



# News from KSU Animal Sciences

## UPCOMING EVENTS...

☞ The **2018 KSU Dairy Days** will be hosted on February 1 in Seneca, KS, and February 2 in Whiteside, KS. The Kansas Dairy Commission is the lunch sponsor for both meetings. The Whiteside meeting will be held in conjunction with the Reno County DHIA Annual Meeting. Both days will begin at 9:45 a.m. and adjourn at 3:00 p.m.

The day will be information packed including a presentation by Dr. John Goeser, Rock River Laboratory animal nutrition, about moving your dairy toward better margins and better grain and starch utilization. Dr. A.J. Tarpoff will lead a session focused on dairy beef quality assurance guidelines. Other key topics include a producer panel discussing technology practices implemented; Resynchronization strategies for open lactating cows; Glucose needs in transition cows; Transition cow health during Kansas' summer, along with a Midwest Dairy Association and Kansas Department of Ag/Kansas Department of Commerce update.

People interested in attending are encouraged to pre-register. For the Seneca location call 785-336-2184 or e-mail [jholthau@ksu.edu](mailto:jholthau@ksu.edu); Whiteside location call 620-662-2371 or e-mail [darrenbusick@ksu.edu](mailto:darrenbusick@ksu.edu). More information about K-State Dairy Day, including the schedule for both locations, is available online at [asi.ksu.edu](http://asi.ksu.edu). For more information, contact Luis Mendonca ([mendonca@ksu.edu](mailto:mendonca@ksu.edu); 785-532-2652).

☞ The 2018 **K-State Swine Profitability Conference** will be Tuesday, February 6, 2018, at the Stanley Stout Center, 2200 Denison Avenue, Manhattan, KS. The schedule is as follows:

- 9:15 a.m. Coffee and Donuts
- 9:30 a.m. **Managing Pig Health with Minimal Antibiotic Use in Commercial Pig Production**  
*Dr. Doug MacDougald, Southwest Vets*
- 10:30 a.m. **Opportunities and Pitfalls of Producing Antibiotic Free Pork**  
*Ben Woolley and Ben Keeble, Sunterra Farms*
- 11:15 a.m. **Rebuilding after a Catastrophe**  
*Terry Nelson, Husky Hogs*
- 12:00 noon Lunch
- 1:15 p.m. **Future Trends Impacting the Swine Industry**  
*Dr. Gary Louis, Seaboard Foods*
- 2:15 p.m. **Life Lessons Learned While Practicing with Dr. Steve Henry**  
*Dr. Lisa Tokach, Abilene Animal Hospital*
- 3:00 p.m. Adjourn

Pre-registration fee is \$25 per participant by January 26; with registration at the door \$50 per participant. The complete schedule and online registration information can be found at [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Lois Schreiner at [lschrein@ksu.edu](mailto:lschrein@ksu.edu) or 785-532-1267.

### Department of Animal Sciences and Industry

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↪ **K-State's Winter Ranch Management Series Set for February** – This seminar series will highlight “*Corrals, Calcium, Costs and Cows: Management and Profit Strategies for 2018.*” The format of the 2018 Winter Ranch Management Seminar Series is a face-to-face meeting with a series of short presentations focused on enhancing management and profit in beef production and a ‘Town Hall’ Question and Answer session where producers can ask their questions to local/district and state extension specialists. Producers are encouraged to bring their questions on cow-calf animal health, nutrition, genetics, reproduction and management to the session!

Please RSVP to your selected location contacts by close of business **one week before** the event. 40 RSVP'd attendees requested for each location. Locations with fewer than 40 confirmed attendees may be cancelled. Registration fees and payment forms may vary by site. Contact your local host contact for registration/RSVP details. Meal is included in the registration fee. Locations and dates include:

Tuesday, February 6; 5:30 – 8:30 pm – NCK Technical College, 3033 US Hwy 24, Beloit, KS

Wednesday, February 7; 5:30 – 8:30 pm – McCormick Elementary, 109 N First Street, Olsburg, KS

Thursday, February 8; 5:30 – 8:30 pm – Lane County Fair Grounds, Dighton, KS

Tuesday, February 13; 5:30 – 8:30 pm – Community Building, Hepler, KS

Online updates to the Seminar information can be found on the Animal Sciences website at [www.ksubeef.org](http://www.ksubeef.org). For more information, contact Bob Weaber ([bweaber@ksu.edu](mailto:bweaber@ksu.edu) or 785-532-1460).

↪ **Make plans to attend Cattlemen's Day 2018** –The 105<sup>th</sup> annual Cattlemen's Day will be hosted Friday, March 2, 2018. The trade show and educational exhibits will open at 8 a.m. in Weber Arena.

Registration for KSU Cattlemen's Day will be \$20 per person in advance or \$30 per person at the door. Morning refreshments and lunch are included with registration. A complete schedule will be coming soon to [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday) or call 785-532-1267.

If you are interested in exhibiting at Cattlemen's Day or have any questions, please contact Dale Blasi ([dblasi@ksu.edu](mailto:dblasi@ksu.edu); 785-532-5427) or Jim Drouillard ([jdrouill@ksu.edu](mailto:jdrouill@ksu.edu); 785-532-1204).

↪ The **41<sup>st</sup> annual Legacy Bull and Heifer Sale** will be March 2, 2018, at 3:30 p.m. at the Stanley Stout Center. Visit [www.asi.ksu.edu/bullsale](http://www.asi.ksu.edu/bullsale) for more information, as it becomes available, including the sale catalog.

↪ **Kansas Junior Sheep Producer Day – March 17, 2018** - The 2018 Kansas Junior Sheep Producer Day is scheduled for Saturday, March 17, 2018, in Weber Hall on the Kansas State University campus. This event will be a fun-filled, educational day of activities in which youth, parents, sheep project leaders, and adults can increase their knowledge and experience of sheep production and management. This interactive, educational event will stimulate enthusiasm and provide a foundation for the management and care of youth sheep projects. Presentations and demonstrations will be provided by K-State faculty and graduate students, as well as guest speakers. Topics that will be covered include project selection, nutrition, equipment and facilities, meat science, the state livestock nomination process, sheep health, wellness, and diseases, wool, showmanship, grooming, and Youth for the Quality Care of Animals certification. A complimentary lunch and t-shirt will be provided for participants. Registration is due by February 23, 2018, and is \$15/person. Registrations received after February 23rd cannot be guaranteed a t-shirt and will be \$20/person. More information, a promotional flyer, and registration information may be found on the K-State Youth Livestock Program website: [www.youthlivestock.ksu.edu](http://www.youthlivestock.ksu.edu) under Kansas Junior Producer Days. Participants may register online at <https://commerce.cashnet.com/KSUASIND>. This event has been added to the university Pulse calendar.

The K-State Sheep & Meat Goat Center will be having their annual sale on the same date, following the Junior Sheep Producer Day. The program schedule will allow participants who would like to participate in both events to do so. For more information, please contact Lexie Hayes ([adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264).

↪ **Kansas Junior Beef Producer Day – March 24, 2018** - The 2018 Kansas Junior Beef Producer Day is scheduled for Saturday, March 24, 2018, in Weber Hall on the Kansas State University campus. This event will be an interactive, educational day in which youth, parents, beef project leaders, and adults can increase their knowledge about youth beef production and management. K-State faculty, staff, and guest speakers will cover topics such as market and breeding project selection, nutrition, the state nomination processes and updates, meat science, grooming, leadership, health, reproduction, showmanship, grooming, and Youth for the Quality Care of Animals certification. All ages and skill levels are invited to attend. A complimentary lunch and t-shirt will be provided for all participants. Registration is due by March 2, 2018 and is \$15/person. Registrations received after March 2, 2018 cannot be guaranteed a t-shirt and will be \$20/person. More information, a promotional flyer, and registration information may be found on the K-State Youth Livestock Program website: [www.youthlivestock.ksu.edu](http://www.youthlivestock.ksu.edu) under Kansas Junior Producer Days. Participants may register online at <https://commerce.cashnet.com/KSUASIND>. This event has been added to the university Pulse calendar. For more information, please contact Lexie Hayes ([adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264).

↳ Plan to attend the **41<sup>st</sup> Annual Midwest Meat Processing Workshop** on April 6, 2018, at K-State. Join us at the workshop and see, hear, taste and ask questions as state award winners share their expertise and demonstrate the manufacture and techniques used to make award winning products. Mark your calendar and watch for more details coming soon. For more information, contact Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu); 785-532-1247).

↳ **Livestock Fair Management Clinics Scheduled for April 10 and 12** – Dates set for Livestock Fair Management Clinics. Every other year, K-State Research and Extension and the Department of Animal Sciences and Industry host a Livestock Fair Management Clinic for county fair board members, Extension Agents, and other adult volunteers involved in local livestock fair management and leadership. This professional development opportunity consists of an activity filled day to increase awareness and how different county fairs operate and provide a forum for open communication for individuals with local livestock fairs across Kansas.

There will be two different locations on two different days with the same general agenda. Tuesday, April 10, 2018, will be the first session at the Gray County Fairgrounds in Cimarron. The second session will be Thursday, April 12, 2018, in Holton at the Jackson County Fairgrounds. Lunch and refreshments will be provided. The agenda includes:

8:45 – 9:15 a.m.	Registration
9:15 – 9:30 a.m.	Welcome
9:30 – 10:45 a.m.	County Fair Board Structure and Management - members, by-laws, tax exempt status, superintendent selection, and Extension/Fair Board relationships
10:45 – 11:00 a.m.	Break
11:00 – 11:30 a.m.	Fair Insurance
11:30 – 12:00 p.m.	Poultry Health & Exhibit Management
12:00 – 1:00 p.m.	Lunch (provided)
1:00 – 1:45 p.m.	Official 4-H Livestock Policies and Extension's role at County Fairs
1:45 – 2:30 p.m.	Timing of Livestock Shows during the County Fair - balancing potential for heat stress vs. crowd attendance, length of fair, accommodating families/multiple fair activities
2:30 – 3:00 p.m.	Open Forum Questions & Discussion
3:00 p.m.	Wrap-up and Adjourn

Registration is \$15/person and is due by April 1, 2018. Checks can be made payable to "KSU-ASI" and mailed to "Livestock Fair Management Clinic, Attn: Lexie Hayes, 214 Weber Hall, KSU, Manhattan, KS 66506." For a registration form and a tentative agenda, please visit the website, [www.YouthLivestock.KSU.edu](http://www.YouthLivestock.KSU.edu). Information is linked to the event on the calendar at the top of the page. If you have any questions please contact Lexie Hayes at 785-532-1264 or [adhayes@ksu.edu](mailto:adhayes@ksu.edu); Joel DeRouchey at 785-532-2280 or [jderouch@ksu.edu](mailto:jderouch@ksu.edu); or Pam Van Horn at 785-532-5800 or [pvanhorn@ksu.edu](mailto:pvanhorn@ksu.edu).

↳ The **4-H Wildlife Habitat Education Program Contest** will be Wednesday, April 25, 2018, at the Claythorne Lodge, Columbus, Kansas. For the past 28 years, Kansas has held state wildlife habitat evaluation contests in which the winning team was eligible to advance to the national contest. The contest is about teaching young people about wildlife, the needs of wildlife, and their habitat. If you are interested in participating as a member of a team or as an individual in the 2018 contest, please contact Charles Lee, Extension Specialist, Wildlife, Room 131 Call Hall, 1530 Mid-Campus Drive North, Kansas State University, Manhattan, KS 66506, or call 785-532-5734 by March 20, 2018. A \$5 donation/fee is requested from each person to help defray lunch expenses.

↳ **Youth PQA Plus Training Extended to June 1, 2018** - It was announced in last month's update newsletter that the Youth PQA Plus program would be discontinuing at the end of 2017. However, the National Pork Board has decided to extend the program to June 1, 2018. If you are a current Youth PQA Plus trainer, you probably received a package from the National Pork Board within the last few weeks. If you have not already done so, I encourage you to look at the materials provided on the flashdrive. It includes a formal letter with information about the Youth PQA program extension, as well as informational materials about the transition to Youth for the Quality Care of Animals (YQCA). At this point in time, Youth PQA Plus will function as normal, and youth will be able to certify or re-certify until June 1, 2018. Once the program is discontinued, the National Pork Board will honor Youth PQA Plus numbers until they expire, and agents will still be able to use their credentials to log on to the pork board website and verify a young person's certification status or current number. After June 1, 2018, youth needing quality assurance training for swine, or other livestock species, are encouraged to use YQCA for their certification. The YQCA program is available for youth ages 8-21. Young people may complete the training online for \$12/person, or attend a face-to-face training for \$3/person. More information may be found at [www.yqca.org](http://www.yqca.org). Extension Agents who would like to become a YQCA instructor may contact Lexie at [adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264 for details.

Quality Assurance requirements for Kansas State Fair Grand Drive and Kansas Junior Livestock Show exhibitors have not been finalized. This information will be released by March 1, 2018.

- ↳ **Developing and Implementing a HACCP Plan for Meat and Poultry Workshop** will be held June 5-7, 2018, in Weber Hall, Kansas State University, Manhattan, KS. This 3 day workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors and is led by an International HACCP Alliance Lead Instructor. For more information, contact Dr. Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu); 785-532-1247).
- ↳ **Kansas 4-H Livestock Sweepstakes Date** - Mark your calendars! The 2018 Kansas 4-H Livestock Sweepstakes will be August 18-19 in Manhattan!
- ↳ The **SowBridge Breeding Herd Education Series** is being offered for 2018-2019. The SowBridge program is intended for people involved in managing or caring for boars, sows, and/or their litters, including operation owners, employees, technicians, managers, and technical service providers. SowBridge is designed to improve the understanding and application of various tools and techniques involved in daily care of the breeding herd and piglets
- This year-long program is offered by subscription only with a January 16 deadline to ensure participants will receive materials for the first session on February 1, 2018. Before each session, subscribers will receive an email message with links to download the materials for that session. Most participants will call a toll-free conference line to listen to and interact with presenters, and the audio portions of all sessions for both programs are recorded. Links to download those recordings are sent to all subscribers after each session. Each session begins at 11:30 a.m. Central Time and lasts approximately 45 minutes.
- The SowBridge Series cost of \$250 (U.S.) includes all 12 sessions and supporting materials. Additional subscriptions from same operation are half that cost. For a complete schedule and registration form, visit [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)).
- ↳ **2018 PorkBridge Grow-Finish Education Series** now available. The 13<sup>th</sup> year of the PorkBridge distance education series begins Feb. 1, 2018. This low-tech program features topics important to those who work with grow-finish operations and are presented by recognized industry experts. Provided through the collaboration of 11 land grant universities with swine faculty and staff, PorkBridge reaches producers and industry professionals across the country and around the world through an every-other-month series of six sessions. 2018 dates include February 1; April 5; May 31; August 2; October 4; and December 6. Sessions are generally scheduled for the first Thursday of each designated month, starting at 11:30 a.m. Central Time, but occasionally are moved up a week to avoid interference with national industry events. Each session lasts about 45 minutes.
- The cost is \$125 (U.S.) for the entire 2018 PorkBridge program year. Subscription deadline is January 16 to assure receipt of program materials in time for the first session on Feb. 1. For a complete schedule and registration form, visit [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)).
- ↳ As we enter 2018, it is also time to order **Kansas 4-H eID livestock tags**. This year we will be transitioning the tag ordering and distribution process from Dave Kehler in Butler County to Lexie Hayes, on campus. Prior to the first of the year, all of the tag orders went to the Butler County office. Now that we have entered 2018, all tag orders need to be sent to the KSU Youth Livestock Program. The mailing address may be found on the top of the order forms. Several important EID tag resources may be found on the KSU Youth Livestock Program website (<https://www.asi.k-state.edu/research-and-extension/youth-programs/kansas-4-h-eid-tags.html>), as well as the Butler County website (<http://www.butler.k-state.edu/eid/>). The resources include the order forms, tag application instructions, and information on utilizing eID technology at the local level. Please make sure the person responsible for ordering and managing the livestock tags in your office is aware and receives this information. Counties/units who plan to order beef tags this year are encouraged to do so at their earliest convenience. We will be filling another round of beef tag orders at the end of January. Orders received after this point will be considered a special order. Payment must accompany the tag order form for it to be accepted and completed.
- State accepted tags – there has been no change in the 4-H/EID tags that will be accepted for nomination to the Kansas Junior Livestock show and the Kansas State Fair. You can see pictures of these tags on the KSU Youth Livestock Program website at [www.YouthLivestock.KSU.edu](http://www.YouthLivestock.KSU.edu) or under the EID info on the Butler County Extension website. Livestock projects must be tagged with a Kansas 4-H EID tag to be eligible for nomination and exhibit at the Kansas State Fair or KJLS.
- SPECIAL NOTE ABOUT TAG USE: It is important that counties/units use their oldest tags first. We have reached the point that we will need to start some of the 4-H visual ID tag numbers over. This will make some of the older (issued in 2010 and 2011) tags not eligible for state nominations. Also, extension agents and staff need to remember that these are EID tags, and specifically the beef and swine tags are 840s. So, each unit will need to keep an accurate record of the animals/families in which each tag is applied. If you have any questions please contact Lexie Hayes at 785-532-1264 or [adhayes@ksu.edu](mailto:adhayes@ksu.edu);

**CALENDAR OF UPCOMING EVENTS**

<b>Date</b>	<b>Event</b>	<b>Location</b>
January 19, 2018	Beef eID-tag order deadline	
February 1, 2018	KSU Dairy Day	Seneca
February 1, 2018	SowBridge Session 1; PorkBridge Session 1	
February 2, 2018	KSU Dairy Day	Whiteside
February 6, 2018	KSU Swine Profitability Conference	Manhattan
February 6, 2018	Winter Ranch Management Workshop	Beloit
February 7, 2018	Winter Ranch Management Workshop	Olsburg
February 8, 2018	Winter Ranch Management Workshop	Walnut Creek
February 13, 2018	Winter Ranch Management Workshop	Hepler
March 2, 2018	KSU Cattlemen's Day	Manhattan
March 2, 2018	KSU Legacy Bull and Heifer Sale	Manhattan
March 17, 2018	Kansas Junior Sheep Producer Day	Manhattan
March 24, 2018	Kansas Junior Beef Producer Day	Manhattan
April 6, 2018	Midwest Meat Processors Workshop	Manhattan
April 10, 2018	Livestock Fair Management Clinic – Western Session	Cimarron
April 12, 2018	Livestock Fair Management Clinic – Eastern Session	Holton
April 25, 2018	Wildlife Habitat Education Program Contest	Columbus
June 5-7, 2018	Introduction to HACCP Workshop	Manhattan
August 18-19, 2018	Kansas 4-H Livestock Sweepstakes	Manhattan

# WHAT'S NEW.....

☞ **Management Minute** – Justin Waggoner, Ph.D., Beef Systems Specialist

## *“Failure”*

Leadership and management are evaluated by an organization or operations' successes. However, the path to success often involves failure. Everyone hates to fail. However, failure is an excellent teacher and the simple truth is that we learn more from our failures than we do our successes. One of the traits many successful people possess is that they did not let fear of failure exceed their desire to succeed. History is full of leaders who were quite familiar with failure. However, when they made a mistake, they learned from it, moved on and didn't let it happen again. Additionally, great leaders in the business world recognize that department or unit managers don't always succeed and that failure is an unfortunate, but necessary component of empowering and cultivating good managers within the organization.

*“Winners are not afraid of losing. But losers are. Failure is part of the process of success. People who avoid failure also avoid success.”* - Robert Kiyosaki, author of “Rich Dad, Poor Dad”

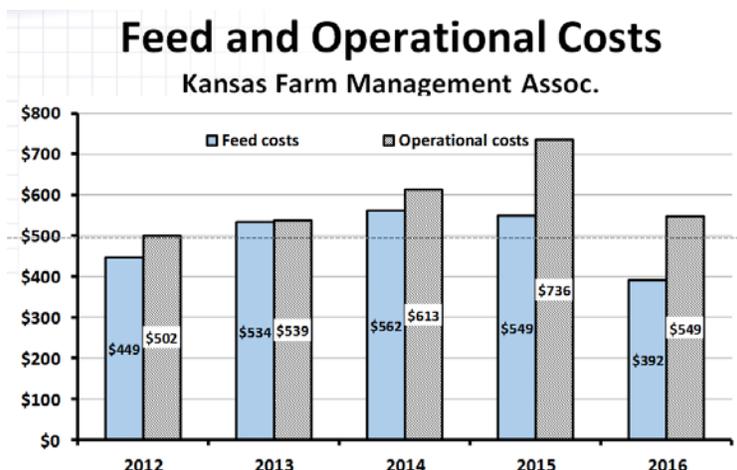
*“I have not failed. I've just found 10,000 ways that won't work”*- Thomas Edison, inventor of the light bulb

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu)

☞ **Feedlot Facts** – Justin Waggoner, Ph.D., Beef Systems Specialist

## *“What's Your Cost of Production?”*

I can assure you that Henry Ford knew exactly how long and how much it cost to produce the Model T. Although it may seem difficult to make comparisons between the automotive industry and modern day beef production, many cow-calf operations are business enterprises...large business enterprises. Yet financial benchmarking and accurately documenting production costs are not necessarily high on the “to do” list of most cattle producers. One of the best reasons to know what it costs to produce a calf or what your total feed and non-feed costs are, is that it allows you to quickly evaluate emerging opportunities such as grazing a neighbor's cover crop, or an additional circle of corn stalks. Thus, if you don't know your production costs, I would encourage you to think about them. Tax time is a great time to take a good look at your business and calculate your production costs. If you would like to get a better idea of what it costs to produce a calf in Kansas, the Kansas Farm Management Association (KFMA) Enterprise Reports provide that information in a one-page summary that can be accessed on the Ag Manager website (<https://www.agmanager.info/kfma>). The chart below shows the total feed and non-feed (operational costs) of KFMA participating cow-calf producers from 2012 to 2016.



## ↪ **Feedlot Facts – “What’s Your Cost of Production?” (cont.)**

The data from these operations suggests that in 2016, feed costs were approximately \$392 per cow and the non-feed or operational costs were approximately \$549 per cow. Thus the average total cost to produce a calf was \$941 (\$349 + 549) in 2016. The total feed costs of \$392 amounts to \$1.07 per day to feed a cow in Kansas. The question is “What does it cost you to feed a cow and produce a calf?”

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu).

↪ **Angus Ground Beef Has Higher Overall Consumer Acceptability than Grass-Fed Ground Beef** – The objective of the study was to determine consumer palatability ratings of grass-fed ground beef in comparison to Angus and commodity ground beef. Fresh grass-fed ground beef, Angus ground beef, and commodity 80/20 ground beef from 14 distinct production lots were used to manually form 4 oz patties using a stainless steel and acrylic template. Patties were cooked using a clam shell grill to obtain an internal temperature of 165°F after a post-cook temperature rise. A total of 98 consumers evaluated the cooked patties for tenderness, juiciness, flavor liking, texture liking, and overall liking using 100 point line scales and each palatability trait was rated as either acceptable or unacceptable.

**Bottom Line...** Angus and commodity ground beef were liked overall more than grass-fed ground beef, and Angus ground beef was more acceptable overall to consumers than grass-fed ground beef. Additionally, consumers’ acceptability for ground beef flavor was higher for commodity ground beef than grass-fed ground beef. Ground beef palatability and acceptability is influenced by the source of diet of the beef. For more information, contact Elizabeth Boyle (785-532-1247; [lboyle@ksu.edu](mailto:lboyle@ksu.edu)).

↪ **Route of *Mannheimia haemolytica* and *Pasteurella multocida* Vaccine Administration Does Not Affect Health or Performance of Receiving Heifers** - The objective of this study was to determine the effects of route of administration of the *Mannheimia haemolytica* and *Pasteurella multocida* fractions of the vaccine regimen on receiving cattle growth performance, health, and mortality. Heifers were sorted by body weight and randomly assigned to treatments. Treatments consisted of Vista Once SQ (Merck Animal Health, Madison, NJ) given subcutaneously at initial processing (SQTRT) or Vista 5 SQ (Merck Animal Health, Madison, NJ) given subcutaneously plus Once PMH IN (Merck Animal Health, Madison, NJ) administered intranasally at initial processing (INTRT).

**Bottom Line...** Route of vaccine administration in cattle experiencing a low disease challenge did not impact performance or health measurements. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information contact, Dale Blasi (785-532-5427; [dblasi@ksu.edu](mailto:dblasi@ksu.edu)).

↪ **Effect of Parity and Stage of Gestation on Maternal Growth and Feed Efficiency of Gestating Sows** - The objective of this study was to evaluate the effect of parity and stage of gestation on maternal weight gain and efficiency of feed use in group-housed gestating sows from a commercial sow farm. A total of 712 females were group-housed from day five to 112 of gestation and individually fed with electronic sow feeders (ESF). Feed intake and BW were recorded daily throughout gestation via the ESF and a scale located in an alleyway just after sows exited the feeding station. Gilts (parity 1) and sows received 6.5 and 7.3 Mcal ME per d. Maternal weight gain, not including products of conceptus, and feed efficiency were predicted using a series of equations to model nutrient utilization in gestation. Data were divided into three parity groups: 1, 2 and 3+, and gestation was divided into three periods: day five to 39, 40 to 74, and 75 to 109.

After dividing energy requirements into tissue pools for maintenance, growth (maternal protein and fat deposition) and products of conceptus, the greatest portion of the energy requirement was for maintenance and maternal growth. The predicted energy used for maternal protein and fat deposition decreased in each period of gestation, regardless of parity group. Parity 2 sows had the greatest energy use for maternal protein and fat deposition in all stages of gestation while parity 1 sows had a negative energy balance during the final stage of gestation. Parity 1 sow maternal BW increased in each period of gestation; however, parity 2 and 3+ sow maternal BW remained static after day 74 of gestation. Parity 3+ sows had the greatest maternal BW throughout the course of gestation in comparison to other parity groups.

**Bottom Line....** Regardless of parity, maternal ADG decreased from day 39 to 74 before increasing during the final stage of gestation. Parity 1 sows had the greatest ADG in all gestation periods. Parity 1 sow G:F decreased in each sequential period of gestation. Parity 2 and 3+ sow G:F decreased from day 39 to 74 but improved during the final period of gestation. Parity 1 sow G:F was greater than parity 2 and 3+ sows in most gestation periods. Overall, this study demonstrates how feed usage, stage of gestation, and parity affect sow maternal BW and tissue pool composition in highly prolific sows. More information is available on this experiment and others in the KSU Swine Day Report at [www.KSUswine.org](http://www.KSUswine.org). (This study conducted by L.L. Thomas, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.C. Woodworth, and J.M. DeRouchey)

↪ **Effects of Standardized Ileal Digestible Lysine on 15- to 25-lb Nursery Pigs** - A total of 300 pigs (DNA 241 × 600; initial pen average BW of 15.4 lb) were used in a 22-day growth trial to determine the standardized ileal digestible (SID) lysine (Lys) requirement of nursery pigs from 15- to 25-lb. Pigs were weaned at approximately 21 d of age and allotted to pens based on BW and gender. There were 10 replicate pens per treatment and 6 pigs per pen. Pigs were fed a common pelleted diet for 10 d post-weaning. Subsequently, pens of pigs were randomly assigned to one of six experimental diets in a randomized complete block design, with BW as a blocking factor. Dietary treatments consisted of 1.10, 1.20, 1.30, 1.40, 1.50, and 1.60% SID Lys and were achieved by the inclusion of crystalline amino acids at the expense of corn. Experimental diets were fed for 11 d followed by a common diet fed for 11 d. Experimental data were analyzed using generalized linear and non-linear mixed models, fitting the data with heterogeneous residual variances as needed. Competing models included linear (LM), quadratic polynomial (QP), broken-line linear (BLL), and broken-line quadratic (BLQ). For the overall treatment period, increasing SID Lys improved ADG and F/G, with no differences observed in ADFI. Similarly, as dietary SID Lys increased, BW increased linearly on d 11 and 22. Feed cost per pig, feed cost per pound of gain, and total revenue per pig increased as SID Lys increased, with no observed differences in income over feed cost (IOFC). For ADG, the best-fitting models were the LM and QP models. The maximum mean ADG was estimated at greater than 1.60%, and at 1.54% (95% CI: [1.34, >1.60]%), with 99% of the maximum ADG achieved at 1.43% SID Lys, in the LM and QP models, respectively. Similarly, the best-fitting models for feed efficiency were LM and QP, both estimating the requirement at greater than 1.60% SID Lys.

**Bottom Line...** In conclusion, this experiment determined that the mean SID Lys required for nursery pigs from 15- to 25-lb. ranged from 1.54% to at least 1.60%. These data provide evidence that different response variables and statistical models can result in different estimates of the requirements. However, formulating nursery diets for 15- to 25-lb pigs to 1.40% would allow for the highest income and approximately 99% of maximum growth to be captured. More information is available on this experiment and others in the KSU Swine Day Report at [www.KSUswine.org](http://www.KSUswine.org). (*This study conducted by G.E. Nichols, C.M. Vier, A.B. Clark, M.B. Menegat, H.S. Cemin, C.K. Jones, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, and S.S. Dritz*)

↪ **Effects of Monosodium Glutamate on 14- to 56-lb Nursery Pigs** - A total of 700 nursery pigs (PIC C-29 × 1050 × 1040, initially 13.6 lb BW) were used in a 42-day growth study to determine the effects of monosodium glutamate (MSG; Ajinomoto Heartland, LLC, Chicago, IL) on growth performance. Pigs were fed one of five dietary treatments: 0, 0.5, 1.0, 1.5, or 2.0% MSG. Experimental diets were fed in three phases from day 0 to 14, 14 to 28, and 28 to 42. Phase 1 was pelleted and phases 2 and 3 were fed in meal form. Diets were formulated to balance Na and Cl content with increasing MSG using salt, sodium bicarbonate, and potassium chloride. Pigs were weaned at approximately 21-day of age and allotted to pens, which were then allotted to treatment according to BW in a randomized complete block design. There were 14 replications per treatment and initial BW was used as a covariate. There were no significant differences between dietary treatments for ADG or ADFI within any phase or for the overall nursery period. Increasing MSG did not affect F/G during phase 1; however, it tended to improve F/G in phase 2, but resulted in poorer F/G for phase 3. For the overall nursery period, F/G tended to be poorer with increasing MSG. There were no significant differences among dietary treatments for intermediate or final BW.

**Bottom Line...** Results from this study indicate that MSG did not influence overall nursery pig growth performance. Additional research may be necessary to determine the appropriate dietary inclusion of MSG and its role during the post-weaning period. More information is available on this experiment and others in the KSU Swine Day Report at [www.KSUswine.org](http://www.KSUswine.org). (*This study conducted by A.B. Clark, M.D. Tokach, J.M. DeRouchey, S.S. Dritz, J.C. Woodworth, R.D. Goodband, and K.J. Touchette*)

# AS&I Faculty Spotlight



**Evan Titgemeyer** ([etitgeme@k-state.edu](mailto:etitgeme@k-state.edu); 785-532-1220)

## **Interim Department Head/Professor**

Evan Titgemeyer joined the K-State faculty in 1992. He is currently serving as the Interim Department Head for the Department of Animal Sciences and Industry. With 70% research and 30% teaching appointment, his research focus has been ruminant nutrition and he primarily teaches graduate nutrition courses. His research program has been very productive as evidenced by 150 journal articles and more than \$2 million in research support.

Titgemeyer grew up on a small family farm in northwest Ohio. Following completion of a bachelor's degree at The Ohio State University in 1984, he completed both master's (1986) and Ph.D. (1989) degrees at the University of Illinois. His graduate work was focused on determining amino acid requirements of growing cattle; this is an area of research where he is still active. He also completed post-doctoral training at the University of Illinois in the area of fiber chemistry before joining the KSU ASI faculty.

Titgemeyer's research program studies amino acid utilization by growing cattle and has demonstrated that the efficiencies of amino acid use for growth differ among the amino acids, and are often much less than predicted by current models. Eleven of his graduate students have been placed as university faculty.

He has served as a section, division and associate editor for the *Journal of Animal Science*. He received the 2016 American Society of Animal Science (ASAS) Fellow Award: Research Category and the American Feed Industry Association Award in Ruminant Nutrition Research in 2007.

Evan and his wife, Lori, have two children, Taylor and Jack.



**Jeff Stevenson** ([jss@k-state.edu](mailto:jss@k-state.edu); 785-532-1243)

## **Professor/Reproduction Physiology of Bovine**

Dr. Jeff Stevenson was born in Salt Lake City, Utah, and attended elementary and secondary schools in Salt Lake City before relocating to Gresham, Oregon, in 1967 and graduating from Gresham Union High School in 1969. He attended Utah State University (USU) from 1969-1970 and from 1972-1975, graduating with a B.S. in Dairy Science in 1975. During summers, Jeff worked on his uncle's dairy farm in southeastern Idaho and spent two school years milking cows on a private dairy in Smithfield, Utah, and feeding experimental cows for Dr. Melvin C. Anderson, USDA-ARS in Logan, Utah. While a student at USU, he was active in Alpha Zeta (officer) and Dairy Club for two and three years, respectively. He was honored as Utah's Dairy Shrine Student Recognition Awardee in 1975. While a student at USU, he married Barta Morrill in 1974.

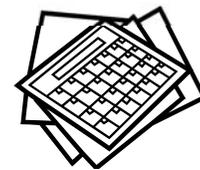
He entered graduate school in Dairy Science at Michigan State University in 1975 and served as a graduate research and teaching assistant until completing the requirements for a M.S. in Dairy Science in 1977. He relocated to Raleigh, North Carolina, and enrolled in a Ph.D. program in Animal Physiology at North Carolina State University under the continued direction of Dr. Jack H. Britt. While fulfilling the requirements of the Ph.D. during 1977-1980, Jeff served as a graduate and teaching assistant in the Department of Animal Science.

In August 1980, Jeff was appointed Assistant Professor (70% research/20% teaching) in the Department of Animal Sciences and Industry at Kansas State University. He was promoted to Associate Professor in 1986 and Professor in 1992. His current responsibilities include teaching one undergraduate course, entitled "Dairy-Poultry Science" and one graduate course, entitled "Ovarian Physiology," and serving as faculty coordinator for the Dairy Teaching and Research Center and Kansas Artificial Breeding Service Unit (KABSU). Research interests include synchronization of estrus and ovulation in dairy and beef cattle. Jeff has served on the editorial boards of the *Journal of Dairy Science*, *Journal of Animal Science*, and *Animal Reproductive Science*. Recently served as senior section editor for the Physiology and Management Section of the *Journal of Dairy Science*.

Jeff received the 1990 American Dairy Science Association (ADSA) Agway Inc. Young Scientist Award; 1998 National Association of Animal Breeders Research Award; 2002 ADSA Pharmacia Animal Health Physiology Award; 2002 Kansas State University Research and Extension Team Award; 2006 Kansas Dairy Leader; 2009 American Society of Animal Science (ASAS) Animal Management Award; 2012 ASAS Physiology and Endocrinology Award; named 2012 ASAS Fellow (research category); and named 2015 ADSA Fellow. He is the author or coauthor of 171 peer-reviewed journal articles, 18 invited papers, 10 book chapters, 267 popular press articles, and 143 paper presentations at professional meetings.

# What Producers Should Be Thinking About.....

## WHAT PRODUCERS SHOULD BE THINKING ABOUT IN MARCH.....



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

- Manage calving pens and pastures to minimize human, cow and calf stress. Stay organized.
- An observation schedule should be implemented for calving first-calf heifers and cows. First-calf heifers should be checked every two to three hours.
- Sanitation is key to reducing and/or eliminating calf scours. An excellent calving pasture management plan by Dr. David Smith from the University of Nebraska - Lincoln, can be found at <https://beef.unl.edu/a95e3e40-93f8-4893-a296-d706fb4aec9a.pdf>.
- Make sure every calf consumes adequate colostrum during the first four to 12 hours after birth.
- Keep accurate calving records, including cow identification (ID), calf ID, birth date, calving difficulty score and birth weight. Other traits to consider recording are teat and udder scores, calf vigor score, and other pertinent information. This information along with Angus sire information is vital for enrolling cattle into the AngusSource<sup>SM</sup> program.
- Calving books are essential sources of information; make sure you have a backup copy.
- Body condition score (BCS) cows. Thin and young cows will need extra energy to maintain yearly calving interval.
- If cow diets are going to be shifted from low- (poor quality forage or dormant grass) to high-quality forage (lush green grass) programs, begin a grass tetany prevention program at least three weeks prior to the forage switch.
- Given the high price of mineral supplements, conduct a needs assessment of your cow herd. Moreover, closely monitor daily intake to insure that it is consistent with label directions.
- When making genetic selections, use the most recent National Cattle Evaluation (NCE) and herd records judiciously.
- If new bulls are purchased, now is the time to start preparing them for their first breeding season. Bulls need to be properly vaccinated and conditioned to be athletic. Moderate body condition with abundant exercise is ideal.
- After calving and before breeding, vaccinate cows as recommended by your veterinarian.
- Plan to attend beef production meetings.

*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](mailto:lschrein@ksu.edu), or phone 785-532-1267.*