



News from KSU Animal Sciences

April, 2016

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UPCOMING EVENTS...

➤ An **Adult PQA Plus Training**, will be held on Thursday, April 21, 2016, from 9:00 a.m. – 3:30 p.m. at the Stanley Stout Center in Manhattan. Whether you are a current PQA+ advisor or would like to become certified, you must attend this or a similar training in another state in order to conduct PQA+ trainings. Some of the changes to the program require you to go through the training process in person and successfully compete an examination for certification. If you are interested in the training, please contact Lois at lschrein@ksu.edu or 785-532-1267. For more information, contact Mike Tokach (785-532-2032; mtokach@ksu.edu) or Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

➤ Please join us for the **102nd Roundup at the K-State Agricultural Research Center in Hays, April 21, 2016**. Registration and the commercial trade show begin at 9 a.m. Our head count for the complementary steak lunch will be taken at 10 a.m., so be there and be counted! The program runs from 10 a.m. to 3 p.m. and includes presentations on Old World Bluestem, Anaplasmosis, fly control and grazing dormant forage.

The complete program schedule can be found at www.KSUBeef.org. For more information, contact John Jaeger, jrjaeger@ksu.edu, or 785-625-3425.

➤ **Kansas State University will be hosting the 2nd annual Barbecue 101 workshops in 2016**. Barbecue 101 is a one day workshop focusing on teaching the basics of grilling and smoking to consumers of all ages and experience levels. The topic areas will provide a unique perspective on the science of barbecuing as well as give insight to selecting meat, wood, rubs, spices and sauces to use at your next barbecue. Dates and locations for the workshops include: April 30 – Community Building, Iola, KS; May 21 - Northeast Kansas Heritage Complex, Holton, KS; June 4 – First National Bank, Washington, KS; and June 25 – Sedgwick County Extension Office, Wichita, KS. The schedule includes:

8:00 Welcome	12:30-2:30 Afternoon Station Rotations
8:15 Meat Cutting Basics	Selecting the Right Smoker for You
9:15 All About Rubs & Spices	BBQ Regionality: A Difference in Sauce
9:45 Break	Meat Cuts to Stretch the BBQ Dollar
10:00 BBQ Food Safety	Taste the Difference: It's All in the Wood
10:30 Science of Smoking	3:00 Competition BBQ Expert Roundtable
11:30 Lunch	3:30 Closing & Evaluations

Registration is \$50 for an individual or \$80 for a couple. Registration closes one week prior to each scheduled event. Registration fee includes lunch, apron and Barbecue 101 Course Book containing cooking guides, recipes and barbecue tips and tricks. Space is limited at each location. For a registration form and more information, visit www.asi.k-state.edu/barbecue101workshop.html. For more information, contact Travis O'Quinn (travisquinn@ksu.edu; 785-532-3469).



↪ **State Market Beef Nominations - Due May 2** - State livestock nomination season is here! All market beef nominations are due May 2, 2016. This is a postmark deadline, but families are encouraged to submit their nominations as early as possible. Nomination information may be found on the youth livestock website (www.youthlivestock.ksu.edu). In order to make sure nominations are complete upon initial submission, double check that all fields of the declaration and nomination forms are complete and signed by all of the appropriate individuals, include a DNA sample for each animal nominated and cross-reference the tag numbers between the envelopes and forms, include payment made payable to the appropriate entity.

↪ **2016 Livestock Nomination Materials** - The updated 2016 state livestock nomination materials have been released. Information, updates, and forms may be found on the youth livestock website (www.youthlivestock.ksu.edu) under "Nominated Livestock". This information was also emailed directly to counties and extension units via the KSRE listserv in March. **All state livestock nominations MUST be submitted using the updated 2016 forms in order to be accepted.** There are a handful of changes and updates to the process for 2016, but the most notable modifications are that all swine nominations will require submission of ear notches, all sheep and goat nominations require the scrapie tag #, and the verbiage on the declaration form has been updated. All species will continue requiring DNA as part of the nomination process. A "Rookie Guide" has also been created to help guide new families through the nomination process with as little stress as possible. Market Beef nominations are typically due on May 1st, however, that is a Sunday for 2016. So, market beef nominations that are postmarked May 2nd will be accepted this year ONLY. All other specie nominations will continue to be due on June 15th. If you have questions about eID tags, please contact Dave Kehler at dkehler@ksu.edu. Official DNA envelopes may be ordered through the KSRE bookstore. If you have questions about youth livestock nominations, please contact Lexie Hayes at adhayes@ksu.edu or (785)532-1264.

↪ **Kansas State University and Kansas beef industry to host anaplasmosis meeting in Salina** - A meeting to sync up the Kansas beef industry and veterinary profession in combatting anaplasmosis infections in Kansas cow herds will be held May 11, 2016, beginning at 11:30 a.m., at the College Conference Center at the Kansas State University Polytechnic Campus located at 2310 Centennial Road in Salina. The meeting is hosted by the Kansas State Veterinary Diagnostic Laboratory and K-State Research and Extension involving beef-focused faculty from K-State's College of Veterinary Medicine and College of Agriculture along with leadership from the Kansas Livestock Association, the Kansas Farm Bureau and the Kansas Veterinary Medical Association.

The meeting will cover practical, applied topics about anaplasmosis. Speakers will discuss the disease process of anaplasmosis along with clinical signs in cows infected and diagnostic tests that can confirm the disease. Four speakers will discuss how to keep anaplasmosis from infecting your cows including vaccine strategies, fly control, prescribed burning and other management practices that can lower the chances of herd infections. Treatment of cows with anaplasmosis and what to expect in cow productivity after infection will be discussed. The afternoon will end with a panel discussion where producers, veterinarians and allied industry personnel can ask the experts questions about the disease and how it can be controlled. The goal of the meeting is to sync up the Kansas beef industry to develop a coordinated effort to control this disease on Kansas beef ranches.

To register and for more information, contact Anthony N. Ruiz in the K-State Research and Extension Central Kansas District extension office at 785-392-2147 or anruiz@ksu.edu.

↪ **K-State Animal Sciences Leadership Academy** - Kansas State University will host two sessions of the K-State Animal Sciences Leadership Academy in 2016 for young livestock industry leaders! They will be held June 8-11 and June 29-July 2. This four-day event will focus on increasing young leaders' knowledge of Kansas' diverse livestock industry as well as building participant's leadership skills. Students will stay in university housing with event staff for the duration of the event.

Twenty high school students (current 9th-12th graders) have been selected to participate in each session (2 sessions will be held). For more information, please contact academy director, Sharon Breiner at sharonjbreiner@gmail.com.

- ↪ **K-State Livestock Judging Camps** - A three day, intense judging camp designed for 4-H and FFA members ages 14-18 who are seriously interested in enhancing their livestock judging and oral communication skills. Prior livestock judging experience is necessary for this camp. Workouts will be conducted similar to those at a collegiate level. Chris Mullinix, coach of over 30 national championship teams and KSU livestock judging coach, will conduct the training for each camp. The camp will focus primarily on the proper format, terminology, and presentation of oral reasons. Camp participants will also be exposed to livestock evaluation skills and incorporating performance records in the decision making process. The registration deadline is May 23.
- The following dates are set for the 2016 camps. June 6-8; June 10-12; and June 17-19. For more information and a registration form, visit <http://www.asi.k-state.edu/students-and-programs/youth-programs/judging-camps.html>
- For more information, contact Chris Mullinix (785-532-1917; cmullinix@k-state.edu).
- ↪ The **KSU Youth Horse Judging Camp – Beginners Section** will be held June 7, 2016 and the **KSU Youth Horse Judging Camp – Advanced Section** will be held June 8-9, 2016. Both camps will be held in Weber Arena on the KSU Campus. Registration for both camps must be paid by May 13, 2016. Camp will be limited to the first 30 participants. For more information, camp agenda and registration forms, visit the website www.asi.ksu.edu/p.aspx?tabid=1141. You can also contact James Lattimer, (785-532-2840; jlattimer@ksu.edu) or Katie Jordan at (katiejordan@ksu.edu).
- ↪ **Developing and Implementing a HACCP Plan for Meat and Poultry and FSPCA Preventive Controls for Human Foods Workshop will be held June 7-9, 2016**, in Weber Hall, Kansas State University, Manhattan, KS. This 3 day workshop uses curriculum recognized by the FDA to meet Preventive Control Qualified Individual requirements and the International HACCP Alliance for meat and poultry processors. This workshop is led by a FSCPA Lead Instructor and International HACCP Alliance Lead Instructor. The workshop fee is \$400 per person, and participants will be presented with a certificate with an International HACCP Alliance seal upon completion of the course. Registrants will have to pay a separate \$50 fee for the FSCPA certificate following the workshop as that is not included in the \$400 registration fee. Registration is limited to 25 participants.
- For more information, contact Dr. Liz Boyle (lboyle@ksu.edu; 785-532-1247). Registration is online at <http://haccp.unl.edu>.
- ↪ **Beef Improvement Federation Convention to be held in Manhattan, KS, June 14-17, 2016**. The 2016 Beef Improvement Federation (BIF) Annual Meeting and Research Symposium will be June 14-17 at the Hilton Garden Inn and Conference Center in Manhattan, Kansas. The theme for this year's program is "Progress on the Prairie." Hosted by Kansas State University, the event will start at noon on Tuesday, June 14 with registration and at 1 p.m. a Young Producers Symposium. A welcome reception begins at 6:30 p.m.
- The meeting will allow the research community and industry to meet and discuss issues surrounding the genetic improvement of beef cattle and for attendees to learn about technologies and management practices that can aid in the profitability of their operations.
- On Wednesday, June 15, the meeting will start at 8 a.m. with a welcome and general session. Presentations and technical breakout sessions will follow through June 16. Attendees are invited to participate in producer tours on Friday, June 17. Sessions to be covered include a variety of presentations on: "*Opportunities for the Beef Value Chain: Can we become more coordinated and more profitable,*" and "*Protecting producer profit for the future.*" For a complete schedule, visit <http://beefimprovement.org/convention/general-information>.
- A link to online registration for the conference is coming soon. Early registration is offered at a discounted rate and ends May 15. Day-only, and student discount rates will also be available. A room block is available at the conference hotel; go online to <http://beefimprovement.org/convention/general-information> for room block instructions.
- The Beef Improvement Federation was formed more than 45 years ago to standardize beef cattle performance programs and evaluation methodology and to create greater awareness, acceptance and usage of these concepts for the genetic improvement of beef cattle. It represents more than 40 state and national beef cattle associations. For more information about this year's event, contact Bob Weaber, Associate Professor/Extension Beef Specialist with Kansas State University at 785-532-1460 or bweaber@k-state.edu.

↪ The **2016 Dr. Bob Hines Kansas Swine Classic** is scheduled for July 8-9, 2016, 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, 2016.

This year's Classic will feature a swine photography contest along with a swine skillathon. For the Swine Photography Contest, youth may submit up to 2 swine photos. Photos should be 8x10 size and should not be framed or matted. Photos will be placed in plastic sleeves and displayed throughout the weekend.

Entries must be postmarked by June 25, 2016. More information and registration will be coming soon to www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Lexie Hayes (785-532-1264; adhayes@ksu.edu).

↪ **Kansas 4-H Livestock Sweepstakes – Save the Date – August 20-21.** The 2016 Kansas 4-H Livestock Sweepstakes will be held August 20-21, 2016 on the K-State campus in Manhattan. Mark your calendars! This is the corresponding date to previous years. The 4-H Livestock Sweepstakes event includes the state 4-H livestock judging contest, meat judging contest, livestock skillathon, and livestock quiz bowl. The members who will represent Kansas at the national contest for each of these events will be selected during the livestock sweepstakes weekend. There is also a team sweepstakes award for the county or extension unit team with the best combined performance in all four events. Individual sweepstakes awards are based on livestock judging, open meat judging (cannot participate in the intermediate division and be eligible), and livestock skillathon. More information, rules, and registration details will be released later this spring.

↪ Join us for the 2nd annual **AS&I Family and Friends Reunion to be held on Friday, October 7, 2016**, from 6:00 – 9:30 p.m. at the Stanley Stout Center, 2200 Denison Avenue, Manhattan, Kansas. Last year's event was truly amazing with over 1,100 family and friends reuniting at the inaugural event. The Don L. Good Impact Award will be presented to Certified Angus Beef. Other activities will include great food, live music, Junior Wildcat Barn Yard and more surprises!! Watch for more information and a registration form, coming soon to www.asi.ksu.edu/familyandfriendsreunion.html.

↪ **Youth Spring Livestock Shows** - Counties who have spring show opportunities for Kansas youth are invited to share that information with the youth livestock program by emailing Lexie Hayes at adhayes@ksu.edu.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
April 21, 2016	PQA+ Advisor Training	Manhattan
April 21, 2016	Hays Roundup	Hays, KS
April 30, 2016	BBQ 101 Workshop	Iola, KS
May 2, 2016	Market Beef Nominations Due	
May 11, 2016	KSU Anaplasmosis Symposium	Salina, KS
May 21, 2016	BBQ 101 Workshop	Holton, KS
June 4, 2016	BBQ 101 Workshop	Washington, KS
June 6-8, 2016	K-State Livestock Judging Camp	Manhattan
June 7, 2016	KSU Youth Horse Judging Camp-Beginners	Manhattan
June 7-9, 2016	HACCP/FSPCA Preventive Controls Workshop	Manhattan
June 8-9, 2016	KSU Youth Horse Judging Camp-Advanced	Manhattan
June 8-11, 2016	Animal Sciences Leadership Academy	Manhattan
June 10-12, 2016	K-State Livestock Judging Camp	Manhattan
June 14-17, 2016	Beef Improvement Federation Convention	Manhattan
June 17-19, 2016	K-State Livestock Judging Camp	Manhattan
June 25, 2016	BBQ 101 Workshop	Wichita, KS
June 29 – July 2, 2016	Animal Sciences Leadership Academy	Manhattan
July 8-9, 2016	Dr. Bob Hines Kansas Swine Classic	Manhattan
August 20-21, 2016	Kansas 4-H Livestock Sweepstakes	Manhattan
October 7, 2016	AS&I Family and Friends Reunion	Manhattan

WHAT'S NEW.....

Management Minute "Servant Leadership"

↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **"Servant Leadership"**

What is a leader? There are many appropriate responses that are all good and right and true. George Patton was a leader. As was his boss, Dwight Eisenhower (a good Kansas boy). Patton is legendary for his swagger and aggression; Eisenhower is iconic for his serious, pensive, decision-making and consensus-building. Outspoken autocrat vs. quiet, thoughtful team-builder.

Both Patton and Ike were successful and highly-effective leaders. However, which of these great generals practiced a leadership style that is likely to be applicable to your workplace in the modern business environment where good employees have options of other places to work?

In battle, democracy doesn't work above the squad level. When bullets are flying and bombs are exploding, and lives are in jeopardy, decisions must be made and orders must be followed---immediately. Patton won battles, but Ike won the war. Winning a battle requires a short-term strategy of exploiting your own strengths and your enemy's weaknesses. But winning the war required not just military strategy but political strategy as well---something Patton was likely not good at or even cared greatly about.

Most employees will follow an autocratic leader if they trust the leader's vision for the organization, and provided the work environment is not oppressive. However, if the contributions of ideas and strategy by individual employees which could help attain the corporate vision are continually ignored or suppressed by the leadership, creative, proactive employees will eventually lose their motivation. They will quit trying to make the workplace better and quit trying to improve the company. Enthusiasm wanes, and they will leave when the opportunity arises.

Your greatest strength, maximized, may be your greatest weakness. The visionary autocrat, without humility and compassion, will eventually be followed by uninspired automatons who must be dragged through their daily duties by the leadership. However, the visionary leader who routinely requests and welcomes input from the team will create a powerful synergy, harnessing the work ethic and creativity of the team to their own directional vision---the engine effectively synchronized with the steering wheel.

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

Feedlot Facts "Ammoniation of Wheat Straw dramatically improves Feeding Value"

↪ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **"Ammoniation of Wheat Straw dramatically improves Feeding Value"**

Although it's a strange time to discuss winter forage needs, it's about the right time to be planning what to do with wheat straw left after wheat harvest. "Planning" here is the key word.

Sometimes, forage is cheap and abundant; other times, everything has value. Ingredients we never would considered as suitable for feeding some years are other times in high demand and bring a good price. But while we want to give every opportunity due consideration, we've got to be sure to know what the true nutritional value of a feedstuff is, as well as any potential for toxicity.

Wheat straw has traditionally been fed to beef cows and can provide energy to gestating cows if supplemented with protein; however, ammoniation of the straw can effectively improve its feed value. Lignin (the "glue" that holds the cells together and gives strength to the stalk) normally prevents ruminal microbes from breaking down much of the cellulose in mature forages. Ammoniation breaks down the bonds between lignin and the cellulose and hemicellulose, allowing access for rumen microbes, and releasing energy for the cow to use.

Ammoniation not only adds nitrogen and increases the crude protein content of the forage, but also improves digestibility and consumption of the forage as well. Simply put, untreated wheat straw has very little energy and protein; whereas ammoniated wheat straw has protein and energy values similar to moderate quality prairie hay.

↪ **Feedlot Facts – “Ammoniation of Wheat Straw dramatically improves Feeding Value” (cont.)**

The ammoniation process is relatively simple and inexpensive. Stack the straw bales in either a 3-2 or 3-2-1 pyramid. Leave several inches between adjacent bales to allow ammonia to flow freely between the bales within the stack. Cover the stack with a single sheet of 6 mil plastic and completely seal the plastic around the base of the stack with soil. Any holes in the plastic should be sealed with tape.

Insert a hose from the anhydrous ammonia nurse tank under the plastic at the base of the stack at the midway point of the stack and seal the plastic around the hose. A manifold can be used to disperse the ammonia more evenly throughout the bale stack.

Most literature sources recommend applying anhydrous ammonia at the rate of 3% of the bales' dry weight; however, recent K-State data suggests that 1.5% may be nearly as efficacious but has roughly half the cost. At a 3% addition rate, 60 lbs of anhydrous ammonia will be added for each ton of hay. For simplicity, a nurse tank can be used containing the exact amount of anhydrous ammonia for the amount of hay in the stack, and the tank can be allowed to empty completely. Apply the ammonia slowly to prevent rapid expansion and breaking of the plastic.

WARNING: Anhydrous ammonia is very toxic to the skin, eyes, and respiratory tract. Therefore, only conduct ammoniation in an open, well-ventilated area, always work upwind from the ammonia source, and always wear goggles and rubber gloves when exposed to the anhydrous ammonia. Have abundant clean water available in the event of exposure of the eyes or skin to the anhydrous ammonia.

The time required for the chemical breakdown to occur depends on ambient temperature: allow 1-2 weeks to cure if daily temperatures are in the 80's or 90's; increase this time to 4-6 weeks if ammoniating during the winter. Prior to feeding, remove the plastic and allow the bales to aerate for several days to allow excess ammonia to escape. Corn stalks can also be successfully ammoniated and forage quality effectively improved in a similar manner.

The value of wheat straw and corn stalks can be dramatically improved by ammoniation. The cost of ammoniation is presently \$20-40 per ton of forage, depending on application rates, which makes the ammoniated crop residue a very cost-effective alternative to prairie hay which might need to be purchased and hauled from a distance. In the present market, all forage has some value; however, it's imperative to test all forages to determine what that value is.

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

↪ **New Communications Coordinator** - We are pleased to announce that Angie Denton has accepted the position as Communications Coordinator for the Animal Sciences and Industry Department. We are excited about the enthusiasm and excitement that Angie brings to K-State. Angie began her position at K-State on April 11, 2016. She will be in Weber Hall, Room 256. Her e-mail is angiedenton@ksu.edu.

↪ **Freezing Improves Instrumental Tenderness of Strip Steaks Purchased at Retail Grocery Stores** – Determine the impact of freezing on instrumental tenderness measured by Warner-Bratzler shear force and cooking characteristics of strip steaks purchased from grocery store outlets. A total of 125 packages with two strip steaks per package were purchased from local grocery store outlets between March 2014 to February 2015. One steak was randomly selected from each package and cooked the following day (fresh, non-frozen) while the other steak was vacuum-packaged and frozen at -4°F for two weeks. After two weeks, the frozen steak was thawed, cooked, and refrigerated. The following day shear force of the steak was measured.

Bottom Line.... Strip steaks that are previously frozen are more tender instrumentally (lower shear force), have higher cooking losses and take longer to cook than fresh (non-frozen) steaks. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, John Unruh (785-532-1245; junruh@ksu.edu) or Liz Boyle (785-532-1247; lboyle@ksu.edu).

↪ **Palatability of Ground Beef Increases When Brand Is Disclosed in Consumer Testing** – The effect of brand and product identification on consumer palatability ratings of ground beef patties was determined. Six ground beef treatments were selected to represent a variety of fat levels and brands and included: 90/10 Certified Angus Beef (CAB) ground sirloin, 90/10 commodity, 80/20 CAB, ground chuck, 80/20 commodity ground chuck, 80/20 commodity, and 70/30 CAB. Consumers (n = 112) evaluated 1/3 lb patties in two rounds, blinded sampling and sampling after brand, and product type was disclosed. Samples were tested for 5 palatability traits: tenderness, juiciness, flavor liking, texture, and overall liking were rated as either acceptable or unacceptable.

Bottom Line.... Few differences between ground beef palatability were seen when consumers had no knowledge of branding, but when product information was disclosed, multiple treatments received increased ratings indicating branding plays a large role in consumer perception of ground beef palatability. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Travis O'Quinn (785-532-3469; travisquinn@ksu.edu).

↪ **Effect of Thermal Mitigation on Porcine Epidemic Diarrhea Virus (PEDV) Contaminated Feed** Porcine Epidemic Diarrhea Virus (PEDV) is primarily transmitted by fecal-oral contamination. However, epidemiological evidence has shown that swine feed and ingredients may serve as potential vectors of transmission. Since it is known that PEDV is a heat-sensitive virus, we hypothesized that a conditioner and pellet mill mimicking commercial thermal processing would mitigate PEDV infectivity. To test this hypothesis, two experiments were designed to determine if different pellet mill conditioner retention times or temperatures would impact PEDV infectivity determined by polymerase chain reaction (PCR) analysis and bioassay. For the first study, a 3x3x2 factorial was utilized, with three pelleting temperatures (155, 175, or 195°F), three conditioning times (45, 90, or 180 s), and two levels of virus (low: 1x10² TCID₅₀/g, or high: 1x10⁴ TCID₅₀/g). Non-inoculated and PEDV-inoculated unprocessed mash were used as controls. There was no PEDV RNA detected in the PEDV-free mash. The low-dose PEDV-infected mash was 6.8 ± 1.8 cycle threshold (Ct) greater than the high dose mash. Regardless of time or temperature, feed processing increased the Ct compared to the PEDV-inoculated unprocessed mash. As expected, fecal shedding of PEDV was not detected in rectal swabs from control pigs for the duration of the study. Fecal swabs from pigs fed the PEDV-inoculated unprocessed mash, regardless of dose, were PEDV-positive from 2 to 7 days post-inoculation, at which time the pigs were sacrificed. However, if either PEDV dose of inoculated feed was pelleted at any of the nine tested conditioning time x temperature combinations, no PEDV RNA was detected in fecal swabs or cecum content. Based on these results, a second experiment was developed to determine the impact of lower processing temperatures on PEDV infectivity. The pellet mill was heated for 1 hour at normal manufacturing conditions prior to simulating a plug by turning off the steam supply. This allowed the temperature of the mash feed to decrease below 100°F. The PEDV-inoculated feed was then pelleted at one of five conditioning temperatures (100, 115, 130, 145, or 160°F) for 30 s. This study was repeated three times on three separate days with complete decontamination between each experiment day. Again, non-inoculated and PEDV-inoculated mash were used as controls. The five increasing temperatures led to feed with respective mean Ct values of 32.5, 34.6, 37.0, 36.5, and 36.7. Even though all samples had detectable PEDV RNA in the feed, infectivity was only detected by bioassay in pigs from the 100 and 115°F conditioning treatments. In each of the other processing temperatures, no PEDV RNA was detected in fecal swabs or cecum contents

Bottom Line...Our results suggest that processing feed through a conditioner and pellet mill similar to those used in commercial feed mills will be effective as a point-in-time mitigation step for PEDV as long as conditioning temperatures remain above 130°F. Any time feed is processed at temperatures below that level, such as during start-up or when the pellet mill die becomes plugged and the steam is consequently shut off, there is a risk that the feed can act as a vector for transferring infectious PEDV and lead to cross-contamination of post-pelleting handling equipment. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by R. A. Cochrane, L. L. Schumacher, S. S. Dritz, J. C. Woodworth, A. R. Huss, C. R. Stark, J. M. DeRouchey, M. D. Tokach, R. D. Goodband, J. Bia, Q. Chen, J. Zhang, P. C. Gauger, R. G. Main, and C. K. Jones)

↪ **Effects of Standardized Ileal Digestible Lysine Content in Low Crude Protein Diets on Finishing Pig Performance and Economics from 230 to 280 lb** The objective of this study was to estimate the nutritional requirement of standardized ileal digestible (SID) Lys on growth performance and economics of 230- to 280-lb finishing pigs housed in a commercial environment and fed diets not containing ractopamine HCl. A total of 1,101 gilts (PIC L327 x 1050, initially 233.4 lb BW) were used in a 28-d growth trial. Pens were blocked by BW and were randomly assigned to diets with 27 pigs per pen and 7 pens per treatment in a randomized complete block design. Diets were corn and soybean meal-based and fed in meal form, with dietary treatments consisting of: 0.52, 0.58, 0.64, 0.70, 0.76, or 0.82% SID lysine. Increasing SID Lys increased ADG and final BW, resulting in pigs fed 0.82% SID Lys having the greatest final BW. There was no difference in ADFI among pigs fed different SID Lys levels. Feed efficiency was improved with increasing SID Lys. In addition, there was an improvement in caloric efficiency on both a ME and NE basis with increasing SID Lys. Feed cost per pig increased as SID lysine level increased. However, there was no difference in feed cost/lb gain. Total revenue per pig increased while income over feed cost (IOFC) tended to increase as SID lysine level increased. Quadratic polynomial and broken-line linear models to maximize ADG resulted in similar fit and predicted the SID Lys level required to maximize ADG to be greater than 0.82 and at 0.685% SID Lys, QP vs. BLL, respectively. Using the QP model, 95% of the maximum growth was predicted to be at 0.675% SID Lys. The best F/G was achieved at greater than 0.82 and at 0.648% SID Lys for QP vs. BLL, respectively, with 95% of lowest F/G predicted at 0.638% SID Lys using the QP model. IOFC was maximized by the QP and BLL model at 0.754 and 0.640% SID Lys, respectively.

Bottom Line...In summary, the SID lysine requirement for optimal ADG, F/G, and IOFC of finishing pigs is at least 0.64% SID Lys. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J. T. Gebhardt, M. A. D. Goncalves, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, J. C. Woodworth, and S. S. Dritz)

AS&I Faculty Spotlight



**Jason Woodworth (jwoodworth@k-state.edu ; 785-532-1157)
Research Associate Professor/Swine Nutrition and Management**

Dr. Jason Woodworth was raised in Sterling, Kansas on a diversified crop farm. In 1997 Jason completed his B.S Animal Science degree at KSU and during his undergraduate career he worked and lived at the KSU Swine Unit. Jason went on to complete his swine nutrition M.S. and Ph. D. degrees at KSU with his research emphasis related to the vitamin and mineral requirements of nursery pigs and sows.

After completing his degrees, Jason joined Lonza which was the same company that funded his Ph.D. In his 11+ year tenure at Lonza, Jason's responsibilities transitioned from being the NAFTA Technical Sales & Service Manager, to the NAFTA Business Manager, and finally to the Global Product Manager for some of Lonza's specialty feed ingredients. In this capacity, Jason was responsible for the global research & development initiatives of Lonza's animal nutrition portfolio for all production and companion animal species. Furthermore, he had the global profit/loss responsibility for Lonza's L-Carnitine-based portfolio and spent about 50% of his time traveling internationally to develop the global business.

In June of 2013 Jason re-joined the Applied Swine Nutrition team at KSU as a Research Associate Professor. In this role, Jason will contribute to the already-successful swine nutrition team at KSU in their efforts to expand swine nutrition knowledge and develop young professionals for their future roles in the swine industry as well as support the team's overall objectives to increase swine producer profitability.

Jason lives in Enterprise, KS with his wife, Brooke, and two sons, Jensen and Carson, where they operate a 150 head registered Angus herd.



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

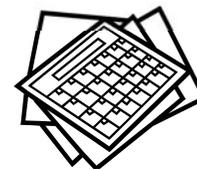
Growing up on a diversified livestock and grain farm in North Dakota taught Dr. Mike Tokach many of the practical day-to-day problems that livestock producers can encounter. In his position as a swine extension specialist and researcher, Mike has the opportunity to help producers solve those problems. 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. After completing his doctorate in swine nutrition at the University of Minnesota in March 1991, Mike joined the staff of K-State Research and Extension as a livestock specialist.

His position has evolved from a 100% extension position to the current 60% extension and 40% research appointment. Mike was promoted to associate professor in 1995 and full professor in 2001. He assumed the additional role of Extension State Leader for Animal Sciences and Industry in July, 2005. In 2013, he was named a University Distinguished Professor.

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 250 animal and veterinary science meetings around the world. Mike has co-authored 252 refereed journal papers, 615 abstracts, 874 extension publications and field day reports, and 7 book chapters. Mike and his colleagues have generated over \$12 million in grants and gifts to Kansas State University to support swine research. 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.

What Producers Should Be Thinking About.....

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



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

June is a month to let Mother Nature take her course. **Assuming timely precipitation**, native grasses are usually at peak production; therefore, little supplementation is needed, with the exception of some minerals.

Cow-herd nutrition

- Provide plenty of clean, fresh water.
- Provide free-choice minerals to correct any mineral deficiencies or imbalances.
- Monitor grazing conditions and rotate pastures if possible and practical.
- Consider creep-feeding if it's cost-effective.

Herd health

- Monitor and treat pinkeye cases.
- Provide fly control. Consider all options; price and efficiency will dictate the best options to use.
- Monitor and treat for foot rot.
- To reduce heat stress, avoid handling and transporting cattle during the hottest times of the day.

Forage and pasture management

- Check and maintain summer water supplies.
- Place mineral feeders strategically to enhance grazing distribution.
- Check water gaps after possible washouts.
- Harvest hay in a timely manner; think quality and quantity.

Reproductive management

- If using AI, do not expect all females to conceive. A common practice is to breed once or twice with AI, then turn out cleanup bulls for the balance of a 65-day breeding season. A 42-day AI season with estrus synchronization at the front end gives most females three chances to conceive by AI.
- Watch bulls for libido, mounting and breeding function.
- Record breeding dates to determine calving dates.
- By imposing reproductive pressure (45-day breeding season) on yearling heifers, no late-calving 2-year-olds will result. This will increase lifetime productivity and profits.

Genetic management

- Monitor herd performance. Then identify candidates to cull because of poor performance.

General management

- Check equipment (sprayers, dust bags, oilers, haying equipment, etc.), and repair or replace as needed. Have spare parts on hand because downtime can make a big 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.*