



Newsletter from the Department of Animal Sciences and Industry  
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## UPCOMING EVENTS...

### ☞ 2015 K-State Beef Conference Set for Four Locations on August 11 & 13 –

Many cattle producers have experienced record returns on their calves the past year, but even times of high profitability demand a search for more opportunities to enhance the management of a beef operation. Several of these opportunities will be discussed at the upcoming K-State Beef Conference, hosted Aug. 11 and 13 at various locations across Kansas.

The goal of the conference is for extension professionals and industry thought leaders to have a conversation with profit-minded cattle producers about different timely and economically impactful production and management topics. This year's focus is "Improved Management, Improved Nutrition, Improved Profits."

The keynote address will be provided by rancher and author Rich Porter of Reading, Kansas. Porter will discuss building successful personal and professional relationships. He has operated a cattle ranch in Kansas for a third of a century. The ranch has expanded to include about 6,000 head of cattle and 2,800 acres of corn and soybeans.

Porter has degrees in chemical engineering, law and a master's of agribusiness. His intriguing background includes a clerkship with the Environmental Protection Agency enforcement division, work for Bethlehem Steel in pollution control and being a part-time flight instructor. He was named BEEF magazine's 2010 National Stocker Award winner, 2008 Distinguished Alumnus Award winner from the K-State College of Agriculture and the 2006 Distinguished Alumni Award winner from the K-State Department of Agricultural Economics.

Joining Porter at this year's conference meetings will be speakers from K-State Research and Extension, including Justin Waggoner, beef systems specialist, and Chris Reinhardt, feedlot specialist. Waggoner will discuss low-stress cattle handling principles and techniques through the development of enhanced stockmanship skills. Reinhardt will discuss the benefits of a year-round mineral supplementation strategy. He will cover motivations for supplementation, practical feeding advice and cost containment methods.

The conference speakers will be followed by a "town hall" style question-and-answer session. Attendees are encouraged to bring their questions and pose them to the expert panel of speakers and additional extension specialists.

Hosting locations by date include:

- Aug. 11: Melvern Community Center, Melvern, 9 a.m. – 1 p.m.
- Aug. 11: 4-H Center, Pratt County Fairgrounds, Pratt, 5 – 9 p.m.
- Aug. 13: American Ag Credit, Salina, 9 a.m. – 1 p.m.
- Aug. 13: Nemaha County Community Building, Seneca, 5 – 9 p.m.

Registration fees and payment forms vary by site, and registrations should be completed with the hosting county or district office by Aug. 5 for the Aug. 11 meetings and by Aug. 7 for the Aug. 13 meetings. A meal is included in the registration fee.

For more information, visit [www.KSUbeef.org](http://www.KSUbeef.org) or Bob Weaber at [bweaber@ksu.edu](mailto:bweaber@ksu.edu) or 785-532-1460.

July, 2015

### News from KSU Animal Sciences

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#### We Need Your Help!

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



☞ **Entry Deadlines Approaching** - Entries for the Kansas State Fair 4H/FFA Show (Beef, Sheep, Swine, Meat Goats) are due by July 15. Late entry forms will be accepted until July 25 with a late fee of \$10 per head. No entries will be accepted after July 25. For more information, visit [www.kansasstatefair.com](http://www.kansasstatefair.com). All departments are strongly encouraged to enter and submit entries online at [www.kansasstatefair.com](http://www.kansasstatefair.com).

Entries for the Kansas Junior Livestock Show must be postmarked by August 15, 2015. Late entries will be accepted through August 31, 2015, but all late entries will be subject to an entry fee double the stated entry fee amount. For more information, visit [www.kjls.org](http://www.kjls.org).

**Just a reminder – any correction to livestock nominations are due July 15 to Lexie Hayes (785-532-1264; [adhayes@ksu.edu](mailto:adhayes@ksu.edu)).**

☞ **Flint Hills Beef Fest planned for August** - Make plans now to attend the Flint Hills Beef Fest which will be held August 21-23, 2015. Founded in 1986, the Flint Hills Beef Fest is an annual celebration of the grass cattle industry for which the Flint Hills region of Kansas is known. Several contests involving cattle are designed to showcase the quality and economic competitiveness of Flint Hills cattle. Events will take place on the Lyon County Fairground in Emporia, Kansas. For more details and a complete schedule of events, please visit [www.beeffest.com](http://www.beeffest.com)

☞ The **Kansas Livestock Sweepstakes** has been scheduled for August 22-23, 2015. This all-around event will feature contests in Livestock Judging, Meats Judging, Livestock Skillathon, and Livestock Quiz Bowl. A special prize will be awarded to the county that does the best in all four contests. Rules and past winners can be found at [www.YouthLivestock.KSU.edu](http://www.YouthLivestock.KSU.edu). Registration forms will need to be postmarked by August 1. Complete information for 2015 will be available soon on the Youth Livestock Web page. Sweepstakes registration will be through Cvent again this year; counties will receive a direct link from Lexie when registration opens. For more information, contact Lexie Hayes ([adhayes@ksu.edu](mailto:adhayes@ksu.edu); 785-532-1264).

☞ The **2015 KSU Beef Stocker Field Day** will be held on Thursday, September 24, 2015 at the KSU Stocker Unit, Manhattan, KS. Registration will begin at 9:30 a.m. and the day will conclude with a good old fashioned Prairie Oyster Fry in the evening. Included in the day will be a producer panel on “Breaking into the Stocker Business-Managing the Risk” along with a veterinarian panel on “Health Issues-What we Think.” Watch for more details coming soon to [www.KSUbeef.org](http://www.KSUbeef.org). For more information, contact Dale Blasi ([dblasi@ksu.edu](mailto:dblasi@ksu.edu); 785-532-5427).

☞ **Developing and Implementing Your Company’s HACCP Plan** for meat, poultry, and food processors will be held October 7-9, 2015 in Olathe, KS. Information and registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://haccp.unl.edu>. 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. For more information, contact Dr. Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu); 785-532-1247).

☞ Join us for the **AS&I Family and Friends Reunion to be held on Friday, October 9, 2015**, from 5:30–9:30 pm at the Stanley Stout Center, 2200 Denison Avenue, Manhattan, Kansas. This inaugural event will celebrate the K-State Animal Sciences & Industry family and thank our industry friends for decades of contributions to animal agriculture. Activities include great food, live music, a commemorative limited edition take-home poster created by noted artist and K-State AS&I alum, Dino Cornay, Junior Wildcat Barn Yard and more surprises!!

The first Don L. Good Impact Award recipient will be presented to Dr. Miles McKee, AS&I Professor Emeritus. Dr. McKee has taught, mentored and been a friend to thousands of ASI students spanning more than four decades. Join us as we honor one of the most influential teachers and animal scientists of the century!

We will also be hosting a Tailgate/Watch Party for the football game (KSU vs. TCU) on Saturday, October 10, 2015. Time will be 2 hours before the scheduled game time which is to be determined. Come join us for the fun! For more information and a registration form, visit [www.asi.ksu.edu/familyandfriendsreunion.html](http://www.asi.ksu.edu/familyandfriendsreunion.html)

#### CALENDAR OF UPCOMING EVENTS

Date	Event	Location
August 11, 2015 AM	K-State Beef Conference	Melvorn
August 11, 2015 PM	K-State Beef Conference	Pratt
August 13, 2015 AM	K-State Beef Conference	Salina
August 13, 2015 PM	K-State Beef Conference	Seneca
August 21-23, 2015	Flint Hills Beef Fest	Emporia
August 22-23, 2015	Kansas Livestock Sweepstakes	Manhattan
September 24, 2015	KSU Beef Stocker Field Day	Manhattan
October 7-9, 2015	HACCP Workshop	Olathe
October 9, 2015	AS&I Family and Friends Reunion	Manhattan

# WHAT'S NEW.....

## Management Minute "Energize!"

### ↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist "Energize!"

Do you have certain people in your organization or team who are natural problem solvers and who seem to be energized when there is a logistical or physical challenge within the operations system? These people are out there and they are golden.

However, a problem (actually a good problem to have) is that within a really well-run, team-run, bottom-up-run business, the logistical bottle necks are few and far between. So these solutions-oriented people are left without an outlet for their creative energies. They continue to do well, but this creative energy goes untapped.

Often, these people spend their off hours at home inventing solutions to problems that aren't really problems, but they've invented fun solutions just the same, and because they have ideas in their head that need to be expressed outwardly.

What if their employer found a way to tap into this creativity on a regular basis? What if you intentionally devoted a portion of the day/week/month/year to creative solutions, either to the physical plant, or simply to the way things get done? This can be a slippery slope with certain people, as they will tend to be distracted to this effort during time they need to simply get their job done. Also, there are some people who think they are much more creative and brilliant than they really are---this is dangerous ground for this person as well.

However, while most ag businesses have certain seasons that are fast-and-furious, they have other seasons that are slow. What if, instead of having our highly trained, dedicated, creative, solutions-oriented people paint pipe and grease zerks, we gave them the creative outlet they're craving all year long? There's only so many times you can grease the same zerks or paint the pipe, after all. What if, say, on Fridays during the slow season, whenever that might occur in your business, you asked the team to come up with problems they see in the business during the extremely hectic times, and brainstorm on solutions to those challenges? Give them a bit of low-cost resources and some time, and creative people can invent very witty and useful tools.

You have built a truly great team; don't lose your best people for want of a challenge.

For more information, contact Chris at 785-532-1672 or [cdr3@ksu.edu](mailto:cdr3@ksu.edu).

### ↪ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist "Consider Early Weaning early"

Normally we only consider early weaning when we are in the throes of a nasty drought. However, given what we now know about calf and cow nutrition, we may want to expand our thinking.

Late summer forage quality in pastures declines, even in good rainfall years. The decreased energy and protein content of late summer grass does not support a great deal of calf gain. Doubly challenging is that this late season forage also does not support a great level of lactation by the calf's dam, so calf ADG declines considerably late in the grazing season. Assuming you've received adequate moisture, late season calf gain may be estimated in the range of 0.5 to 1.5 lb per day; many years on western range late season ADG may drop to near zero.

Although the actual amount of milk and grass consumed by calves varies greatly among calves and from season to season, it can be stated broadly that the calf's first choice for a source of nutrients, as long as he can get away with it, is his mother's milk. Calves are fully functional ruminants by 60-90 days of age, and are fully capable of making use of good quality forage, but milk is always their first choice for nutrients, rather than their last. So every day they will go to their mother and consume as much milk as they can. And as the calf grows and its appetite climbs, mother's milk decreases, effectively pushing the calf to go to grass more and more in order to supplement his nutritional needs.

This constant demand for milk by the calf places a tremendous pull on the dam's nutrient reserves. Early in the season, when grass is both lush and plentiful, the cow can often produce a greater quantity of milk than the small calf can utilize because of the lactation curve and the abundant nutrient supply available to the dam. However, as grass matures and nutrient supply declines, the cow will pull energy from her own reserves (her body fat) to sustain lactation to prepare the calf for the winter.

## Feedlot Facts "Consider Early Weaning early"

## ↪ **Feedlot Facts – “Consider Early Weaning early” (cont.)**

If we work backwards from calving, the target body condition for beef cows at the time of calving is usually a condition score 5.0, indicating muscling, and a slight cover of fat, but no fat pockets obvious, and 2-3 ribs visible. Cows which are in a thinner condition than this target usually have a longer post-partum interval and delayed post-calving first estrus, resulting in later conception---or even an open cow come next preg check.

So if the cow goes into the winter in poor body condition, we need to feed those reserves back into the cow or risk late breeding next summer and late calving in subsequent years or even open cows next fall. It is estimated that for each 2 weeks we leave cows grazing late season pasture with calves still suckling them, after about September 1, cows lose about 0.25 of a condition score, which is worth about 20-25 lbs. That means if we leave the calves on cows until November 1, we've milked about 100 lbs of body condition off the cows.

If calves are only gaining 0.5-1.0 lb per day on their dam late in the season, we can do better. By weaning (especially utilizing low-stress weaning methods), we can improve the nutritional supply available to the calf, meeting all the needs for energy, protein, vitamins, and minerals. Weaning during favorable weather also has the advantage of reducing stress and the risk of disease brought on by inclement, cold, wet, fall weather.

In turn, the now dry cow can maintain and oftentimes actually increase body condition without the demands of lactation, resulting in cows going into winter in better flesh, requiring less supplemental nutrition to achieve the target body condition 5.0. That means less out of pocket cost to maintain the herd.

The disadvantages of early weaning are lower weaning weights, and weaning and feeding calves separate from cows requires good quality feeds, equipment, decent facilities, and labor. But the advantages are reduced disease, improved daily gains late in the season, and improved cow body condition going into the winter.

It's usually true that your standing forage is your cheapest feed resource. But I'm not advocating NOT using that precious resource, only re-directing it's use to optimize it's value: allow the cows to graze themselves into good body condition rather than feeding that same condition onto them later in the winter with costly purchased feeds, and provide the calves with extra nutrition other than the relative pittance of milk Mama is putting out at the end of lactation. It's time to reconsider what we do and why we do it. “Because we've always done it this way...” is the worst reason to do anything. If there are legitimate, defensible reasons for what you do on your operation, then keep on truckin'. If not, seek wise counsel to find perhaps better, more efficient, and more effective practices that may lead to better outcomes for your calves, your cows, and hopefully, your bottom line.

For more information, contact Chris at [cdr3@ksu.edu](mailto:cdr3@ksu.edu)

↪ **Announcing All-Star Livestock Judging Team to Represent Kansas at National 4-H Contest** – Beginning this year at the Kansas 4-H Livestock Sweepstakes, top ranking livestock judging individuals will be invited to practice for the chance to represent Kansas 4-H at the National 4-H Livestock Judging Contest in Louisville, KY. Practices will be offered at the Kansas State Fair and through web based technology with a Kansas State Animal Science graduate student. Top 4-H competitors from across Kansas that are age 14 before January 1, 2015 judging at the 4-H Sweepstakes contest may have the opportunity to expand their livestock judging knowledge and skills through this partnership created between Kansas 4-H and K-State Animal Sciences. This will also provide a chance for 4-H members to learn more about Kansas State University, Animal Sciences and Agriculture careers. Top placing teams from local Extension Units will continue to have the ability to travel to other National Contests, including Aksarben, the American Royal, and the National Western Stock Show. For more information, contact Chris Mullinix ([cmullinix@ksu.edu](mailto:cmullinix@ksu.edu); 785-532-1917).

↪ **Information about poultry entries at the 2015 Kansas State Fair.** - As you know, all poultry shows, sales, auctions, etc in Kansas have been cancelled for the remainder of 2015 because of avian influenza that was spread by migratory fowl in the spring. What will happen in 2016 will not be known until these fowl migrate south during fall. This has impacted hundreds of shows in many states and will leave almost 3000 empty cages at the Kansas State Fair.

In order for youth to still participate at the poultry competition at the Kansas State Fair, entries are being encouraged in alternative activities. There will be opportunities to submit posters or short videos about poultry projects, as well as poultry related demonstrations. The guidelines can be found in the exhibitor handbook, under the poultry division, under “poultry addendum (2015)”. Participants will be able to enter into the special sections without having to enter in a county show. There will be prizes for the best entries.

The annual state 4H poultry judging contest will still be held with many changes. Contestants will not judge live birds, but will be asked to place birds based on a series of PowerPoint slides or pictures. There will be no meat or egg samples allowed in the contest so the contestants will evaluate USDA quality factors using photos of the samples. Information about the classes will be posted on the web site when they are ready. The contest has been moved from the 4H Encampment Building to the Poultry Exhibit Hall where the cages are located.

It is disappointing, but necessary, to make these changes in format so that we best protect the health of our poultry in Kansas. This is a big box of lemons, so let's make lemonade! We would appreciate encouragement for participants to submit an entry in these special classes so that KSF Poultry Hall can still be active, even if the lack of crowing roosters leaves it a bit quiet this year!  
(Scott Beyer; [sbeyer@ksu.edu](mailto:sbeyer@ksu.edu))

↪ **Impacts of the Veterinary Feed Directive** - Science has provided us with a number of useful antimicrobials to help ensure the health and wellbeing of both animals and humans. New regulations concerning use of antibiotics in feeds will begin in Oct of this year. The regulations are aimed to support the judicious use of antimicrobials to reduce the development of resistant bacteria. This will result in changes to the steps needed for producers to obtain products that contain antimicrobials.

In the past producers have been able to obtain medicated milk replacer or a mineral product containing chlortetracycline from their local feed mill or farm store. The new regulations will require that the use of these products or others that contain certain antimicrobials are under the direct supervision of a veterinarian. A feed distributor cannot provide them to you without first receiving an order (veterinary feed directive) or prescription from your veterinarian. In turn your local veterinarian will need to have sufficient knowledge of the animal(s) by virtue of examination and/or visits to the facility where the animals are managed. The veterinarian will need to be engaged with your operation enough to assume responsibility for making clinical judgements about animal health. This is known as a valid patient-client relationship. These rules will apply regardless of the number of animals involved.

In the past some antimicrobial products were used in attempt to control issues for which the product had no label claim. An example might be the use of chlortetracycline to minimize problems with foot rot or pink eye. These uses will no longer be allowed because there is no label claim for the effectiveness of control for those conditions. Your veterinarian can not prescribe an extra label use.

When you obtain a prescription or veterinary feed directive from your veterinarian, each party (producer, veterinarian, feed distributor) must retain a copy of the order for a period of two years. The copies must be available for inspection upon request. The veterinary feed directive will have an expiration date no more than 6 months from the date of issue and the associated feed must not be fed to animals after the expiration date.

Hopefully producers already have a good working relationship with a veterinarian who helps plan treatment, vaccination and biosecurity programs. However retirements and gaps in service coverage may have resulted in a more disjointed approach to veterinary services for some operations. If you don't currently have a good working relationship with a veterinarian now is a good time to start working on that process.

As with any regulatory change there will be questions and time will be needed for everyone to learn a new system. While no one plans to have a disease outbreak, some advance communication with your veterinarian before events such as weaning will put you in a better position to get the needed treatment with minimal stress on you and your cattle. (Sandy Johnson, sandyj@ksu.edu)

↪ **Recent Awards received by AS&I Faculty/Staff** – Congratulations to the following award recipients:

- **Dave Nichols was recognized by Ingram's as one of the "50 Kansans You Should Know"** Ingram's 50 Kansans You Should Know, is a group of highly accomplished individuals, from all walks of life—business, education, non-profits, cultural, artistic and sporting venues, and many more avenues. It is a cross-section of life in Kansas, told through the stories of the people who make this great state tick. David Nichols has spent a lot of his time in college classroom and research settings as a professor of animal sciences and industry at Kansas State, but he's never been far removed from the farm. He was raised on one in his native Indiana, earning his degree in animal science at Purdue University. That's when he headed west to pick up a master's at K-State, then his Ph.D., and he's been a fixture in Manhattan—and in Kansas livestock circles—ever since. Today, in addition to advising duties for nearly 100 students, he conducts courses in live animal and carcass evaluation, introductory animal science, and livestock sales management.
- The **Beef Improvement Federation honored Lois Schreiner, Kansas State University, with the Continuing Service Award** during the organization's 47<sup>th</sup> Annual Convention. Continuing Service Award winners have made major contributions to the BIF organization. This includes serving on the board of directors, speaking at BIF conventions, working on BIF guidelines and other behind-the-scenes activities. As BIF is a volunteer organization, it is this contribution of time and passion for the beef cattle industry that keeps BIF moving forward. Schreiner's service and dedication to BIF makes her one of the most deserving individuals there is of this award. Her timeless effort and organization have been critical to the function of BIF and its board. Since 2002, she has worked to coordinate all the activities for the BIF board, including management of business and details for the federation. During her time volunteering for the organization she has worked with three separate executive directors.
- **Mike Tokach was recently awarded the FASS-AFIA New Frontiers in Animal Nutrition Award.** The award is designed to stimulate, acknowledge, and reward pioneering and innovative research relevant to the nutrition of animals that benefits mankind and the nutritional value of foods from animals. The award was presented at the 2015 ADSA-ASAS Joint Annual Meeting held July 12-16. Mike Tokach is a University Distinguished Professor in the Department of Animal Sciences and Industry, where he serves as Extension State Leader and Swine Specialist. Mike was also recently elected as a Director at Large to the American Society of Animal Science Board of Directors. He will begin his term at the 2015 Joint Annual Meeting.

↪ **Get Connected with eBEEF** - eBEEF is developing a wide range of communication media to reach beef producers and educators. See [eBEEF.org](http://eBEEF.org) to follow us on Twitter. eBEEF's new website dedicated to beef cattle genetics has been launched at the 2015 Beef Improvement Federation Conference. eBEEF.org is part of the national eXtension program with the goal of being a one-stop site for beef cattle genetics and genomics information. Beef cattle specialists from six land grant institutions have joined forces to provide educational materials that are pertinent to today's beef cattle producers, without searching multiple sites or filtering through countless hits on a search. The site contains factsheets, short frequently asked question (FAQ) video clips, relevant conference recordings and webinars, a blog and links to other useful beef sites.

One of the goals of the eBEEF.org website is to archive the information generated from current and future beef genetics integrated grants funded by USDA-NIFA. All eBEEF.org team members are a part of one or more of the three current grants (Integrated Program for Reducing Bovine Respiratory Disease Complex in Beef and Dairy Cattle; National Program for Genetic Improvement of Feed Efficiency in Beef Cattle; and Identification and Management of Alleles Impairing Heifer Fertility While Optimizing Genetic Gain in Beef Cattle).

For more information or to make suggestions please contact any of the eBEEF.org team members. Team members include, Dr. Darrh Bullock, University of Kentucky, Dr. Jared Decker, University of Missouri; Dr. Megan Rolf, Oklahoma State University; Dr. Matt Spangler, University of Nebraska; and Dr. Bob Weaber, Kansas State University. Bob Weaber at 785-532-1460; [bweaber@ksu.edu](mailto:bweaber@ksu.edu).)

↪ **Signup for eBEEF newsletter!** - Are you interested in keeping up-to-date on news and practical application of beef genetics and genomics tools? If so, sign-up for the eBEEF quarterly electronic newsletter. See here for the first edition of the newsletter: <http://eepurl.com/bpA-m9>. Sign-up here: <http://eepurl.com/bnAO35>

↪ **Effects of Increasing Crystalline Amino Acids in Sorghum- or Corn-Based Diets on Nursery Pig Growth Performance** - A total of 300 pigs (PIC 1050; initially 23.3 lb BW) were used in a 21-d study to compare the effects of increasing crystalline amino acids in sorghum- and corn-based diets on nursery pig growth performance. Treatments with 5 pigs per pen and 10 pens per treatment were arranged in a 2 × 3 factorial with main effects of grain source (sorghum vs. corn) and crystalline amino acid supplementation (low, medium, or high). Amino acid ratios to lysine as well as standardized ileal digestibility coefficients used were set by NRC (2012). Because replacing increasing amounts of soybean meal with crystalline amino acids changes the NE of the diet, all diets were formulated to the same Lys:NE ratio. The lysine concentration in the diets was formulated at 95% of the pig's estimated requirement to ensure that the other amino acids, on a ratio to lysine, would not be underestimated. The grain sources and soybean meal were analyzed for amino acid profile and diets formulated from these concentrations. The low amino acid fortification contained L-lysine HCl and DL-methionine. The medium amino acid fortification contained L-lysine HCl, DL-methionine, and L-threonine, and the high amino acid fortification contained L-lysine HCl, DL-methionine, L-threonine, and L-valine.

**Bottom Line...**Overall, no main or interactive effects of grain source or added amino acids were detected for any response criteria. This suggests that balancing to the third, fourth, or fifth limiting amino acids is possible in both sorghum- and corn-based diets with the use of crystalline amino acids without detrimental effects on growth performance. . 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 K.E. Jordan, J.E. Nemechek, M.A.D. Goncalves, R.D. Goodband, M.D. Tokach, S.S. Dritz, J.M. DeRouchey, and J.C. Woodworth)

↪ **Effects of Hard Red Winter Wheat Particle Size in Meal Diets on Finishing Pig Growth Performance, Diet Digestibility, and Caloric Efficiency** - A total of 288 pigs (PIC 327 × 1050; initially 96.4 lb) were used in an 83-d study to determine the effects of hard red winter wheat particle size on finishing pig growth performance, diet digestibility, and caloric efficiency. Pens of pigs were balanced by initial BW and randomly allotted to 1 of 3 treatments with 8 pigs per pen and 12 pens per treatment. The same wheat-soybean meal-based diets were used for all treatments. Diets were fed in three phases in meal form. The 3 dietary treatments were hard red winter wheat ground with a hammer mill to 730, 580, or 330 μ.

From d 0 to 40, decreasing wheat particle size decreased ADFI but improved F/G and caloric efficiency (CE), with no change in ADG. From d 40 to 83, decreasing wheat particle size increased ADG and improved F/G and CE, with no change in ADFI. Overall from d 0 to 83, decreasing wheat particle size improved F/G and CE on both an ME and NE basis, with no difference in ADG or ADFI. Finally, reducing wheat particle size improved DM and GE digestibility.

**Bottom Line...**In summary, fine-grinding hard red winter wheat was detrimental to feed intake in early finishing, but improved ADG in late finishing and improved F/G in both periods and overall. Dry matter and GE digestibility as well as CE were all improved for the overall period with fine-grinding wheat. Grinding wheat from 730 to 330 improved the caloric content on an NE basis by 100 kcal/lb. 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 J.A. De Jong, J.M. DeRouchey, M.D. Tokach, R.D. Goodband, J.C. Woodworth, C.B. Paulk, C.K Jones, C.R Stark, and S.S. Dritz)

# AS&I Faculty Spotlight



**Karol Fike (karol@k-state.edu; 785-532-1104)**

**Assistant Professor**

Karol Fike was raised on a diversified crop and livestock (beef cattle and sheep) operation in eastern Iowa. She completed her B.S. degree in Animal Sciences at Iowa State University and continued her education at the University of Nebraska-Lincoln, earning her M.S. and Ph.D. studying reproductive physiology in beef cattle. Karol has a passion for teaching and working with students. She taught courses in Anatomy and Physiology, Human Nutrition, and Biology at Western Iowa Tech Community College. She spent four years on faculty at Ohio State University teaching Introductory Animal Sciences, Animal Products, advising students, and coordinating the undergraduate internship program. Here at K-State, Dr. Fike advises students, teaches Farm Animal Reproduction (ASI 400), Physiology of Reproduction in Farm Animals (ASI 710), Career Preparation (ASI 580), and coordinates the departmental internship program (ASI 599). Research

interests include bull and heifer reproductive management. Karol, her husband Gary, and 3 children, Jackson, Marshall, and Grace live near Westmoreland, Kansas.



**Abbey Nutsch (anutsch@k-state.edu; 785-532-4549)**

**Assistant Professor/Food Microbiology**

Dr. Abbey Nutsch is an Assistant Professor of food safety and security. She received B.S. (1994) and Ph.D. (1998) degrees in Food Science from Kansas State University with an emphasis in food microbiology, particularly the application of antimicrobial interventions for both fresh and processed meat products. After spending five years as the Director of Technical Services for a commercial food testing and research laboratory, Dr. Nutsch returned to K-State in 2002 to serve within the Food Science Institute as a coordinator for a multi-institutional carcass disposal working group. In 2004 she joined the Department of Animal Sciences & Industry as an Assistant Professor working to coordinate and facilitate interdisciplinary food safety and security initiatives, including curriculum development projects related to food protection and

defense. Currently Dr. Nutsch teaches a variety of online graduate food safety courses and serves as an academic advisor to more than two dozen graduate students within the online Food Science Master of Science program. Originally from WaKeeney, Kansas, she and her husband, Todd, currently live in Wamego, KS with their two children, Gracyn and Hayden.

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

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



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

September is when forages are maturing rapidly, weaning time can be appropriate, and weather dictates several key management decisions.

#### **Breeding Season**

Out of concern for trichomoniasis, an economically devastating reproductive disease, do not introduce untested bulls to your herd. Remove bulls after 60 days with cows, 45 days with heifers (Never run bulls for more than a 90-day breeding season).

#### **Cowherd Nutrition**

- Provide ample amounts of clean, fresh drinking water.
- Consider limited-intake creep feeding if:
  - ◆ Drought conditions develop and persist.
  - ◆ Range conditions limit milk production.
  - ◆ Creep feed/grain prices are relatively low.
  - ◆ Value of gain allows for economic benefits.
- Tips for successful limited-intake creep feeding:
  - ◆ Limit duration to last 30 to 75 days before weaning.
  - ◆ Limit intake to less than 2 pounds/head/day.
  - ◆ Use an ionophore or other feed additive to maximize efficiency.
  - ◆ Protein level should be equal to or greater than 16%.
  - ◆ High salt levels may help limit intake, but can be tough on feeders.
- Prepurchase bulk rate winter supplementation needs prior to seasonal price increases.

#### **Herd Health**

- If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures.

##### *Preventive:*

- ◆ Make sure the herd is receiving adequate vitamins and trace mineral in their diet.
- ◆ Consider using a medicated trace mineral package.
- ◆ Consider vaccination for pinkeye and IBR.
- ◆ Control face flies.
- ◆ Clip pastures with tall, coarse grasses that may irritate eyes.
- ◆ Provide ample shade.

##### *Therapy:*

- ◆ Administer a long-acting antibiotic subcutaneously when symptoms are first noticed.
  - ◆ Shut out irritating sunlight by patching eyes, shade, etc.
  - ◆ Control flies.
  - ◆ Consult your veterinarian.
- Consider revaccinating for the respiratory diseases any animals that will be taken to livestock shows.
  - Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least 3 weeks prior to weaning.
  - Revaccinate all calves for blackleg.
  - Vaccinate replacement heifers for brucellosis (4 to 10 months of age).
  - Monitor and treat footrot.

### **Forage/Pasture Management**

- Enhance grazing distribution with mineral mixture placement away from water sources.
- Observe pasture weed problems to aid in planning control methods needed next spring.
- Monitor grazing conditions and rotate pastures if possible and(or) practical.
- If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- Harvest and store forages properly. Minimize waste by reducing spoilage.
- Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- Plan winter nutritional program through pasture and forage management.
- For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) type supplement.

### **Reproductive Management**

- Remove bulls to consolidate calving season.
- Pregnancy check and age pregnancies 60 days after the end of the breeding season. Consider culling cows that are short-bred.

These methods contribute to a more uniform calf crop, make winter nutritional management easier, and increase the success rate of next year's breeding season.

### **General Management**

- Avoid unnecessary heat stress - Don't handle and(or) truck cattle during the heat of the day.
- Repair, replace and improve facilities needed for fall processing.
- Order supplies, vaccines, tags, and other products needed at weaning time.
- Consider early weaning if:
  - ◆ Drought conditions develop and persist.
  - ◆ Range conditions limit milk production.
  - ◆ Cows are losing body condition.
  - ◆ Calf and cull cow prices indicate maximum profit.
  - ◆ Facilities and management is available to handle lightweight calves.
    - ✓ *First calf heifers have the most to gain.*
    - ✓ *Resist the temptation to feed the cows without weaning; feeding early-weaned calves is more efficient.*
- Look for unsound cows that need to be culled from the herd.
- Prepare to have your calf crop weighed and analyzed through your state, regional, or breed performance-testing program.
- Plan your marketing program, including private treaty, consignment sales, test stations, production sales, etc.

*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.*