



Newsletter from the Department of Animal Sciences and Industry
 218 Weber Hall - Kansas State University - Manhattan, KS 66506
 785-532-6533 – www.asi.ksu.edu

UPCOMING EVENTS...

January, 2015

News from KSU Animal Sciences

In This Issue

- Upcoming Events
- Management Minute
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- 2014 KSU Cattlemen's Day Article Featured
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- Faculty Spotlight
- What Producers Should Be Thinking About...

We Need Your Help!

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

↪ The 2015 **KSU Swine Profitability Conference** will be held on February 3, 2015, in Forum Hall of the K-State Student Union. With the cancellation of the 2014 conference due to inclement weather, all those pre-registered for 2014 are already registered for the 2015 event. The schedule for the event includes:

- 9:15 a.m. Coffee and Donuts
- 9:30 a.m. Economic Considerations for Growing the U.S. Swine Industry
Glynn Tonsor, KSU Department of Ag Economics
- 10:30 a.m. Special Lecture: Jack and Pat Anderson Lecture in Swine Health Management: Achieving World Class Swine Production: Is There a Silver Bullet?
Larry Coleman and Tim Friedel, Vet Care, Broken Bow, NE
- 11:15 a.m. What Have I Done to Make My Land-Based System Successful
Craig Christensen, Ogden, IA
- 12:00 noon Lunch
- 1:15 p.m. Lessons I've Learned About Marketing Pork to the Chefs of High End Restaurants of New York
Craig Good, Olsburg, KS
- 2:15 p.m. Future Technology for the Swine Industry
Kim Friesen, Research and Development, Elanco
- 3:00 p.m. Adjourn

For registration information, visit www.KSUswine.org. For more information, contact Jim Nelssen (785-532-1251; jnelssen@ksu.edu).

↪ **Youth learn about raising and showing pigs at the Kansas Junior Swine Producer Day** which will be held Saturday, February 28, 2015, in Weber Arena. This highly interactive, hands-on educational event will be a fun filled day of activities in which youth, parents, swine project leaders and adults can increase their knowledge and experience of swine production and management practices. A tentative schedule includes:

- 9:00 a.m. Registration
- 9:15 a.m. Welcome and Opening Remarks
- 9:30 a.m. Selecting Your Youth Project
- 10:00 a.m. Breakout Sessions (will attend 2)
 - Meat 101: Know your Pork!
 - Swine Breeds and Ear Notching
 - Proper Grooming and Clipping
- 11:15 a.m. Nutrition and Daily Feeding
- 11:45 a.m. Educational Materials; On-line Youth PQA, and Livestock Nominations
- 12:00 p.m. Lunch
- 12:45 p.m. Daily Care: From Purchase to Show
- 1:30 p.m. Hands-On Showmanship
- 2:15 p.m. Final Questions and Wrap-up

For more information on the event, visit www.KSUswine.org or contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu)



↖ The **PorkBridge Grow-Finish Educational Series** is being offered for 2015. Since the first session in 2005, PorkBridge has provided producers and other industry professionals across the U.S. and around the world with relevant and timely information. It combines electronic presentations with live presentations from topic experts by teleconference six times each program year on an every-other-month basis, and offers access to the recorded audio of all sessions to ensure subscribers don't miss a thing!

The PorkBridge Series cost of \$125 includes all sessions and supporting materials. No internet access is needed to participate in the scheduled sessions. For a complete schedule and registration form, visit www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

↖ The **SowBridge Breeding Herd Education Series** is being offered for 2015-2016. For 8 years, SowBridge has provided producers and other industry professionals across the U.S. and around the world with relevant and timely information related to boars, sows and their litters. SowBridge combines electronic presentation material with live presentations from topic experts by teleconference 12 times each program year on a monthly basis, and offers access to the recorded audio of all sessions.

This year-long program is offered by subscription only with a January 16, 2015, deadline to ensure participants will receive materials for the first session on February 4, 2015. Sessions are held the first Wednesday of each month and will begin at 11:35 a.m. central time and last approximately 45 minutes.

The SowBridge Series cost of \$250 includes all 12 sessions and supporting materials. For a complete schedule and registration form, visit www.KSUswine.org. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu).

↖ The 102nd annual **KSU Cattlemen's Day** will be held on Friday, March 6, 2015. Mark your calendars and watch for more details. Program details and registration information will be coming soon to www.KSUbeef.org. For more information, contact Jim Drouillard (jdrouill@ksu.edu; 785-532-1204) or Dale Blasi (dblasi@ksu.edu; 785-532-5427).

↖ The **2015 KSU Sheep Producer Day** will be held on Saturday, March 7, 2015 at the KSU Sheep and Meat Goat Unit, Manhattan. A complete schedule and registration information will be coming soon. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).

↖ Plan to attend the **38th Midwest Processed/Cured Meat Workshop** on Friday, March 27, 2015 in Weber Hall at KSU. At the Meat Processing Workshop, learn techniques for improving product quality. Watch for more details coming soon. Contact Liz Boyle at lboyle@ksu.edu for more information.

↖ Make plans now to attend the **2015 Kansas Junior Meat Goat Producer Day planned for March**. Kansas Junior Meat Goat Producer Day will be held on Saturday, March 28, 2015 at Kansas State University's Weber Hall in Manhattan, KS. Presentations and demonstrations by a featured speaker(s), as well as K-State faculty will cover topics such as selection, facilities and general care, health and vaccinations, nutrition, and showmanship. This interactive workshop is designed for all ages and skill levels. All participants will receive a T-shirt, complimentary lunch, and educational materials. The program has not yet been finalized. For more information, contact Brian Faris (brfaris@ksu.edu; 785-532-1255).

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
January 27, 2015 am	Winter Ranch Management Series	Herington, KS
January 27, 2015 pm	Winter Ranch Management Series	Wamego, KS
January 29, 2015 pm	Winter Ranch Management Series	Overbrook, KS
February 3, 2015	KSU Swine Profitability Conference	Manhattan
February 28, 2015	Kansas Junior Swine Producer Day	Manhattan
March 6, 2015	KSU Cattlemen's Day	Manhattan
March 7, 2015	KSU Sheep Day	Manhattan
March 27, 2015	Midwest Processed/Cured Meat Workshop	Manhattan
March 28, 2015	Kansas Junior Meat Goat Producer Day	Manhattan

WHAT'S NEW.....

Management Minute "Relationships"

↩ Management Minute – Chris Reinhardt, Ph.D., Extension Feedlot Specialist "Relationships"

How do you ever get to know someone?

Ask yourself who you know really well. Now think of what it took to get to that emotional place with those people. For some people, the list of people that are well-known may be extensive; for others, there may be only a few---maybe only one.

But the process of really getting to know another person is the same for all of us: we only know the people with whom we spend extensive time, drilling down and getting to know them.

When I asked a guy how well he knew a third guy, he replied, "Well, I've never hunted with him." You can tell a lot from spending a week or two cooking with, eating with, cleaning up after, and looking out for, another person. People who work together in an intimate work environment have some of, if not all of, this dynamic. Spend all day, every day with a small handful of people and you will, over time, learn who they are. "Anyone can clean up for a 2-hour interview." But nobody can "pretend" forever, under often stressful conditions.

Considerate, compassionate, and self-sacrificing people are an absolute joy to work with and contribute more to every relationship than they take away. Conversely, selfish, rude, condescending people drain the workplace of joy and drain relationships of mutual respect and good-will.

The challenge managers have is that they rarely spend the same amount of time, day-in, day-out, with their team-mates. So how can the astute manager compensate for a lack of "quantity time"? They need to schedule intentional "quality time" instead. Set up times on a monthly or quarterly basis to discuss workplace concerns, personal and professional goals, and any other issues that may need to be addressed. This is not a time to spend on job performance; that will result in yet another one-way, top-down, conversation---not really a conversation at all. Instead, this needs to be a time for you to get to know your team mates.

You simply cannot really know someone if you have not spent any time getting to know them. We invest in that which we place value. Without spending time, you cannot even scratch the surface.

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

Feedlot Facts "Feeding Cows to Maintain Body Condition Score"

↩ Feedlot Facts – Chris Reinhardt, Ph.D., Extension Feedlot Specialist

"Feeding Cows to Maintain Body Condition Score"

The "optimum" or "target" body condition score for beef cows, at the time of calving, is a Body Condition Score (BCS) of 5 on a 9-point scale. BCS of 1-3 and 7-9 are rarely seen in most herds. A "5" is typically considered moderate condition, showing no obvious fat deposits, but showing full expression of muscle through the round and shoulder, and with only 2-3 ribs obviously visible prior to morning feeding. The reason this level of body condition is important to lifetime productivity is that energy is the first limiting nutrient when the cow's biological systems are trying to determine whether there are sufficient nutrients available after calving to (1) maintain her own body, (2) provide milk for the calf, and (3) begin to cycle prior to the breeding season.

A BCS "4" typically has no obvious fat deposition anywhere on her body, has less than complete muscle deposition in the round and shoulder, and clearly has 4-5 ribs showing prior to morning feeding. A cow in BCS "4" will typically delay cyclicity and may breed late in the breeding season. Unfortunately, if a thin cow calves late in the calving season she may miss the breeding season entirely. This is possibly the primary cause of infertility in the beef herd.

↪ **Feedlot Facts– “Body Condition Scoring Beef Cows” (cont.)**

A BCS “6” is what most producers would consider a slightly “fleshy” cow. This cow has small but obvious fat deposits around the tail head, in the brisket, and in her flanks. She will have sufficient fat cover over the round and shoulder so that separate muscle groups are not clearly defined. The reason a cow is a BCS “6” at the end of the grazing season would be an “easy keeper”. But a cow that maintains a BCS “6” throughout the winter feeding season is probably a boss cow and is probably eating 2-3 times her given allotment of supplemental energy and protein every day.

Young cows often do not winter well for a number of reasons. Two-year-olds are still growing so some of the nutrient intake is going to growth of frame and muscle, in addition to maintenance. Also, they do not have the size, strength, or social status to out-compete older cows for feed and may be pushed out of the supplement line or the feeding area. Older cows may come out of the grazing season in poor body condition, and may lack the strength to compete in the feeding area. For these reasons, it is often recommended to find a way to separate off thinner cows from fleshier cows to provide additional feed.

Some producers worry about creating “welfare cows” who chronically require additional feed resources during the winter to simply stay up with their herd mates. Although this is logical, good record-keeping will help you to identify those individuals who simply cannot complete a production cycle without this “welfare”. Use good records to get one more calf out of her, then move her out of the herd. Simply allowing cows to fall out of the herd because of malnutrition cheats you out of several months of feed, and forces you to sell an open female rather than a bred female or a pair.

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

↪ **The Department of Animal Sciences and Industry, Kansas State University seeks applicants for our Assistant Manager – Beef Stocker Unit position.** This is a full-time, 12-month, term position. A Bachelor of Science degree in Animal Science, Feed Science or related field is required. View complete position announcement at: www.asi.ksu.edu/about/job-announcements.html. Review of applications begins February 4, 2015 and continues until the position is filled.

↪ **Botanical Composition of Beef Cow Diets Shifts When Native Range Infested with Sericea Lespedeza (Lespedeza Cuneata) is Supplemented with Corn Steep Liquor** – This study was designed to evaluate the effects of supplemental corn steep liquor on botanical composition of the diets of beef cows grazing native tallgrass rangeland infested with sericea lespedeza in the Kansas Flint Hills. Our study was conducted from May 1 through October 1, 2011, in Chautauqua County, KS, on nine native tallgrass pastures located approximately 10 miles southeast of Sedan. Crossbred beef cows and calves (145 pairs) were assigned randomly to treatments consisting of no supplementation or supplementation with corn steep liquor. Supplementation began June 1 and was delivered three times each week in portable feed bunks. Delivery of corn steep liquor was prorated for an average daily intake of 1.0 gallon per cow daily. Botanical composition of beef cow diets was estimated using fecal microhistology.

Bottom Line...Supplemental corn steep liquor increased beef cow tolerance for and acceptance of high-condensed tannin sericea lespedeza in a commercial-scale, native-range production system. We conclude that supplemental corn steep liquor allowed for a desirable change in selection preference by beef cows that stemmed from a critical modification of the post-ingestive consequences associated with condensed tannin consumption. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact KC Olson (785-532-1254; kcolson@ksu.edu) or Dale Blasi (785-532-5427; dblasi@ksu.edu).

↪ **Increasing Postmortem Aging Time Decreases Color and Flavor Stability of Top Sirloin Steaks** – This study was designed to determine the color and flavor stability of beef top sirloin (*gluteus medius*) steaks subjected to extended aging and blade tenderization treatments and the biochemical factors responsible for any changes that may occur. After aging 5, 19, 33, 47, and 61 days, the top sirloin was removed from 15 top sirloin butts. The top sirloin was then cut into two pieces of equal size, which were then assigned to either blade tenderization or control with no mechanical tenderization. One-inch steaks were cut and assays were performed. Descriptive sensory analysis was conducted using a highly trained sensory analysis panel. A trained color panel evaluated steaks for initial color, display color, and discoloration. Aging and blade tenderization were effective in improving tenderness of top sirloin steaks. Aging decreased color stability of top sirloin steaks when steaks were evaluated in simulated retail display. The decreased color stability shown in this study was the result of decreased enzyme functionality. Lipid oxidation and warmed-over flavors increased in top sirloin steaks as aging time increased. Lactic acid bacterial growth also increased as aging time increased.

Bottom Line...Postmortem aging and blade tenderization improve tenderness of top sirloin steaks; however, decreased color shelf life and increased warmed-over flavors should be expected in top sirloin steaks aged longer than 19 days. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Terry Houser (785-532-1253; houser@ksu.edu) or Elizabeth Boyle (785-532-1247; lboyle@ksu.edu).

↪ **Guidelines for successful heifer development** - Development of replacement heifers is a long and thus costly process that becomes even more costly when heifers fail to rebreed or must be culled for reasons other than age. The following guide-lines highlight management impacts on development costs and performance.

Nutrition

- Target 60% of mature weight at the start of breeding season and a body condition of 5 to 6.
- A lighter target weight (53- 58%) is appropriate when additional heifers can be exposed for breeding than are needed to maintain herd size and if selling open heifers at the end of the breeding season is profitable. Higher target weights (60-65%) are appropriate when used with an AI program and feed cost is less of a concern. Body condition scores of 7 or greater are expensive to achieve and generally result in lower fertility.
- Determine needed gain from weaning until breeding season begins and develop ration appropriately. Usually .75 – 1.5 lbs per day gain will suffice.
- Monitor weight and body condition during development to achieve gain and condition goals.
- Use of an ionophore can conserve forage and improve reproductive response.
- Gains on summer pasture are inversely related to gains over winter.
- Regardless of target weight at breeding, heifers should continue to grow post breeding and achieve a target of 85% of mature weight and a body condition of 5.5 to 6 at first calving.
- Experience grazing crop residue or winter pasture as heifer calves can be beneficial to future performance when nutrient demands are higher.

Health

- Consult with your local veterinarian for the optimum vaccination and parasite control program for your situation. In most cases three injections of a MLV respiratory complex prior to breeding should be used.
- Two doses of vaccine for Leptospirosis and Vibriosis, 21 days apart with the final dose 30 days before breeding are recommended.
- Response to vaccination is improved in animals in moderate to good body condition and with adequate trace mineral status.

Reproduction

- Heifers should be gaining weight 60 days before and during the breeding season.
- Reproductive tract scores (1=infantile to 5=mature and cycling) taken 50 to 60 days prior to breeding can be used to assess physiological maturity. If 50% of heifers have tract scores of 3 or greater 50-60 days prior to breeding, estrous synchronization programs are more successful.
- The postpartum interval to first estrus is longer in first calf heifers than mature cows. Breeding heifers to calve 2 to 3 weeks ahead of the cow herd reduces the risk of reproductive failure at the second breeding season.
- Risk of calving difficulty is minimized when high accuracy calving ease sires are used via artificial insemination.
- Use a short breeding season, 30 – 45 days or less, to improve odds of rebreeding at second breeding and concentrate calving season labor.
- Change of diet resulting in short-term decreases in energy intake can be detrimental to embryo survival (drylot to pasture post AI). Stress from a new environment, novel feedstuffs, as well as energy content of feedstuffs can contribute. If pasture growth is short, delayed or even extremely lush during the early breeding season, short-term supplementation may be warranted in heifers transitioning from a drylot.
- If heifers must be moved after AI, then transportation should be within 3-4 days of breeding or after 42 days.

Other considerations

- A crossbred heifer is expected to produce the equivalent of at least one more calf in weaning weight than a straight bred heifer in a lifetime.
- Heifers born in the first 21 days of the calving season remain in the herd longer than those born in later cycles. Data show from .6 to 1.2 years longer.
- Heifers that conceive in the first 21 days of the first breeding period have heavier calves at weaning. In a recent study the weight advantage was apparent through 6 calf crops.

(Sandy Johnson, January 2014 Beef Tips; sandyj@ksu.edu; 785-462-6281)

↪ **Effects of Media Type on Shiga Toxin-Producing *E. coli* Growth Patterns** – The objective was to determine appropriate laboratory culture media for the selective growth and detection of serotypes of Shiga toxin-producing *Escherichia coli* (STEC) deemed to be adulterants in raw beef products. Eight STEC serotypes were individually inoculated into eight types of enrichment media, some of which had an antibiotic supplement. Growth at 99°F was evaluated over a 24-hour period. Aliquots of enrichments were removed at defined times and enumerated to establish the growth patterns of all media/strain combinations.

Current enrichment methods utilize high to medium levels of novobiocin antibiotic to select for *E. coli* O157:H7 growth, but this antibiotic was shown to suppress the growth of many of the other STEC strains recently declared adulterants. The average log count (cfu) of *E. coli* O26, O45, O103, O111, O145, O157:H7, and O104:T4 enriched using *E. coli* broth at 99°F for up to 24 hours and then plated on tryptic soy agar for enumeration are shown in the figure below.

Bottom Line... *Escherichia coli* broth with no antibiotic addition was determined to be the best selective enrichment medium for STEC analyses to determine presence or absence of STEC in laboratory samples. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Randall Phebus (785-532-1215; phebus@ksu.edu) or Elizabeth Boyle (785-532-1247; lboyle@ksu.edu).

↪ **Effects of Dietary Zinc Oxide and Chlortetracycline on Nursery Pig Growth Performance** - A total of 240 weaned pigs (PIC 1050; initially 13.4 lb) were used in a 47-d study to compare the effects of added Zn from zinc oxide (ZnO), alone or in combination with a low or high dose of chlortetracycline (CTC), on nursery pig performance. Pigs were allotted to pens at weaning (d 0) and fed a common starter diet with no antimicrobial for 5 d before the start of the experiment. On d 5, pens of 5 pigs were allotted to 1 of 6 dietary treatments in a randomized complete block design with 8 replications per treatment. Dietary treatments were arranged in a 2 × 3 factorial with main effects of added ZnO (0 vs. 2,500 ppm of Zn) and CTC (0, 50, or 400 g/ ton). Pigs were fed experimental diets from d 5 to 26 after weaning followed by a common corn-soybean meal-based diet without antimicrobial from d 26 to 47. Pigs on the 50 g/ton treatment received CTC continuously from d 5 to 26; however, to comply with FDA guidelines, CTC was removed on d 15 from the diets of pigs fed 400 g/ton CTC, then added again from d 16 to 26. All diets contained 110 ppm of Zn from ZnO in the trace mineral premix. No ZnO × CTC interactions were observed. Pigs fed added ZnO had increased ADG, ADFI, and ending BW during the treatment period but increased F/G from d 26 to 47 when a common diet was fed. Pigs fed CTC had increased ADG, ADFI, and ending BW during the treatment period as well as a tendency for improved F/G. Overall (d 5 to 47), pigs fed added ZnO had increased ADG and ADFI. Overall, pigs fed CTC tended to have increased ADG and ADFI, but F/G tended to decrease then increase as CTC increased.

Bottom Line... In summary, when ZnO or CTC were added to the diets, increased ADG and ADFI were observed, but additional carryover benefits were not evident after these feed additives were removed from the diets. The benefits of added Zn from ZnO and CTC are additive and could be included together in diets to get the maximum benefit in growth performance of weaned pigs. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J.A. Feldpausch, J.A. DeJong, M.D. Tokach, S.S. Dritz, J.C. Woodworth, R.G. Amachawadi, H.M. Scott, J.L. Nelssen, and R.D. Goodband.)

↪ **Effects of a Novel Protease Enzyme (CIBENZA DP100) on Finishing Pig Growth Performance and Carcass Characteristics**-A total of 1,170 pigs (PIC 337 × 1050; initial BW 56.3 lb) were used in a 131-d study to determine the effects of a protease enzyme on growth performance and carcass characteristics of finishing pigs. Dietary treatments consisted of: (1) a positive control diet formulated to provide 90% of the standardized ileal digestible (SID) lysine requirement for these pigs; (2) a negative control diet formulated to provide 90% of the SID lysine requirement minus the expected nutrient release (both amino acids and dietary energy) from the protease enzyme (CIBENZA DP100, Novus International, Inc., St. Charles, MO), and (3) the negative control diet with the addition of 0.05% CIBENZA DP100. The diets were formulated such that the negative control diet containing the protease enzyme had calculated nutrient concentrations similar to the positive control. Pens of pigs were randomly allotted to 1 of 3 treatments with 26 pigs per pen and 15 replicates per treatment.

Overall (d 0 to 131), pigs fed the positive control diet had increased ADG compared with pigs fed the negative control diet. Pigs fed the negative control diet plus CIBENZA DP100 had improved ADFI and a tendency for improved ADG compared with pigs fed the negative control diet without the enzyme. No differences were observed in ADG, ADFI, or F/G between pigs fed the positive control diet and those fed the negative control diet plus the protease enzyme, which suggests that the release values attributed to the enzyme are accurate. The only observed effect on carcass characteristics was for yield, in which the pigs fed the negative control diet with the enzyme had lower carcass yield than pigs fed the negative control diet without the enzyme.

Bottom Line... Although differences did exist in feed cost per pig and feed cost per pound of gain, no differences were observed for income over feed cost (IOFC) between treatments. These data suggest that the protease enzyme CIBENZA DP100 will elicit improved growth performance when added to diets formulated at 90% of the pig's estimated SID lysine requirement. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by E.W. Stephenson, J.M. DeRouchey, J. Escobar, J.C. Woodworth, M.D. Tokach, R.D. Goodband, and S.S. Dritz)

AS&I Faculty Spotlight



Fadi Aramouni (aramouni@k-state.edu; 785-532-1668)
Professor/Food Processing & Product Development

Dr. Fadi Aramouni was born and raised in Beirut, Lebanon. He received his B.S. in Biochemistry in 1977, and his M.S. in Food Technology in 1980 from the American University of Beirut. Dr. Aramouni earned his Ph.D. in Food Science in 1986 from Louisiana State University. He joined the Kansas State University Department of Foods and Nutrition in 1989, then the Department of Animal Science and Industry in 1995. Since July 1999, his responsibilities have been 0.85 Extension/0.15 Teaching. His teaching responsibilities include "Research and Development of Food Products", "Principles of HACCP", "Advanced HACCP Principles" and "Fundamentals of Food Processing". Since June 2002, Dr. Aramouni has been a Professor and Extension Specialist with the Department of Animal Sciences and Industry and a member of the Food Science Institute.

His Extension activities include: managing a Value-Added Food Product Development Laboratory for Kansas's entrepreneurs; acting as the "Process Authority" for processors of low acid/acidified foods; providing educational programs on Good Manufacturing Practices, Sanitation, HACCP, Recalls, and one-on-one assistance for the development and implementation of food processing programs; and supervising the activities of the Rapid Response Center staffed by an Extension Associate to provide quick answers to questions received primarily from Kansas County Family and Consumer Sciences Extension agents.

Dr. Aramouni has published many journal articles in collaboration with Thomas J. Herald, Ph.D., and Elizabeth Boyle, Ph.D. His most recent leadership positions include: Coordinator of the Value-Added Program for the Food Science Institute; Chair of the 5-year Plan of Work for Post Harvest Food Safety; and Chair of the Long Term Intended Outcomes for Food Safety and Quality. Recent honors include "Outstanding Food Scientist Award", "Professor of the Year" nominee, and "Faculty Excellence Extension Award".

His teaching includes Advanced Application of HACCP Principles [FDSCI 791]; Fundamentals of Food Processing [FDSCI 305]; Principles of HACCP [FDSCI 690]; Research and Development of Food Products [FDSCI 740]; Advanced Application of HACCP Principles [FDSCI 791]; Fundamentals of Food Processing [FDSCI 305D]; and Research and Development of Food Products [FDSCI 740D]



Scott Beyer (sbeyer@k-state.edu; 785-532-1201)
Associate Professor/Poultry Nutrition and Management

Originally from Galveston, Texas, Dr. Scott Beyer attended Texas A&M University and received an undergraduate degree in Biochemistry in 1983. He obtained his Masters and Ph.D. degrees in the Animal Nutrition Program from the University of Georgia. He then worked as a Post-Doctoral Research Associate for Harvard University in the Department of Nutrition. In 1993, he accepted an Assistant Professor position at Kansas State University where he currently has a 70% teaching, 20% research and 10% extension appointment.

Dr. Scott Beyer has about 50 advisee undergraduate students and 2 graduate students. He teaches 9 different courses in the Department, which includes ASI 106, Dairy/Poultry Science Lab; ASI 107, Companion Animal and Equine Lab; ASI 310, Poultry/Production Evaluation; ASI 520, Companion Animal Management; ASI 635, Gamebird Management; ASI 640, Poultry Product Technology; ASI 645, Poultry Management; ASI 676, Avian Nutrition and ASI 677, Companion Animal Nutrition.

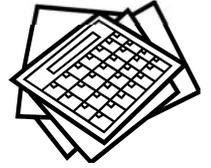
Dr. Beyer is coach of the KSU Collegiate Poultry Judging team, which won the national championship in 2002 and 2003, and has finished well in every contest since then. He also works with numerous 4-H volunteers and FFA instructors and teams. He is involved with poultry judging at counties fairs and supervisor of the poultry division at the Kansas State Fair.

Dr. Beyer is also the Poultry Extension Agent for the state of Kansas and maintains extramural funding for his research program related to poultry and companion animals. He helps with home flock poultry production problems. Dr. Beyer also works with undergraduate students to hold the annual pullet sale each spring. His research focuses on feed manufacturing and poultry nutrition. He has been an invited speaker at almost every nutrition conference in the US. He has been an invited speaker at international conferences in Mexico, Tunisia, Egypt, China, Malaysia, South Korea, Indonesia, Australia, Switzerland, Vietnam, Morocco and the Philippines.

Dr. Scott Beyer resides in Manhattan with his wife, Amy. They have 3 sons, one who is a K-State graduate, another currently at KSU and another hoping to get there soon. When he has some spare time and isn't doing something poultry, he enjoys woodworking, fishing, and gardening.

What Producers Should Be Thinking About.....

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



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

- ☑ Historically, cull cow prices are beginning to rise. Finish culling cows in order of priority:
 1. Those that fall within the "Four-O Rule" (Open, Old, Onry, Oddball).
 2. Those with physical/structure problems (feet and legs, eyes, teeth, etc.)
 3. Poor producers.
- ☑ Continue feeding or grazing programs started in early winter. Fully utilize grain sorghum and cornstalk fields, severe winter weather may begin to limit crop residue utilization, be prepared to move to other grazing and feeding systems.
- ☑ Supplement to achieve ideal body condition scores (BCS) at calving.
- ☑ Control lice, external parasites will increase feed costs.
- ☑ Provide an adequate water supply. Depending on body size and stage of production, cattle need 5-11 gallons of water per head per day, even in the coldest weather.
- ☑ Sort cows into management groups. Body condition score and age can be used as sorting criteria. If you must mix age groups, put thin and young cows together, and feed separately from the mature, properly conditions cows.
- ☑ Use information from forage testing to divide forage supplies into quality lots. Higher-quality feedstuffs should be utilized for replacement females, younger cows, and thin cows that may lack condition and that may be more nutritionally stressed.
- ☑ Consult your veterinarian regarding pre- and postpartum vaccination schedules.
- ☑ Continue mineral supplementation. Vitamin A should be supplemented if cows are not grazing green forage.
- ☑ Plan to attend local, state and regional educational and industry meetings.
- ☑ Develop replacement heifers properly. Weigh them now to calculate necessary average daily gain (ADG) to achieve target breeding weights. Target the heifers to weigh about 60 to 65% of their mature weight by the start of the breeding season. Thin, light weight heifers may need extra feed for 60 to 80 days to "flush" before breeding.
- ☑ Bull calves to be fed out and sold in the spring as yearlings should be well onto feed. Ultrasound measurements should be taken around one year of age and provided to the association.
- ☑ Provide some protection, such as a windbreak, during severe winter weather to reduce energy requirements. The lower critical temperature (LCT) is the temperature at which a cow requires additional energy to simply maintain her current body weight and condition. The LCT for cattle varies with hair coat and body condition (Dry, heavy winter coat = 18 degrees, wet coat = 59 degrees). Increase the amount of dietary energy provided 1% for each degree (including wind chill) below the LCT.

*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.*