fed dextrose monohydrate, dextrose anhydrous, feed-grade whey, lactose, and food-grade whey. Margin-over-feed cost was improved for pigs fed the control diet rather than the diets containing lactose, dextrose anhydrous, or either whey source.

In Exp. 2, a total of 352 pigs (initially 17.1 lb) were used in a 14-d experiment to evaluate seven commercial whey sources. There were eight treatments consisting of a corn-soybean meal-based control diet and seven diets containing 10% whey, each of a different whey source. Pigs were blocked by weight and randomly allotted to treatment after being fed SEW and Transition diets for the first five days post-weaning. Overall, ADG and d 14 weight were improved for pigs fed whey sources A and E when compared to the control and sources B and D. Pigs fed whey sources C, F, and G had intermediate ADG. Average daily feed intake was greater for pigs fed whey source E rather than the control or whey sources B, C, D, and G. Feed efficiency was improved for pigs fed whey source A rather than the control. Pigs fed the remaining whey sources had intermediate F/G. For the economic analysis, pigs fed the control diet had the lowest cost per pound of gain. Margin-over-feed cost was improved for pigs fed the control diet rather than the diets containing whey sources B, D, and G. Pigs fed whey source A had intermediate MOF that was also greater than that of pigs fed whey sources B and D.

In conclusion, differences in the growth performance of pigs fed various whey (or lactose) and dextrose sources exist. The quality, cost, and relative feeding value of lactose sources should be considered when formulating diets for nursery pigs. In some cases, especially with the current high price of dried whey, feeding a Phase 2 diet containing no added source of lactose may be a more economical option despite the slight reduction in growth performance. More information is available on this experiment in the KSU Swine Day Report at www.ksuswine.org. (This study conducted by J.R. Bergstrom, C.N. Groesbeck, J. M. Benz, M.D. Tokach, J.L. Nelssen, S.S. Dritz, J.M. DeRouchey, and R.D. Goodband.)

↳ **Vitamin A Restriction During Finishing Benefits Beef Retail Color Display Life** - Forty-eight Angus crossbred calves were early or traditionally weaned and placed in a feedlot on rations supplemented with 6911.6 IU/lb vitamin A or restricted to no supplemental vitamin A. *Longissimus lumborum* and *Triceps brachii* steaks were removed after 14 days of aging to evaluate retail color display, lipid oxidation, and sensory attributes.

The Bottom Line... Vitamin A restriction during finishing has potential to increase retail color display life and reduce lipid oxidation of beef *Longissimus lumborum* and *Triceps brachii* steaks without negatively affecting cooked meat sensory attributes. View the complete research report online at <http://www.asi.ksu.edu/cattlemensday>. For more information, contact Liz Boyle (785-532-1247; lboyle@ksu.edu) or Michael Dikeman (785-532-1225; mdikeman@ksu.edu).

↳ **Distiller's Grain Market Price Relationships, Discovery, and Risk Management** –We evaluated the nature of price linkages across DG market locations. The ability to offset DG price risk using corn and soybean meal (SBM) futures is incorporated into the analysis to quantify strength of price relationships because these commodities are expected to be most closely related to DG prices.

The Bottom Line... Relationships of DG prices at different locations are not strongly linked, meaning these markets tend to operate independently. Comparing prices for DG across different markets might provide opportunities for market participants looking for the best price. Existing corn and SBM futures markets are not viable cross hedges for DG, which motivates use of forward contracting or development of a DG futures market to help manage DG price risk over time. View the complete research report online at <http://www.asi.ksu.edu/cattlemensday>. For more information, contact Chris Reinhardt (785-532-1672; cdr3@ksu.edu) or T. C. Schroeder (785-532-4488; tcs@ksu.edu).

UPCOMING EVENTS...

↪ The **2008 Dr. Bob Hines' Kansas Swine Classic** is scheduled for July 11-12, 2008 at CiCo Park in Manhattan. This two-day event includes educational workshops, showmanship contest, and a prospect and market hog show. It is open to all Kansas youths ages 7 through 18 as of January 1, 2008. Outlined below is a brief description of this year's program.

Friday, July 11	12:00 p.m.	All hogs in place
	1:00 p.m.	<i>It's All About the Meat</i>
	2:00 p.m.	<i>Show Pig Health and Biosecurity</i>
	4:00 p.m.	Ice cream party by the show ring
	5:30 p.m.	Showmanship Contests

Saturday, July 12	8:30 a.m.	Prospect Hog Show followed by Barrow and Gilt Market Hog Show
-------------------	-----------	---

Visit www.ksuswine.org for a complete brochure and registration form. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Jim Nelssen (785-532-1251; nelssen@ksu.edu).

↪ Mark your calendar for the upcoming **K-State Beef Conference on August 7-8, 2008**. This conference is designed to provide take-home knowledge that will enhance the ability of cow/calf producers to improve profitability. Watch for more details at www.asi.ksu.edu/beefconference. For more information, contact Larry Hollis (lhollis@ksu.edu; 785-532-1246).

↪ The **K-State Beef 505 Short Course** is scheduled for August 8-9, 2008, following the K-State Beef Conference. The short course will focus on market cattle and carcass evaluation, grading, fabrication, pricing, sensory evaluation, and new Retail/Food Service cuts. More details will be available soon. For more information, contact Michael Dikeman (mdikeman@ksu.edu; 785-532-1225) or John Unruh (junruh@ksu.edu; 785-532-1245).

↪ Make plans now to attend the **Flint Hills Beef Fest** which will be held August 15-17, 2008. Cattle Division Events include a Grass Futurity Contest, Stocker Cattle Show, Best of Grass and Show, Feedlot Contest and Carcass Show. Events will take place on the Lyon County Fairground in Emporia, Kansas. Other Beef Fest Activities include Arena Events such as Ranch Rodeo, Team Roping, Ranch Horse Competition and more. For more details and a complete schedule of events, please visit <http://www.beefest.com>.

↪ The **2008 KSU Stocker Field Day** will be held on Thursday, October 2 at the KSU Beef Stocker Unit in Manhattan. Mark the date on your calendar for watch for more details.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 16-18, 2008	KSU Livestock Judging Camp	Manhattan
June 20-22, 2008	KSU Livestock Judging Camp	Manhattan
June 25-27, 2008	KSU Livestock Judging Camp	Manhattan
July 11-12, 2008	Kansas Swine Classic	Manhattan
August 7-8, 2008	K-State Beef Conference	Manhattan
August 8-9, 2008	KSU Beef 505 Shortcourse	Manhattan
August 15-17, 2008	Flint Hills Beef Fest	Emporia, KS
August 16, 2008	4-H Meat Judging Workshop	Manhattan
August 23, 2008	State 4-H Meat Judging Contest	Manhattan
October 2, 2008	KSU Stocker Field Day	Manhattan

AS&I FACULTY SPOTLIGHT



Brian Faris (brfaris@ksu.edu; 785-532-1255)
Assistant Professor/Extension Sheep and Meat Goat Specialist

Dr. Brian Faris was born in 1975 and grew up raising registered and commercial Rambouillet sheep and Angora goats on the Edwards Plateau in Sonora, Texas. He showed market lambs for 12 years and was extremely active in numerous other 4-H projects throughout his career. He graduated with his B.S. in Animal Science from Texas A&M University in 1997. He received his M.S. in Animal Science from Angelo State University in 2001, and earned his Ph.D. in Animal Science from New Mexico State University in 2004. Prior to coming to Kansas, Brian served as the Extension 4-H Youth Livestock Specialist at North Carolina State University. Dr. Faris now serves K-State as the Sheep & Meat Goat Specialist with a 70% Extension and 30% Teaching appointment.

Brian's extension appointment will involve conducting educational programs for purebred and commercial sheep and meat goat producers throughout Kansas. He will also work closely with county extension agents to bring the latest research information and production practices to the counties so it may be relayed to the producers.

Dr. Faris teaches ASI 385 (Fall) Wool Grading and Evaluation and ASI 524 (Fall) Sheep Science. Additional teaching responsibilities will include overseeing the Sheep & Meat Goat Teaching and Research Unit along with coaching the Intercollegiate Wool Judging Team.

Brian enjoys spending time with his wife, Reyna, and their three children, Raylee, Craddock, and Preslee. He also enjoys hunting, playing sports, and judging sheep and goat shows. The Faris family lives on a small farm near Fostoria, KS.



Dr. David Grieger (dgrieger@ksu.edu; 785-532-1229)
Associate Professor/Beef Cattle Reproduction

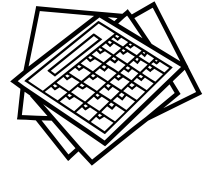
Dr. David Grieger is from a small town in Indiana, kind of like John Mellencamp without the talent. His major teaching and research interests are applied and basic reproductive physiology with an emphasis in cattle. He received his B.S. and M.S. from Purdue University (Go Boilers!) and his Ph.D. from Washington State University (Go Cougs!). Dr. Grieger was a post-doctoral associate at the Hospital for Sick Children in Toronto, Ontario. (No worries; he worked on mice there, not children. David found that mice are a bit harder to work with than cows because the handles on the squeeze chutes are so small).

Dr. G teaches courses on estrus synchronization, ultrasonography, pregnancy diagnosis and calving. He also teaches a course on applications of biotechnology to animal agriculture. Along with Duane Davis, David co-teaches Reproduction in Farm Animals. In addition to his teaching responsibilities he also advises about 25 undergraduate students.

His applied research interests focus on estrus synchronization and timed artificial insemination of beef heifers. He also has worked to develop vaccines that decrease reproductive function in beef heifers and mares. Dr. G's basic research focuses on genes important to reproductive function in livestock. Recently, his lab has collaborated with Dr. Davis on developing stem cells for biotechnical applications in livestock. He has a 60% Teaching and 40% Research appointment in the department. David has one wife (Yvonne) and three children (Brooke, Sammi and Luke). The first two progeny were girls so until son Luke arrived, it was pretty much a estrogen-dominated household with the exception of Dad and the neutered cat. David enjoys playing guitar (badly), playing basketball (horribly) and riding his bike (slowly).

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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



BEEF --

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions.

Breeding Season

- Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.
- Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers.

These methods contribute to a more uniform calf crop, makes winter feed management easier, and increases the success rate of next year's breeding season.

Cowherd Nutrition

- Provide ample amounts of clean, fresh drinking water.
- Conduct an inventory of forage needs for the winter feeding period
- Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical seasonal price increases.

Herd Health

- If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures.

Preventive:

- ◆ Make sure the herd is receiving adequate vitamins and trace mineral in their diet.
- ◆ Consider using a medicated trace mineral package.
- ◆ Consider vaccination for pinkeye and IBR (consult your local veterinarian).
- ◆ Control face flies.
- ◆ Clip pastures with tall, coarse grasses that may irritate eyes.
- ◆ Provide ample shade.

Therapy:

- ◆ Administer an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
- ◆ Shut out irritating sunlight by patching eyes, shade, etc.
- ◆ Control flies.
- ◆ Consult your veterinarian.

- Consider revaccinating for the respiratory diseases any animals that will be taken to livestock shows.
- Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least 3 weeks prior to weaning.
- Revaccinate all calves for blackleg.
- Vaccinate replacement heifers for brucellosis (4 to 10 months of age).
- Monitor and treat footrot.

Forage/Pasture Management

- ☑ Enhance grazing distribution with mineral mixture placement away from water sources.
- ☑ Observe pasture weed problems to aid in planning control methods needed next spring.
- ☑ Monitor grazing conditions and rotate pastures if possible and(or) practical.
- ☑ If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- ☑ Harvest and store forages properly. Minimize waste by reducing spoilage.
- ☑ Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- ☑ Plan for sufficient standing pasture for winter grazing needs.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

General Management

- ☑ Avoid unnecessary heat stress - Don't handle and/or truck cattle during the heat of the day.
- ☑ Repair, replace and improve facilities needed for fall processing.
- ☑ Order supplies, vaccines, tags, and other products needed at weaning time.
- ☑ Consider earlier than normal weaning, but have a marketing plan in place.

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.