



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....

↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist *“Spring Cleaning”*

A friend of mine was once the assistant manager of a large ranching corporation. He enjoyed the outside work and was very good at it. But his job as a manager required mountains of paper work to be completed on a daily basis. When the heavy work seasons of calving and weaning came around, his extra pair of skilled hands was always needed outside: by the chute, on a horse, in a feed truck, in the shop, etc.

The problem is that the paper work didn't complete itself, and there was no “day-worker” for hire who could complete federal permits or tax ID statements. So when my friend came back into the office at 5 p.m. after an already long day, not only was his work not done, but it was piling up and getting away from him. This led to a great deal of stress and tension between himself and the general manager, not to mention a fair bit of confusion, frustration, and burnout.

As we head into the busy spring season, there may be a need to be exceptionally intentional about delineating job duties and priorities. In small businesses, everyone wears several hats, and that is especially true in agriculture. There will be opportunities for inside folks to get their hands dirty. The thinking is that the paper work will get done when the outside work slows down, and that may be true enough.

The question is, “What toll is that accumulating pile of inside work taking on those whose responsibility it will be to complete it?” Every properly designed job description will have duties clearly stated, and the duties will be clearly prioritized. If it is someone's priority to complete payroll before Friday, then there shouldn't be a ‘temporary’ priority change until after the field work is completed. That's not to say emergencies don't happen and flexibility isn't required, but there may be unintended consequences. After the emergency is alleviated, what steps can be taken to assist the person who wasn't permitted to complete their priority duties? Simply asking them to “go get your work done” is a good recipe for burnout and failed morale.

As we all get busy this spring, take time to discuss any potential deviations from “business as usual” ahead of time with all the affected parties, and then discuss ways to keep these deviations from settling around the shoulders of a few, key, individuals. They may be committed to the organization and may be able to deal with the stress for a short while, but concessions should be made to ensure their long-term satisfaction by rewarding their short-term sacrifices.

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

↪ **Current Factors Affecting Feeder Cattle Pricing in Kansas and Missouri Cattle Markets** - Transaction-level feeder cattle market data were collected from approximately 8,200 individual lot transactions encompassing 84,319 head. Data were collected from feeder cattle auctions in Dodge City, KS, and Carthage, MO, during November and December 2008 and March and April 2009 by trained evaluators. Data recorded for each transaction included lot size, sex, color, breed, condition, fill, muscle, frame size, weight uniformity, freshness, horn presence, time of sale, weight, and price.

Bottom Line... Cattle producers cannot affect forces that drive the cattle market, but they can control factors that affect the premiums and discounts their calves can potentially obtain. Producers should market healthy, dehorned cattle, ideally in large, uniform lots. Producers should also avoid selling cattle that are extremely thin or fat and/or extremely gaunt or full to obtain the greatest value. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Justin Waggoner (620-275-9164; jwaggon@ksu.edu) or Kevin Dhuyvetter (785-532-9164; kcd@ksu.edu).

↪ **Feedlot Facts** by Chris Reinhardt, Ph.D., Extension Feedlot Specialist

“Feet and Legs: Part One”

After what has been a long, difficult, winter, feedlot pens are going to need a great deal of repair. This is absolutely critical for performance of the next turn of cattle which will occupy the pen. There have been feedyards which were unable to get pens repaired after a particularly oppressive winter prior to the following winter season and performance suffered greatly---throughout the summer months, the winter, and the following spring.

For optimum intake, gain, and conversion, cattle need smooth, solid surfaces on which to lie down and walk to the bunk and water tanks. Mound space is absolutely essential during wet and/or cold weather to provide comfort to the cattle. It may be said that cattle process and metabolize nutrients more efficiently and burn less energy when lying down than when standing or walking. Therefore, we want to encourage the cattle to move to the bunk to eat as often as possible, but when satisfied, we also need to provide a comfortable place to rest.

As cattle grow, there is greater strain on their legs and joints, making resting time even more essential for optimum performance. If cattle have been slogging through hock deep (or deeper) mud all winter the strain on the joints can be tremendous, especially as they approach finish weight. Clean out excess mud as frequently as possible during or following wet conditions.

One often overlooked source of lameness is foot injury within the home pen. During pen maintenance, take special care to evaluate edges of the concrete pad for broken concrete or exceptionally rough areas. This is especially critical in high traffic areas between the pad, the water tanks, and the mounds. Make sure the junction from the concrete to the dirt area is relatively seamless; a large hole behind the pad not only discourages travel to and from feed and water, the large step required may be a source of injury. Repair these broken and rough areas early, before they can do irreparable harm to cattle welfare and performance.

Clean, comfortable, resting and traffic areas are a good investment: like money in the bank.

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

↪ **Comparison of Medicinal Feed Additives on Health and Growth Performance of Beef Calves**

Grazing Native Grass Pasture - Stocker calves (n = 306, initial body weight = 582 lb) were double stocked (250 lb body weight/acre) on native grass pasture for 90 days. The two treatments consisted of a free-choice mineral formulated to contain similar concentrations of minerals but with either (1) Bovatec and Aureomycin or (2) Rumensin.

Daily intake of the Rumensin mineral was only 60% of the daily consumption of Bovatec/Aureomycin mineral, but there was no difference in daily gain between treatments. There was a tendency for a reduction in foot rot in the Bovatec/Aureomycin treatment (P<0.09).

Bottom Line.... The Bovatec/Aureomycin combination decreased incidence of foot rot but did not improve performance compared with Rumensin. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu).

↪ **Effects of Feeding Low Levels of Crude Glycerin on Performance and Carcass Characteristics of Feedlot Heifers**

Yearling crossbred heifers (n = 295; 941 ± 20 lb) were fed corn-based finishing diets containing 0%, 0.5%, or 2% crude glycerin or by-product based diets with 0% or 2% crude glycerin. All diets were based on dry-rolled corn for the first 37 days of the feeding period, after which cattle were gradually transitioned to diets based on steam-flaked corn. All final diets contained 3% alfalfa hay and 6% corn silage and provided 300 mg Rumensin, 90 mg Tylan, and 0.5 mg MGA per heifer daily. In the by-product diets, soybean meal and portions of the steam-flaked corn were replaced by adding 25% soybean hulls and 15% wet distillers grains (dry matter basis). Heifers were fed Zilmax for 21 days before harvest. Cattle were given free choice access to feed for a total of 89 days on feed.

Bottom Line.... Adding low concentrations of glycerin reduced dry matter intake in grain-based diets but had no effect in rations containing byproducts. 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).

↪ **Effects of Increasing Standardized Ileal Digestible Lysine:Calorie Ratio on the Growth Performance of Growing-Finishing Pigs** - A total of 1,080 pigs (PIC TR4 × 1050) were used in four 28-d experiments to determine the lysine requirements of growing-finishing pigs reared in the new Kansas State University finishing barn. Low- and high-lysine corn-soybean meal-based diets with no added fat were formulated for each experiment by varying the amounts of corn, soybean meal, L-lysine HCl, DL-methionine, and L-threonine. Six lysine levels were evaluated in each experiment, with intermediate lysine levels obtained by blending the low- and high-lysine diets. There were 6 pens containing an equal number of barrows and gilts for each treatment, with 6 or 8 pigs per pen. Pens were blocked by initial count and BW. In Exp. 1, 252 pigs (initially 80.7 lb) were fed diets with standardized ileal digestible lysine:calorie (SID lys:cal) ratios of 2.09, 2.39, 2.69, 2.99, 3.29, or 3.59 g/Mcal ME. Increasing the SID lys:cal ratio improved (linear; $P < 0.04$) ADG and F/G. Optimum performance and income over feed cost (IOFC) was observed at 2.69 g SID lys/Mcal, or a dietary level of 1.01% total lysine and 0.90% SID lysine. In Exp. 2, 288 pigs (initially 122.9 lb) were fed diets with SID lys:cal ratios of 2.12, 2.35, 2.58, 2.81, 3.04, or 3.27 g/Mcal. Increasing the SID lys:cal ratio tended (quadratic; $P < 0.12$) to increase ADG and improved (linear; $P < 0.02$) F/G. Optimum performance and IOFC was observed at 2.35 g SID lys/Mcal, or a dietary level of 0.88% total and 0.78% SID lysine. In Exp. 3, 252 pigs (initially 177.2 lb) were fed diets with SID lys:cal ratios of 1.49, 1.79, 2.09, 2.39, 2.69, or 2.98 g/Mcal. Increasing the SID lys:cal ratio tended (linear; $P < 0.06$) to improve ADG and improved (linear; $P < 0.001$) F/G. Optimum performance and IOFC was observed at 2.09 g SID lys/Mcal, or a dietary level of 0.80% total and 0.70% SID lysine. In Exp. 4, 288 pigs (initially 224.3 lb) were fed the same SID lys:cal ratios as in Exp. 3. Increasing the SID lys:cal ratio decreased (linear; $P < 0.04$) ADFI, F/G, carcass yield, and IOFC. Despite a linear improvement in F/G, ADG did not improve above 1.79 g SID lys/Mcal, which resulted in the best IOFC. This requirement is equivalent to 0.69% total and 0.60% SID lysine. These experiments agree with previous recommendations for growing-finishing pigs of this genotype. For pigs weighing 80 to 143 lb, 123 to 190 lb, 177 to 235 lb, and 224 to 284 lb, growth performance and IOFC were optimal with SID lys:cal ratios of 2.69, 2.35, 2.09, and 1.79 g SID lys/Mcal ME (or 0.90%, 0.78%, 0.70% and 0.60% SID lysine) in corn-soybean meal diets without added fat. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J.R. Bergstrom, N.W. Shelton, G. Papadopoulos, M.L. Potter, J.Y. Jacela, J.M. DeRouchey, M.D. Tokach, S.S. Dritz, R.D. Goodand, and J.L. Nelssen.)

↪ **Comparison of Different Antimicrobial Sequences on Nursery Pig Performance and Economic Return** - A total of 1,008 weanling pigs (12.0 lb and 19 d of age) were used in a 42-d experiment to compare different antibiotic regimens on growth performance and economic return. From d 0 to 11 and d 11 to 21, pigs were fed diets containing no antibiotic, a combination of Denagard (Novartis Animal Health, Greensboro, NC) at 35 g/ton and chlortetracycline at 400 g/ton (Denagard/CTC), or Pulmotil (Elanco, Greenfield, IN; 363 g/ton from d 0 to 11 and 181 g/ton from d 11 to 21). From d 21 to 42, pigs previously fed Denagard/CTC or Pulmotil were fed diets containing no medication, Denagard/CTC, or a combination of Mecadox (Philbro Animal Health Corp., Ridgefield Park, NJ) at 25 g/ton and oxytetracycline at 400 g per ton (Mecadox/OTC). Adding Denagard/CTC or Pulmotil to the diet from d 0 to 11 and d 11 to 21 improved ($P < 0.01$) ADG, ADFI, F/G, and income over feed cost (IOFC). There were no differences ($P > 0.21$) in ADG or ADFI between pigs fed Denagard/CTC and pigs fed Pulmotil; however, pigs fed Denagard/CTC tended to have better ($P < 0.09$) F/G from d 0 to 21. Feed cost was also lower ($P < 0.01$) and IOFC was greater ($P < 0.03$) from d 0 to 21 for pigs fed Denagard/CTC than for pigs fed Pulmotil. Adding Denagard/CTC or Mecadox/OTC to the diet from d 21 to 42 increased ($P < 0.05$) ADG, ADFI, and IOFC compared with feeding no antibiotic, but there were no differences ($P > 0.17$) in pig performance or IOFC between pigs fed Denagard/CTC and Mecadox/OTC. For the overall trial, adding antibiotics to the diet during any phase improved ($P < 0.05$) ADG, ADFI, F/G, and IOFC. These results demonstrate that adding antibiotics to the nursery diet improved pig performance and economical return on this commercial farm. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by M.U. Steidinger, M.D. Tokach, D. Dau, S.S. Dritz, J.M. DeRouchey, R.D. Goodband, and J.L. Nelssen.)

UPCOMING EVENTS...

- ↪ It's not too late to register for the 2010 **K-State Sheep Day** which will be held on Saturday, March 27, 2010 at Weber Hall. K-State Sheep Day is aimed at those who are new to sheep production, as well as established sheep producers. Pre-registration deadline is March 19. Registration fee is \$20 for the first person & \$10 per additional person from same household; \$5 for students, college age and younger. FAMACHA certification is also offered for an additional \$10. For a complete schedule and registration form, visit www.asi.ksu.edu under Upcoming Events. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).
- ↪ **K-State Youth Sheep Day** will be held on March 27 at Weber Arena on the K-State Campus. Zane Bone, sheep producer from Wimberly, Texas will be the featured presenter. The program will focus on topics such as nutrition, feeding, health, and breeding. For more information and registration forms, visit www.YouthLivestock.KSU.edu.
- ↪ Two **Livestock Fair Management Clinics** are being planned for this spring. These events are designed for county fair boards, volunteers, and extension staff to share ideas about livestock fair management and leadership. A March 30 meeting will take place in Burlington at the 4-H Building, and an April 1 meeting is planned at the Research Center in Hays. More information and registration forms are available at www.YouthLivestock.KSU.edu.
- ↪ **High Plains Horseman's Day** will be April 17th in Oakley, KS at the Logan County Fairgrounds. Registration begins at 8:30 am and program continues to 4 pm. Pre-registration is required for the youth session. For more information contact Clint Milliman, milliman@k-state.edu, 785-460-4582.
- ↪ The **KSU Youth Horse Judging Camp – Beginning Section** will be held Friday, June 4, 2010 in Weber Arena on the KSU Campus. For a brochure and registration, go to <http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=1141>. For more information, contact Teresa Slough (785-532-1268; tslough@ksu.edu).
- ↪ The **KSU Youth Horse Judging Camp – Advanced Section** will be held June 7-8, 2010 in Weber Arena on the KSU Campus.. Camp registration fee is \$115/per student and must be paid by May 1. No entries will be accepted after this date. For a brochure and registration, go to <http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=1141>. For more information, contact Teresa Slough (785-532-1268; tslough@ksu.edu).
- ↪ The **Second K-State Animal Sciences Leadership Academy** will be June 9-12, on the Kansas State University campus. This hands-on event is designed for current high school students to gain animal sciences industry knowledge and develop their leadership skills. You can find applications and more information at www.YouthLivestock.KSU.edu. Cost to participate is only \$50. A special thank you to the Livestock and Meat Industry Council (LMIC) for continuing to support this program.

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
March 27, 2010	K-State Sheep Day and Youth Sheep Day	Manhattan
March 30, 2010	Livestock Fair Management Clinic	Burlington, KS
April 1, 2010	Livestock Fair Management Clinic	Hays, KS
April 17, 2010	High Plains Horseman's Day	Oakley, KS
June 4, 2010	KSU Youth Horse Judging Camp – Beginning Section	Manhattan
June 7-8, 2010	KSU Youth Horse Judging Camp – Advanced Section	Manhattan
June 9-12, 2010	K-State Animal Sciences Leadership Academy	Manhattan

AS&I FACULTY SPOTLIGHT



Mike Tokach (mtokach@k-state.edu; 785-532-2032)
Professor/Extension State Leader/Extension Swine Specialist

Growing up on a diversified livestock and grain farm in North Dakota taught Dr. Mike Tokach many of the practical day-to-day problems that livestock producers can encounter. In his position as a swine extension specialist and researcher, Mike has the opportunity to help producers solve those problems. Following completion of a bachelor degree in Animal Science at North Dakota State University in 1986, Mike earned a Masters degree in swine nutrition at Kansas State University in 1988 and doctorate from the University of Minnesota in March 1991. In addition to his swine nutrition research and extension responsibilities, Mike is the Extension State Leader for the department.

Mike's focus is transferring information to swine producers and conducting practical nutrition research. He is a member of a highly productive swine team. Mike has presented invited seminars at over 240 animal and veterinary science meetings around the world in addition to numerous presentations to local producer groups. Mike has authored or co-authored 166 refereed journal papers, 388 abstracts, 611 extension publications, and 4 book chapters. In 2005, Mike was named one of the 50 people that have made the greatest impact on the swine industry in the last 50 years by the National Hog Farmer Magazine.

Mike's wife, Lisa, also specializes in swine as a veterinarian in the Abilene Animal Hospital. Mike and Lisa have three children, Sage, Rogan, and Fiona.



Dave Nichols (dnichols@k-state.edu; 785-532-1239)
Professor/Teaching Coordinator

Dr. Dave Nichols was born in 1955, and raised on a commercial beef cattle, swine, and crops farm near Brookston, Indiana. He entered Purdue University in the Fall of 1973, majoring in Animal Science. Upon completion of his B.S. degree in December of 1976, he entered graduate school at Kansas State University, where he completed his M.S. in 1979, and his Ph.D. in 1981.

In October of 1981 Dave joined the KSU faculty as an extension livestock specialist. In 1983 he accepted a 80% teaching and 20% research appointment. In 1999 he became coordinator of teaching for the Department of Animal Sciences and Industry and currently holds that position with a 100% teaching appointment. In addition to being Teaching Coordinator he also serves as a Faculty Senator. In recent years he has also led student study abroad tours to Costa Rica.

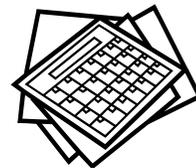
Dr. Nichols advises approximately 100 students, teaches courses in live animal and carcass evaluation, introductory animal science, and livestock sales management. He serves as advisor for the Little American Royal Showmanship Contest, and has been highly involved in 4-H and youth activities. Dr. Nichols coached the KSU Livestock Judging Team from 1986 to 1988, winning, among others, the American Royal Contest. Dr. Nichols has judged numerous cattle shows in recent years.

He has judged cattle at Houston, Ft. Worth, San Antonio, Louisville, the American Royal and numerous state fairs. He recently was a guest speaker at the 33rd World Charolais Congress in Porto Alegre, Brazil.

In addition to his university and judging responsibilities, Dr. Nichols owns and operates A and D Ranch near Manhattan. He and his wife, Anita, have two children, Drew and Amy.

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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



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

Breeding season is beginning or continuing for many operations; therefore, both females and males must be reproductively fit.

- 1) Several estrus synchronization procedures have been developed. To determine the correct synchronization program to use, consider the following: age group of females (yearling replacement heifers vs. cows), commitment of time and efforts for heat detection, potential number of females that are anestrous (days post partum, body condition, calving difficulty), labor availability, and the return on investment for total commitment to the breeding program.
 - 2) Handle semen properly and use correct AI techniques to maximize fertility.
 - 3) Natural service bull should have body condition, eyes, feet, legs and reproductive parts closely monitored during the breeding season. Resolve any problems immediately.
 - 4) All bulls should have passed a breeding soundness examination prior to turnout.
- Begin your calf preconditioning program. Vaccination, castration and parasite control at a young age will decrease stress at weaning time. This is a time to add value to the calf crop.
 - Implanting calves older than 60 days of age will increase weaning weight.
 - Properly identify all cows and calves. Establish premises numbers for compliance with state and national programs.
 - Use best management practices (BMPs) to establish sustainable grazing systems.
 - Use good management practices when planting annual forage sources and harvesting perennial forages.
 - Maintain records that will verify calving season, health programs, and management practices.

*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.*