

News from KSU Animal Sciences

December, 2008



Newsletter from the Department of Animal Sciences and Industry
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WHAT'S NEW...

On behalf of everyone in the Department of Animal Sciences and Industry, I would like to wish all of you a very Merry Christmas and best wishes for a successful and prosperous New Year in 2009.

As partners of the outreach component of Kansas State University, we are proud to be working with you to meet the needs of our clientele in the livestock industries. The current difficult economic times offer an opportunity for us to help people in their greatest time of need. Please let us know how we can better help you serve our joint clientele. Thank you for all of your hard work that you continue to do.

Thanks,

Mike Tokach, Extension State Leader, Animal Sciences and Industry

- ↳ The 2008 KSU Swine Day was a huge success with over 400 swine producers, allied industry representatives, and students in attendance. For a copy of the **KSU Swine Day Research Report**, visit www.KSUswine.org under the Swine Day Publications link.
- ↳ **Effects of Different Feeding Regimens on Growth, Longevity, and Semen Characteristics of Working Boars in a Commercial AI Stud** – The objective of the study was to determine the effects of 2 different feeding regimens on growth performance, semen production and quality, and longevity of boars in a commercial AI stud. A total of 30 replacement boars (PIC TR4, 375 lb and 14.2 mo of age) were randomly selected and allotted to 1 of 2 treatments. The control feeding program was the normal feeding program of the stud; boars were fed 6.7 lb/d for the first 8 wk, and then feeding was adjusted according to body condition of the individual boar. For the treatment feeding program, boars were fed 5.8 lb/d in the first 4 wk until boars reached 400 lb; afterward, boars were fed 6.0 lb/d for the duration of the study. Boars were weighed periodically to determine periodic and overall ADG. Semen was collected from each boar once a week for a total duration of 16 mo. Semen production and quality was determined for each ejaculate. Overall, treatment boars were consistently heavier than the control boars throughout the duration of the study because of their higher periodic and overall daily gains. At the end of the test, treatment boars were 32 lb heavier ($P < 0.15$) than the control boars. A higher proportion of treatment boars (73 vs. 42%) were active at the end of the study, which numerically increased ($P > 0.35$) average days in the stud (345 vs. 279 d), semen collections (58 vs. 49), and doses produced (1,238 vs. 1,077). There were no differences ($P > 0.28$) in the volume, sperm cell concentration, sperm cell count, and doses produced per ejaculate between boars fed the two feeding programs. Likewise, motility rates and proportion of normal cells in ejaculates were similar ($P > 0.33$) between boars fed the control and treatment feeding program. In conclusion, AI boars can be fed to a set feeding level to achieve targeted weight gains to influence longevity without affecting semen production and quality. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by R.C. Sulabo, J. Quackenbush, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.M. DeRouchey, and J.L. Nelssen.)

↳ **Effects of Commercial Enzymes in Diets Containing Dried Distillers Grains with Solubles for Nursery Pigs** - Two experiments utilizing a total of 530 pigs were conducted to evaluate the effects of commercial enzymes in diets containing dried distillers grains with solubles (DDGS) on nursery pig growth performance. In Exp. 1, 180 pigs (initially 19.9 lb) were used in a 27-d growth trial to compare the effects of Easzyme, Hemicell-W, and Porzyme in diets containing 30% DDGS on weanling pig performance. The 5 dietary treatments fed were a positive control (corn-soybean meal-based diet), negative control (diet with 30% corn DDGS), and the negative control diet with either 0.05% Easzyme, 0.05% Hemicell-W, or 0.05% Porzyme added. Overall (d 0 to 27), pigs fed the diet containing Easzyme had lower ADG than pigs fed the positive control diet. Pigs fed diets containing Hemicell-W had lower ADG than pigs fed the control diet with or without 30% DDGS or the diet containing Porzyme. Pigs fed the diet containing Porzyme had ADG similar to that of pigs fed the control diets with or without 30% DDGS. There were no differences in ADFI or F/G.

In Exp. 2, 350 pigs (initially 24.3 lb) were used to evaluate the effects of a commercial enzyme in diets containing a variety of levels and sources of DDGS on nursery pig performance. The 10 experimental treatments were (1) corn-soybean meal positive control, (2) 15% corn DDGS, (3) 30% corn DDGS, (4) 30% corn DDGS + 0.05% Easzyme, (5) 15% milo DDGS from source 1, (6) 30% milo DDGS from source 1, (7) 30% milo DDGS from source 1 + 0.05% Easzyme, (8) 15% milo DDGS from source 2, (9) 30% milo DDGS from source 2, and (10) 30% milo DDGS from source 2 + 0.05% Easzyme. Overall (d 0 to 21), there was no enzyme × DDGS source interaction for any of the measured growth variables. Pigs fed diets with increasing corn DDGS had ADG, ADFI, and F/G similar to those of pigs fed the control diet. Pigs fed diets with increasing milo DDGS had poorer F/G than pigs fed the control diet. Also, pigs fed diets containing milo DDGS had poorer F/G than pigs fed diets containing corn DDGS. However, pigs fed different sources of milo DDGS had similar ADG, ADFI, and F/G. Adding 0.05% Easzyme to the diets containing 30% DDGS did not influence ADG, ADFI, or F/G.

In summary, feeding diets with milo DDGS resulted in poorer F/G with no change in ADG compared with feeding the control diet or diets containing corn DDGS. Adding enzymes to corn-soybean meal-based diets containing high levels of DDGS did not improve any of the growth performance variables. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by C.K. Jones, J.R. Bergstrom, M.D. Tokach, J.M. DeRouchey, J.L. Nelssen, S.S. Dritz, and R.D. Goodband.)

↳ **Evaluation of Dried Distiller's Grains and Roughage Source in Steam-Flaked Corn-Based Finishing Diets** - Crossbred yearling heifers (n = 358) were used in a 97-day finishing study. Heifers were fed steam-flaked corn-based finishing diets with 0 or 25% (dry matter basis) corn DDGS. Additionally, diets included either 10% corn silage or 6% alfalfa hay. Heifers were housed in dirt-surfaced pens (2640 ft²) and received Revalor-200 implant, Bovishield-IV, Fortress-7, and Phoenectin pour-on.

The Bottom Line.... Heifers fed 25% DDGS as partial replacement of steam-flaked corn had similar growth performance and carcass quality as heifers fed no DDGS. Corn silage and alfalfa hay were comparable roughages when a portion of steam-flaked corn was replaced with DDGS. 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@ksu.edu).

↳ **Packaging Atmospheres Alter Beef Tenderness, Fresh Color Stability, and Internal Cooked Color** - Select strip loin steaks were packaged in high-oxygen (HiO₂) modified atmosphere packaging (MAP), ultra-low oxygen blends with carbon monoxide (ULO₂CO) MAP, or vacuum packaging (VP). Instrumental tenderness and instrumental internal cooked color were measured, and fresh display color was scored by trained panelists. Steaks for instrumental tenderness and internal cooked color were cooked to 158°F, a medium degree of doneness.

The Bottom Line.... Packaging beef in ULO₂CO MAP provides a bright red color with extended color stability, allows for a longer aging time and increased tenderness, and results in an internal cooked color that is expected for a medium degree of doneness, all of which are beneficial to the meat industry. View the complete research report at 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).

UPCOMING EVENTS...

- ☞ The 2009 **Tri-State Cow-Calf Symposium** will be held on January 3, 2009, at the Kitzmiller Auditorium in the Wray High School, Wray, Colorado. The theme for this year's symposium will be "Planning for the Future. The beef industry is changing rapidly with new rules, new customer awareness and new scrutiny. It can be difficult and even overwhelming to sort out what a cow/calf producer should pay attention to and what is out of their hands. The symposium will help ranchers sort some of this information.

Registration is \$25 for individuals, \$40 for couples, and \$10 for youth. Registration includes lunch, refreshment breaks, and copies of the proceedings are included. A \$5 late fee will be assessed to registrations after December 22nd. Additionally, ranches and businesses can contact the Yuma County Extension office if they are interested in having a table top display at the event. Registration forms will be available through Colorado, Kansas and Nebraska extension offices, or contact the Yuma County Extension office at 970-332-4151 for more information.

- ☞ Several **Calving Management Schools** will be held in early January. Organized under the theme "*Knowledge and Management = More Weaned Calves*," Kansas State University Research and Extension will host six calving management schools in early January. The schools, to be held in several locations, will feature presentations by Colorado State University veterinarian Bob Mortimer and Pfizer Animal Health veterinarian Dale Grotelueschen. The topics to be covered include: When and How to Provide Assistance; Colostrum and Substitutes; and Cow Herd Management Impacts on Calf Health.

The dates, times, locations and contact telephone numbers for each school are:

- Jan. 5 – 1:30 p.m. – Rawlins County Fairgrounds – 785-626-3192;
- Jan. 6 – 10:00 a.m. – Q-Inn – Quinter – 785-928-4480;
- Jan. 6 - 5:30 p.m. – Pottorf Hall – Manhattan – 785-537-6350;
- Jan. 7 – 10:00 a.m. – Methodist Church – Eureka – 620-583-7455;
- Jan. 7 - 5:30 p.m. – Ellsworth Public Library – Ellsworth – 785-472-4442; and
- Jan. 8 – 10:30 a.m. – CAB Building – Sharon Springs – 785-852-4285.

Reservations are requested by Jan. 2 to allow organizers to prepare for materials and food to be offered at each school.

- ☞ **2009 KOMA Beef Conference** will be held January 8 at Oswego, Kansas. Topics for the conference include Cow/Calf Economic Considerations for the Upcoming Year; Inter-seeding Legumes; PI-BVD Testing the Herd; Cut the Bull; Economic Impact of Cow Biological Type; Cow/Calf Mineral Nutrition and much more. Watch for more details on www.KSUbeef.org. For more information, contact Karl Harborth (harborth@ksu.edu; 620-431-1530).

- ☞ The **Conference on Reproduction, Calving and Calf Care in Cow-Calf Herds** will be held on Friday, January 9, 2009 in Frick Auditorium of Mosier Hall. This conference is designed for producers and ranch hands to gain a better knowledge of nutrition, breeding, birthing, and calf care for application on the ranch. The content is specifically geared toward simultaneous exchange of information among ranch owners, ranch hands, and veterinarians. Veterinarians and non-veterinarians alike will gain insight into the state-of-the-art principles in guiding management and health care for the breeding herd. The pre-registration deadline is December 24, 2008. Registration after that date will be assessed a late fee. For more information, contact Linda Johnson or Marci Ritter at 785-532-5696; VMCE@vet.k-state.edu.

- ☞ Area cattlemen should mark the dates of January 14th and 15th on their calendars and make plans to attend the **25th Annual 4-State Beef Conference**. The conference planning committee has designed an excellent program that should have something of interest to all beef producers. Speakers and their topics for the 2009 conference are as follows: Dr. Rick Rasby, University of Nebraska – "Update on Storing Co-Products."; Dr. Darrel Mark, University of Nebraska – "Economics of Storing Co-Products."; Dr. Vern Anderson, North Dakota State University – "Drylotting Beef Cows."; Dr. Barry Dunn, Executive Director of the King Ranch Institute for Ranch Management, Texas A&M, Kingsville – "Whole Herd Management Strategies for Tough Times".

The conference is scheduled for Wednesday, January 14th and Thursday, January 15th, 2009. The Wednesday morning session will begin at 10:00 a.m. in Washington, KS at the First National Bank, and the afternoon session will begin at 4:00 p.m. in Tecumseh, NE at the Community Building. The Thursday morning session will also begin at 10:00 a.m. in Lewis, IA at the ISU Armstrong Research Farm, and the afternoon session will start at 4:00 p.m. in King City, MO at the Eiberger Building.

The registration fee is \$25.00 per person and reservations are requested by, Friday, January 9th, 2009. The fee includes a beef meal and a copy of the conference proceedings. To keep registration fees affordable in the future, please help us by calling in your reservations. For more information or to register for the conference, contact your local county extension office. For more information, contact Joel DeRouchey (jderouch@ksu.edu; 785-532-2280) or Ross Mosteller, River Valley District/Washington County (785-325-2121; rmostell@ksu.edu).

↪ The **2009 KSU Swine Profitability Conference** will be held Tuesday, February 3 in Forum Hall of the K-State Student Union. A great program has been lined up including presentations from Dr. Darrell Mark from the University of Nebraska-Lincoln; Dr. Bob Taubert from New Horizon Farms; Dr. Joe Connor from the Carthage Vet Clinic; as well as a keynote address from KSU President Jon Wefald.

Registration fee of \$25 per participant is due by January 25, 2009. Watch for more details on the conference. For more information, contact Jim Nelssen (785-532-1251; jnelssen@ksu.edu).

↪ An exciting and informative **Meat Processing Workshop** has been planned at Kansas State University in conjunction with the Kansas Meat Processors Association. The 32nd Annual Midwest Processed/Cured Meat Workshop will be held on Saturday, February 7, 2009 at Weber Hall on the KSU Campus. This is a great opportunity to see, hear and ask questions as state award winning meat processors demonstrate the manufacture of their products. Learn about the new pork cuts, artisan meats, new technology for dry aging, and more.

Registration is \$85.00 per plant and includes lunch for two people if received by January 30, 2009. After that date, the fee will increase to \$90.00 per plant. For a registration form or more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).

↪ Dates for the **2009 KSU Dairy Days** have been scheduled as follows: February 12 in Seneca, Kansas and February 26 in Whiteside, Kansas. Watch for more details. For more information, contact John Smith (785-532-1203; jfsmith@ksu.edu).

↪ Mark your calendars for the **2009 KSU Cattlemen's Day** to be held March 6 at Weber Hall on the KSU campus. Watch for more details coming soon to www.KSUbeef.org under "Cattlemen's Day". 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 **Kansas Junior Swine Producer Day** will be held on March 21, 2009, in Weber Hall. Mark your calendars and watch for more details.

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
January 3, 2009	Tri-State Cow-Calf Symposium	Wray, Colorado
January 5, 2009	Calving Management School	Atwood, Kansas
January 6, 2009	Calving Management Schools	Quinter, Kansas, and Manhattan, Kansas
January 7, 2009	Calving Management Schools	Eureka, Kansas, and Ellsworth, Kansas
January 8, 2009	Calving Management School	Sharon Springs, Kansas
January 8, 2009	KOMA Beef Conference	Oswego, Kansas
January 9, 2009	Conference on Reproduction, Calving and Care Care in Cow-Calf Herds	Manhattan, Kansas
January 14, 2009	4-State Beef Conference	Washington, Kansas
February 3, 2009	KSU Swine Profitability Conference	Manhattan
February 7, 2009	Meat Processing Workshop	Manhattan
February 12, 2009	KSU Dairy Day	Seneca, Kansas
February 26, 2009	KSU Dairy Day	Whiteside, Kansas
March 6, 2009	KSU Cattlemen's Day	Manhattan
March 21, 2009	Kansas Junior Swine Producer Day	Manhattan

AS&I FACULTY SPOTLIGHT



Dale Blasi (dblasi@ksu.edu; 785-532-5427)
Professor/Extension Beef Specialist

Dale A. Blasi was born and reared on his family's farm and ranch in southeast Colorado, near Trinidad. He received his B.S. in Animal Sciences at Colorado State University in 1984. In 1986, he received his M.S. in Beef Systems Management at Colorado State University. He continued his education at the University of Nebraska where his dissertation addressed protein supplementation strategies for beef cows and growing cattle.

After earning his Ph.D. degree in 1989, he accepted an appointment as a Livestock Specialist in South Central Kansas at Hutchinson for Kansas State University. While there, he focused on cow/calf and stocker nutrition and management strategies, forage quality and harvest efficiency, forage utilization systems and utilization of food industry byproducts. In 1997, he transitioned to the Department of Animal Sciences and Industry at Kansas State University as a State Beef Specialist where he currently has a 10% teaching, 20% research and 70% extension appointment. His responsibilities include providing statewide Extension educational leadership in stocker cattle nutrition and management and utilization of grazed and harvested forages by beef cattle and other livestock, conducting research and interpreting results and serving as a resource person for other state and area specialists, county Extension agents, producers and allied industry personnel. In recent years Dr. Blasi has developed and teaches the class, *ASI 650, Identification and Data Management of Food Animals*, to both undergraduate and graduate students.

Since 1998, he has developed and evaluated information and management applications using handheld computers and individual animal electronic identification technologies for the beef industry. He is manager and director of the KSU Beef Stocker Unit and Animal Identification Knowledge Laboratory, a unique facility designed to evaluate the performance of existing and emerging animal identification technologies in a laboratory and animal management setting.



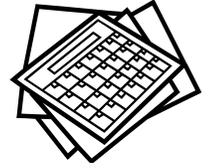
Charlie Lee (clee@k-state.edu; 785-532-5734)
Extension Specialist – Wildlife Control

Charlie completed a B.S. degree in 1975 at Kansas State University in Wildlife Biology. After several years of business and being involved with the family farm and feedlot he returned to Kansas State where he completed a M.S. degree in 1988 in Animal Science. He is currently a Ph.D. candidate in Animal Science at Kansas State. He previously worked for Kansas Department of Wildlife and Parks for 6 years directing private land wildlife management programs and Farm Bill conservation issues. Charlie has been employed by K-State Research and Extension for 13 years, first as an extension assistant and now as Extension Specialist, Wildlife.

Responsibilities include conducting a statewide program in wildlife damage control, wildlife enhancement on private lands, youth outdoor environmental programs, and aquaculture. Current areas of interest include prairie dog and cattle interactions, bird damage control at feedlots and rodent damage in conservation tillage systems.

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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



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

- Historically, cull cow prices are beginning to rise. Finish culling cows in order of priority:
 1. Those that fall within the "Four-O Rule" (Open, Old, Onry, Oddball).
 2. Those with physical/structure problems (feet and legs, eyes, teeth, etc.)
 3. Poor producers.
- Continue feeding or grazing programs started in early winter. Fully utilize grain sorghum and cornstalk fields, severe winter weather may begin to limit crop residue utilization, be prepared to move to other grazing and feeding systems.
- Supplement to achieve ideal body condition scores (BCS) at calving. Use this formula to compare the basis of cost per lb. of CP: $\text{Cost of supplement, \$ per hundredweight (cwt.)} \div (100 \times 5\% \text{ CP}) = \text{cost per lb. CP}$. Use this formula to compare energy sources on basis of cost per lb. of TDN: $\text{cost, \$ per ton} \div (2,000 \times 5\% \text{ DM} \times 5\% \text{ TDN in DM}) = \text{cost per lb. of TDN}$.
- 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 of water per head per day, even in the coldest weather.
- Sort cows into management groups. Body condition score 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 conditions 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 postpartum 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 to 65% of their mature weight by the start of the breeding season. Thin, light weight heifers may need extra feed for 60 to 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 the association.
- Provide some protection, such as a windbreak, during severe winter weather to reduce energy requirements. The lower critical temperature (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 (Dry, heavy winter coat = 18 degrees, wet coat = 59 degrees). 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.