



Newsletter from the Department of Animal Sciences and Industry
 213 Weber Hall - Kansas State University - Manhattan, KS 66506
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UPCOMING EVENTS...

February 2012

News from KSU Animal Sciences

In This Issue

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- Management Minute
- Feedlot Facts
- 2011 KSU Cattlemen's Day Article Featured
- 2011 KSU Swine Day Articles Featured
- Faculty Spotlight
- What Producers Should Be Thinking About...

We Need Your Help!

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

☞ The **2012 KSU Swine Profitability Conference** will be held Tuesday, February 28 in Forum Hall of the K-State Student Union. A great program has been lined up including presentations from Dr. Gene Nemecek, Pfizer Animal Health; Kent Condray, Clifton, KS; Glynn Tonsor, KSU; and Cindy Cunningham, National Pork Board as well as "Humor for the Heart of Agriculture" from Damian Mason. For more information, contact Jim Nelssen (785-532-1251; jnelssen@ksu.edu).

☞ Make plans to attend the 99th annual **KSU Cattlemen's Day** will be held on Friday, March 2, 2012. This program is designed to provide producers, allied industry and individuals with information about new developments in the beef industry. The day will begin with the Commercial Trade Show and Educational Exhibits at 8:00 am in Weber Arena. The morning program will start at 10:00 am with a welcome by Dr. Ken Odde; Glynn Tonsor, KSU, will present "*Market Outlook for the Cattle Industry*" followed by "*Demand for Choice and Prime Beef: The Wal-Mart Effect & Beyond*" presented by John Stikka. The morning program will conclude with the "*Dealing with Declining Inventories amid Excess Feeding and Packing Capacity*" presented by Mike Sands, Informa Economics, Inc.

The afternoon program will include various breakout sessions including:
Sessions will begin at 1:15 p.m.

111 Weber Hall - *Beef Cattle Genomics*, Bob Weaber

123 Weber Hall - *Feed and Cattle Market Risk Management for Cow-Calf Producers*, Ted Schroeder & Glynn Tonsor

146 Weber Hall - *Update of Prevalence and Testing for non-O157:H7 STECs*, Randy Phebus

Kansas Artificial Breeding Service Unit (KABSU) – *Preparing Bulls for Semen Collection*, Tom Taul

Sheep and Meat Goat Teaching Center – *Telltale Signs from Cattle Necropsy: A Real-Time Demonstration*, Larry Hollis

Sessions will begin at 2:00 p.m.

106 Weber Hall – *Role of Collagen Cross-Links in Beef Tenderness*, John Gonzalez

111 Weber Hall – *Cattle Feeding Programs & Fat Profiles of Beef: Implications for Flavor Attributes*, Andrea Sexten

123 Weber Hall – *Limit Feeding Programs for Cows & Calves as an Alternative to Roughages*, John Jaeger and Justin Waggoner

146 Weber Hall – *Cow and Heifer Synchronization*, Sandy Johnson

Kansas Artificial Breeding Service Unit (KABSU) – *Bovine Leukosis*, Meredyth Jones

Registration is \$20 per person and is due by February 24, 2012. There is no charge for students that have pre-registered. For a complete schedule of events and registration information, visit www.asi.ksu.edu/cattlemensday. Online registration is available. For more information, contact Jim Drouillard (jdrouill@ksu.edu; 785-532-1204) or Dale Blasi (dblasi@ksu.edu; 785-532-5427).



UPCOMING EVENTS...

↵ The KSU **Legacy Bull and Heifer Sale** will be held on March 2, 2012, at the conclusion of KSU Cattlemen's Day. The sale will begin at 3:30 p.m. at the Purebred Beef Teaching Unit. Sale offerings include:

- 70 Angus, Simmental, SimAngus and Hereford bulls
- 50 spring and fall bred females
- 7 show heifer prospects
- 8 AQHA horses

For more information or a sale catalog, contact Ryan Breiner (rbreiner@ksu.edu; 785-532-6127).



↵ The **KSU Sheep Producer Day and Ribbon Cutting Ceremony for the new KSU Sheep and Meat Goat Unit** have been planned for Saturday, March 3, 2012. The schedule includes:

Sheep and Meat Goat Center Ribbon Cutting Ceremony

- 9:00 a.m. Explore the Facility
- 10:00 a.m. Welcome and Introduction - Dr. Brian Faris and Dr. Ken Odde
- 10:15 a.m. Dedication and Ribbon Cutting Ceremony
 - Dr. Ron Trewyn*, Vice President for Research, Kansas State University
 - Dr. Gary Pierzynski*, Interim Dean, College of Agriculture, Kansas State University
 - Tom Sloan*, Representative, Kansas House of Representatives
 - Nancy Smith*, President, Kansas Sheep Association
 - Anne McGuire*, Vice-President, Kansas Meat Goat Association
 - Burdell Johnson*, American Sheep Industry Association
- 11:00 a.m. Formal Tour of Facility
- 11:45 a.m. Complimentary Lamb and Chevron Lunch

KSU Sheep Producer Day

- 9:00 a.m. Registration and Explore the Facility
- 10:00 a.m. Dedication and Ribbon Cutting Ceremony
- 11:00 a.m. Formal Tour of Facility
- 11:45 a.m. Lamb and Chevron Lunch
 - KS Sheep Auxiliary Meeting
- 12:30 p.m. Livestock Risk Protection (LRP) – Lamb & Economics of Raising Commercial Sheep
 - Burdell Johnson***, Sheep Producer, North Dakota
- 1:15 p.m. Changing lamb, ewe, and wool prices—Drought—Grow with 2 Plus. Where do we go from here? ***Burdell Johnson***
- 2:00 p.m. Flock Health
 - Mike Caskey***, Pine Lawn Farms, Minnesota
- 2:45 p.m. Balancing Commercial and Purebred Sheep Operations - ***Mike Caskey***
- 3:30 p.m. Kansas Sheep Association Annual Meeting
 - Nancy Smith***, KSA President
- 4:15 p.m. Demonstration
- 5:00 p.m. Adjourn

The event will be held at the KSU Sheep & Meat Goat Center at 2117 Denison Avenue, Manhattan, KS. No registration is needed for the Sheep and Meat Goat Center Ribbon Cutting Ceremony. Registration for the KSU Sheep Producer Day will be \$25/person in advance and \$35.00 at the door. On-line registration is available. For a complete schedule and registration form, go to www.ksusheepandgoats.com. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).

☞ The **35th Midwest Meat Processors Workshop** will be held on Friday, March 30, 2012 in Weber Hall, Kansas State University. At the workshop learn processing strategies to maximize your profit! Co-hosts for the workshop include Kansas State University Research and Extension, Animal Sciences and Industry Department Meat Science Group and the Kansas Meat Processors Association. The schedule includes:

8:30 a.m. Registration, coffee and donuts
8:50 a.m. Welcome and Introductions - *Liz Boyle, KSU*
9:00 a.m. Meat Industry Macro Economics - *Glynn Tonsor, KSU*
9:30 a.m. Critical Processing Points in Manufacturing Shelf Stable Snacks – Jay Wenther, AAMP
10:20 a.m. Refreshment Break
10:30 a.m. Alternative Nitrite Delivery Systems and Labeling – *Gary Sullivan, University of Nebraska*
11:30 a.m. Getting the Most out of a Goat – *Terry Houser, KSU*
12:00 noon Lunch, Weber 111
1:00 p.m. Making Award Winning Summer Sausage – *Kelly Cool, Glasco Locker Plant, Glasco*
1:30 p.m. Making Award Winning Fresh Sausage – *Mark Tittle, Mark's Meats, Halstead*
2:00 p.m. Refreshment Break
2:15 p.m. Get a Sharper Knife – *Andy Nichols, PRIMEEdge, Inc.*
3:00 p.m. Maximize Cutout Yield of Large Ribeyes and Striploins – *Jay Wenther, AAMP*
4:00 p.m. Nutrition Labeling of Fresh Meat - *Karen Hanson, HyVee Dietitian, Manhattan*
4:30 p.m. Adjourn

Registration fee is \$100.00 per plant, which includes lunch for 2 people and parking permit for one vehicle, and is due by March 16. Additional lunches can be purchased for \$8.50 each. For more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).

☞ Join us for **Kansas Junior Sheep Producer Day on March 31, 2012**. Presentations and demonstrations by featured speaker, J.B. Massey, Van Buren, Arkansas as well as K-State faculty will cover topics such as selection, facilities and general care, health and vaccinations, nutrition, and showmanship. This interactive workshop is designed for all ages and skill levels. The tentative schedule is as follows:

8:45 a.m. Registration
9:30 a.m. Welcome and Opening Remarks
9:45 a.m. Selecting Your Youth Sheep Project
10:15 a.m. Facilities, General Care & Health/Vaccinations
11:00 a.m. Break
11:15 a.m. Breakout Session
Breeds and Sheep Identification (Beg.)
Shearing/Fitting Demonstration (Sr.)
12:00 Lunch
1:00 p.m. Educational Materials
1:15 p.m. Nutrition
1:45 p.m. Showmanship Clinic
3:00p.m. Nose Printing/DNA/Ultrasound
3:45 p.m. Final Questions and Wrap-up

Registration fee is \$15.00 per person if post marked by March 9, 2012 and \$20.00 per person after that date. Full registration brochure, along with speaker information is at www.YouthLivestock.KSU.edu. Please contact Chelsea Tomascik if you would like more information (tomascik@ksu.edu, 785-532-1264).

☞ **Livestock Fair Management Clinics** have been set for April 3, 2012, at Pottorf Hall in Manhattan and April 4, 2012 in Garden City, Kansas. The clinics are designed for county fair board members, Extension agents and volunteers involved in local livestock fair management and leadership. This professional development opportunity consists of an activity filled day to increase awareness and knowledge and provide a forum for open communication for individuals working with local livestock fairs across Kansas. K-State faculty and staff will facilitate discussion directly related to livestock activity at local livestock fairs in Kansas. More information and printable registration forms will be available at: www.YouthLivestock.KSU.edu. Registration forms are due March 15, 2012. For more information, contact Chelsea Tomascik at 785-532-1264 or tomascik@ksu.edu.

☞ The **KSU Poultry Research and Teaching Unit will be offering egg-type pullets for sale** this spring. These pullets are raised on the farm by students and employees for teaching projects. Two breeds will be available. One is a white feathered leghorn hybrid cross that will lay white eggs and the other is a reddish feathered New Hampshire hybrid cross that lays brown eggs. They are extremely feed efficient and good producers of high quality eggs. Each white pullet will cost \$6.50 and each brown pullet will be \$7.50. They will be ready to release at the KSU Open House on **April 21, 2012**. You may pick up the pullets from 8:00 a.m. to 5:00 p.m.

To place an order, please call 785-532-5654 or e-mail poultry@ksu.edu. Reservations are encouraged because the pullets are always sold by the pick-up date. The birds are already a few weeks old and they look fantastic! You will not be disappointed with the quality and performance of these pullets. Future pullet sales will be scheduled for KSU Open House weekend.

☞ The **K-State Animal Sciences Leadership Academy** is planned for June 6-9 on K-State's Manhattan campus. This academy will spotlight 20 high school students from across the state wishing to learn more about leadership and production in the animal science industry. Students will receive interactive leadership training and tour facilities in K-State's Department of Animal Sciences and Industry. The second portion of the program will allow students the opportunity to tour businesses and organizations within Kansas' diverse livestock industry.

Any high school student is eligible to apply. Selection will be based on educational, community, and agricultural involvement. Applications are available on K-State's Youth Livestock Program website and are due by March 15, 2012. The academy is sponsored by the Livestock and Meat Industry Council. The cost for the conference is \$50 which includes lodging, tours and meals. More information and printable application forms are available at <http://www.YouthLivestock.KSU.edu> under K-State Animal Sciences Leadership Academy or by contacting Chelsea Tomascik (tomascik@k-state.edu or 785-532-1264).

☞ The **KSU Youth Horse Judging Camp – Advanced Section** will be held June 7-8, 2012 on the KSU Campus. This camp is designed for youth that have had some experience judging horses and would like to learn more about note taking and oral reasons. Emphasis will be placed on the placings and reasons of classes commonly seen in Kansas judging contests. Camp registration fee is \$115/per student and must be paid by May 1, 2012. Camp will be limited to the first 30 participants. 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 – Beginning Section** will be held Monday, June 11, 2012, in Weber Arena on the KSU Campus. This camp is designed for youth that have had very little experience judging horses and would like to learn more about note taking and oral reasons. Emphasis will be placed on the placings of classes commonly seen in Kansas judging contests. Camp registration fee is \$30/per student and due by May 1, 2012. Camp will be limited to the first 30 participants. For a brochure, go to <http://www.asi.ksu.edu/DesktopDefault.aspx?tabid=1141>. For more information, contact Teresa Slough (785-532-1268; tslough@ksu.edu).

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
February 28, 2012	KSU Swine Profitability Conference	Manhattan
March 2, 2012	KSU Cattlemen's Day	Manhattan
March 2, 2012	Legacy Bull and Heifer Sale	Manhattan
March 3, 2012	KSU Sheep Day and Ribbon Cutting Ceremony	Manhattan
March 30, 2012	Midwest Meat Processors Workshop	Manhattan
March 31, 2012	KSU Junior Sheep Producer Day	Manhattan
April 3, 2012	Livestock Fair Management Clinic	Manhattan
April 4, 2012	Livestock Fair Management Clinic	Garden City, KS
April 21, 2012	Pullet Sale Release	Manhattan
June 6-9, 2012	K-State Animal Sciences Leadership Academy	Manhattan
June 7-8, 2012	KSU Youth Horse Judging Camp – Advanced Section	Manhattan
June 11, 2012	KSU Youth Horse Judging Camp – Beginning Section	Manhattan

WHAT'S NEW

Management Minute
“Alert the Media: People are Different!”

Feedlot Facts
“Performance Paradigm II: Carcass Marketing Window”

↙ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist
“Alert the Media: People are Different!”

People are different. We all understand that implicitly. But in reality, our nature and our reflex is to interact with people like we would interact with ourselves. Unfortunately, that might not be the straightest and smoothest path to good results.

During Operation Desert Storm, General Norman Schwartzkopf posted his Myers-Briggs Type (an assessment of preferences for how you relate to the world) above his cot, and his Chief of Staff required that every single person who ever needed to meet with the General read a synopsis of this Type before having the opportunity to interact with the General. This ensured that each person understood how to most efficiently communicate with the General to save time. It is probably unnecessary to state here that the General DID NOT read everyone else's Type.

It is seductive to think of this type of management style for your individual organization. “I'm the General of this team; you need to communicate with **ME** how **I** want to be communicated with!” Well, that was a war, and *that* General had the very lives of over 500,000 men and women in his hands.

You and I are not in a war, and the lives of thousands don't hang in the balance--- although sometimes we feel like it. And we respond to those very real business pressures by pushing and demanding. Unfortunately, while that was needed during wartime, it is most certainly counter-productive in our business and in our teams. We would never dream of treating our customers like we sometimes (hopefully rarely) treat our teammates.

It requires planning, patience, compassion, and understanding, to stretch ourselves as managers and reach out---cross the bridge, so to speak---in order to relate to those around us how they will best respond. It seems reasonable to assume that once we start speaking the language of our colleagues, they just might more accurately interpret and better understand what we're saying.

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

↙ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist
“Performance Paradigm II: Carcass Marketing Window”

When are feedlot cattle done?

Most managers who've sold a few pens of cattle can eyeball a pen of cattle and thumbnail when the average of the pen is ready to be shipped. It's what we do.

But after moving to a carcass-value (grid) marketing system, this traditional approach to terminating the finishing period is no longer a best practice. In the past, selling on a live basis, we were paid an average price per pound for all animals, for all pounds. But on a grid system, we are paid a different price per pound for each animal based on it's individual, not the average, value.

Grid premiums and discounts are based on supply and demand. The Choice-Select spread is based on how many Choice boxes are available relative to the demand, and the volume of Choice carcasses that normally arrive at that plant during a given week. Yield grade 4 and 5 discounts are based on how many over-fat carcasses the plant has to deal with during the week and what the meat market will bear. Yield grade 1 and 2 premiums are based on what the demand is for lean boxes. The grid is designed to incentivize more of the types of carcasses which are in demand and dis-incentivize those that create added cost to the plant. As an illustration: although we normally consider Choice beef to be more valuable than Select, we've actually had brief periods when the Choice-Select spread has actually been negative, because the Choice demand was completely fulfilled, and the Select customers did not want to pay extra for Choice, and actually were willing to pay slightly less because of the extra internal fat that Choice meat carries.

Feedlot Facts – “Performance Paradigm II: Carcass Marketing Window” (cont.)

Producers on a grid have essentially told their packer-partner to evaluate each animal separately from their penmates, and to pay on what each individual animal is worth, yet they continue to insist on selling when only the average of the pen is ready. If we built door frames for the average, half of us would bang our head every time. In other words, if the theoretical “average” animal is ready, half of the pen is over-fat and the other half is under-fat. Neither half is going to receive its hypothetical maximum value, and all will bring less than they could bring per pound, regardless of what grid is being used.

Why not match shipment practices to the very same evaluation system that will be used to determine individual value? Why not evaluate animals individually and sell them when they achieve some standard which will bring maximum value from the grid? Although ultimate marbling potential is driven partially by genetics, it is also driven by overall level of body fat. Few yield grade 1 or 2 carcasses grade Choice or above. By feeding to a Yield grade 3 or above every animal is given the opportunity to reach Choice, although not all have the ability.

Although many grids provide a small premium for lean carcasses (yield grade 1 and 2), the feed efficiency of lean animals is not sufficiently better than the feed efficiency of yield grade 3 animals to justify shipping early. If we calculate daily carcass gain as 80% of daily live weight gain, and conversion similarly, we can determine that carcass value of gain almost always exceeds carcass cost of gain until animals approach yield grade 4.

So the goals of carcass-based marketing are (1) retain animals until the cost of carcass gain approaches the value of carcass gain and (2) sell animals when each individual will approach maximum grid value, not the “average” animal.

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

↳ **Instructor, Livestock Judging Team Coach** - The Department of Animal Sciences and Industry is looking for an Instructor, Livestock Judging Team Coach. This position is a full time, 12 month, 100% teaching position. B.S. degree in Animal Science or related area and evidence of success in coaching a livestock judging team are required. An M.S. degree in animal science is preferred. View complete position announcement at: <http://www.asi.ksu.edu/positions>. Review of applications begins April 1, 2012, and continues until a suitable candidate is identified.

↳ **Export Sales of U.S. Beef Semen Increased Faster Than Domestic Semen Sales** - Data from 1979 to 2009 on domestic, custom frozen, and export semen sales were obtained from the National Association of Animal Breeders website. We used USDA January 1 beef cow inventory records and 500- to 600-lb steer calf prices in Oklahoma City, OK, as reported by the Livestock Marketing Information Center. We utilized simple correlations and multiple regression models to describe relationships.

Bottom Line... Demand for beef genetics available through commercial semen providers in the United States has increased since 1979 and has grown more rapidly outside the country than inside. Domestic use of semen is highly correlated with feeder calf prices and has shown a modest upward trend since 1979. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Sandy Johnson (785-462-6281; sandyj@ksu.edu).

↳ **Evaluating the Effects of Pelletting Deoxynivalenol-Contaminated Dried Distillers Grains with Solubles in the Presence of Sodium Metabisulfite on Analyzed DON Levels** - Deoxynivalenol (DON), also known as vomitoxin, was prevalent in the 2009 U.S. corn crop and subsequently present in dried distillers grains with solubles (DDGS), in which DON levels are about 3 times higher than the original corn source. One method shown to reduce DON levels was by increasing moisture and temperature when sodium bisulfite was added to DON-contaminated corn (Young et al., 19874). Therefore, a pilot study aimed first to replicate these results by placing DON-contaminated DDGS in an autoclave (60 min at 250°F) in the presence of sodium metabisulfite (SMB). The study used 6 treatments: (1) control, (2) 0.5% SMB, (3) 1.0% SMB, (4) 2.5% SMB, (5) 5.0% SMB, and (6) 5.0% SMB with 100 mL/kg water added to evaluate the role of water. After drying, samples were analyzed at North Dakota State University Veterinary Diagnostic Laboratory (NDSU; Fargo, ND). Autoclaving reduced DON levels ($R^2 = 0.99$) with increasing SMB, justifying a follow-up study that aimed to assess whether SMB has the same detoxifying effects on corn DDGS in a commercial pellet mill. For this study, batches of 450 lb DDGS were prepared from DDGS with a known DON concentration (23.4 ppm). The pellet mill was set to a production rate of 1,000 lb/h so retention rate and conditioning temperature could be altered within each batch. Within each batch, 4 samples were collected at conditioning temperatures of 150 and 180°F and retention times of 30 and 60 sec within each temperature. Samples were sent to NDSU for full mycotoxin analysis. No differences were found in conditioning temperature or retention time on total DON, DON, or acetyl-DON; however, pelletting DDGS reduced DON and total DON as SMB increased.

Bottom Line...Based on these results, the reduction in DON and total DON levels appear to plateau somewhere between SMB levels of 2.5 and 5.0%. These results imply that pelleting in combination with SMB may allow pork producers to utilize DON-contaminated DDGS more effectively, but additional research is required to determine the effect of pelleting SMB in DON-contaminated diets on growth performance of pigs. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by H. L. Frobose, M. D. Tokach, E. L. Hansen, L. J. McKinney, J. M. DeRouche, S. S. Dritz, R. D. Goodband, and J. L. Nelssen.)

↳ **The Effects of Sorghum Dried Distillers Grains with Solubles on Finishing Pig Growth Performance, Carcass Characteristics, and Fat Quality** - A total of 288 finishing pigs (PIC TR4 × 1050, initially 129.6 lb) were used in a 73-d study to determine the effects of increasing sorghum dried distillers grains with solubles (DDGS) in sorghum- or corn-based diets on finishing pig growth performance, carcass characteristics, and fat quality. Pigs were allotted to 1 of 6 dietary treatments in a completely randomized design based on initial pen weight. The dietary treatments included sorghum-based diets with sorghum DDGS included at 0, 15, 30, or 45%; a sorghum-based diet with 30% corn DDGS; and a corn-based diet with 30% corn DDGS. Overall (d 0 to 73), increasing sorghum DDGS from 0 to 45% reduced ADG and ADFI. Increasing sorghum DDGS increased backfat iodine value (IV), and fat color became less red and tended to be less yellow. No differences were observed in growth performance among pigs fed corn- or sorghum-based diets with 30% corn DDGS along with similar carcass characteristics, backfat, loin depth, fat-free lean index (FFLI), HCW, carcass yield, and backfat IV. Pigs fed sorghum-based diets with either 30% sorghum or corn DDGS had similar ADG, ADFI, and F/G, as well as similar carcass characteristics; however, pigs fed 30% sorghum DDGS had decreased backfat IV and fat color that was more white and less yellow in color than pigs fed 30% corn DDGS.

Bottom Line...We observed similar ADG, ADFI, and F/G, as well as carcass characteristics, for pigs fed corn- or sorghum-based diets with 30% DDGS. Backfat IV was greater in pigs fed increasing DDGS, with a notable increase in pigs fed corn DDGS compared with those fed sorghum DDGS. Feeding sorghum DDGS produces pork fat that is lighter in color and less yellow than those fed corn DDGS, which may have an important role in pork export markets. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by K.M. Sotak, T.A. Houser, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.M. DeRouche, J.L. Nelssen, B. Goehring, and G.R. Skaar.)

↳ **The Effects of High-Sulfate Water and Zeolite (Clinoptilolite) on Nursery Pig Performance** - A total of 320 nursery pigs (PIC 1050 barrows) were used in a 24-d study to determine the effects of high-sulfate water and dietary natural zeolite on growth performance and fecal consistency of nursery pigs. Eight treatments were arranged as a 2 × 4 factorial with 2 water treatments (control or water with 3,000 ppm sodium sulfate), and 4 dietary zeolite concentrations (0, 0.25, 0.5, and 1.0%). Water treatments remained the same from d 0 to 24 and all diets were fed in 2 phases, with diets containing zeolite having the same inclusion rate in both phases. Phase 1 diets were fed in a pellet form from d 0 to 10 after weaning, with Phase 2 diets fed in meal form from d 10 to 24. Fecal samples were collected on d 5, 9, 16, and 23. These samples were visually assessed and scored on a scale of 1 to 5 to determine consistency of the fecal samples then analyzed for DM.

From d 0 to 10, neither sulfate addition to the water nor zeolite influenced ADG, ADFI, or F/G. Dietary treatment had no effect on fecal consistency; however, pigs drinking control water had a lower fecal score (fewer visual observations of scours) than pigs drinking high-sodium sulfate water. From d 10 to 24, pigs drinking control water had improved ADG, ADFI and F/G compared with pigs drinking high-sodium sulfate water. Dietary zeolite increased ADG and ADFI, but did not affect fecal scores. Similar to Phase 1, pigs drinking control water had lower fecal scores, indicating less scouring compared with pigs drinking the high-sodium sulfate water. Dry matter analysis indicated that dietary zeolite had no effect on fecal DM, but high-sodium sulfate water decreased total DM content of fecal samples in both Phase 1 and the first collection in Phase 2, but not on d 23, the final collection.

Bottom Line...Overall (d 0 to 24), increasing zeolite increased ADG and ADFI, but F/G was not affected. Pigs drinking high-sulfate water had decreased ADG and ADFI and poorer F/G compared with pigs drinking control water. In conclusion, pigs drinking water with 3,000 ppm sodium sulfate had decreased ADG, ADFI, and poorer F/G from d 10 to 24 and for the overall trial. These pigs also had an increased incidence of scouring as measured by lower fecal DM compared with pigs drinking control water. Although zeolite improved ADG and ADFI, it did not influence fecal consistency. 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. Flohr, M.D. Tokach, J.L. Nelssen, S.S. Dritz, J.M. DeRouche, R.D. Goodband, and N.W. Shelton.)

AS&I Faculty Spotlight



Sandy Johnson (sandyj@ksu.edu; 785-462-6281)
Associate Professor/Extension Specialist, Northwest Area

Sandy Johnson was raised on a diversified livestock farm north of Blair, Nebraska. An active 4-Her, her projects included cattle, swine, sheep and horses. She received a B.S. degree in Animal Science from the University of Nebraska in 1982 and a M.S. degree in Reproductive Physiology from the University of Missouri in 1984. A deep appreciation for applied integrated research was developed during three years spent working as a research technician at the University of Nebraska West Central Research and Extension Center in North Platte. A move to West Virginia was made to pursue a Ph.D. Her dissertation examined the role of the follicle in the formation of short-lived corpora lutea in postpartum beef cows. Sandy received a Ph.D. degree from West Virginia University in Reproductive Physiology in 1991 and continued there as a post doctoral fellow until 1993. She held a teaching position at Fort Hays State University before beginning her current position in October of 1998 as

Extension Livestock Specialist at the Northwest Research and Extension Center in Colby.

Sandy is a member of the Beef Reproductive Task Force (www.beefrepro.info) which has hosted the Applied Reproductive Strategies in Beef Cattle Workshops, updated the Estrus Synchronization Planner and organized the Beef Cattle Reproduction Leadership Team. All efforts are aimed at promoting wider adoption of reproductive technologies among cow-calf producers and to educate cow-calf producers in management considerations that will increase the likelihood of successful AI breeding. Her research interests include synchronization of estrus and ovulation, cow/calf management, heifer development and costs of production.



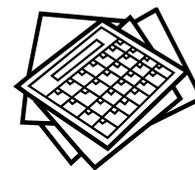
Justin Waggoner (jwaggon@ksu.edu; 620-275-9164)
Assistant Professor/Extension Specialist, Southwest Area

Dr. Justin Waggoner is an assistant professor and Beef Systems Specialist at Kansas State University's Southwest Area Extension Office in Garden City. Waggoner was raised on his family's farm in central, Kansas. He obtained his Bachelor's (2000) and Master's (2001) degrees in Animal Science from Kansas State University and completed his Doctorate in Ruminant Nutrition at New Mexico State University (NMSU) in 2007. While pursuing his graduate studies, Justin also managed the NMSU ruminant nutrition laboratory. Dr. Waggoner's doctoral research evaluated the impacts of morbidity on performance and profitability in feedlot cattle and nutrient utilization in stressed cattle. Dr. Waggoner's Extension program is directed at helping beef cattle producers enhance the sustainability of their operations. His current research interests include evaluating low-input storage of wet distiller's grains and the utilization of distiller's grains in sorghum based rations.

Justin and his wife, Stephanie, live on a small ranch East of Garden City, KS. The current head count includes 2 border collies, 2 horses, and 16 Angus-pairs. At the present time he spends most of his spare time starting home improvement projects and building fence. However, he would like to spend more time training horses and hunting in the future.

What Producers Should Be Thinking About.....

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



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

Many producers should consider calving in this month. Stress is minimized and forage/grass management may be optimized.

- Keep calving areas as clean and dry as possible. Give each calf a dry, comfortable and clean environment.
- Supplement and feed cows to maintain or improve body condition prior to the breeding season (cows should be in moderate body condition by the start of the breeding season to maximize fertility).
- For thin, young cows, consider feeding fat to improve rebreeding rates. Research indicates that when feeding about 0.4 lb. per head per day of a plant source (soybean, sunflower, safflower oils), fat can increase first-service conception and pregnancy rates (0% to 15%). Feeding fat can be effective both before and after calving. Consult your nutritionist.
- Mineral supplementation should include greater levels of magnesium (intake should be between 15 to 30 grams (g) per head per day, or at least 11% of the mineral mix) for grass tetany prevention.
- Plan your breeding season, both AI and natural service. Make sure all supplies and semen are on hand prior to the breeding season. For natural-service programs assign yearling bulls to 10-15 cows, 2- and 3-year-old bulls to 20-25 cows, and older bulls to 25-40 cows. Breeding for 65 days should be long enough; less than 90 days is a key sign of good management. Some suggest the service capacity of a yearling bull (less than 24 months) is equal to his age in months at turn out.
- Bulls should be in good body condition prior to the breeding season. Thin bulls can run out of stamina. Now is the time to make sure bulls are physically capable of performing for the upcoming summer breeding season.
- Breeding soundness examinations are recommended for all bulls!
- Consider using estrus synchronization and AI. Several synchronization systems to overcome anestrus are available. Selection depends on labor, facility and implementation costs.
- Consider breeding heifers three weeks prior to the mature cow herd to give them a greater chance to rebreed.
- Maintain top management concerning calf scours (sanitary conditions, early detection, electrolyte/dehydration therapy).
- Vaccinate calves as per veterinarian consultation. Castrate males that are not candidates for breeding stock prior to pasture turnout. Implant calves that will be sold at weaning.
- Wait for fly control until critical numbers are reached (100 to 200 horn flies per animal).
- Deworm cows and bulls if needed. Expect performance response to be variable dependent on location, weather, grazing system, history, infestation level and management.
- Use prescribed burning techniques to eradicate Eastern Red Cedar trees and improve forage quality.
- Good fences make good neighbors. Summer pastures should have had fences checked, repaired or replaced by now.
- Check equipment (sprayers, dust bags, oilers, haying equipment) and repair or replace as needed. Have spare parts on hand; downtime can make a large difference in hay quality.

*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.*