

News from KSU Animal Sciences

June, 2009



Newsletter from the Department of Animal Sciences and Industry
213 Weber Hall, Kansas State University, Manhattan, KS 66506
785-532-6131 - www.asi.ksu.edu

WHAT'S NEW...

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

“Conflict Resolution: Somebody’s Got To Do It”

Next to terminating employees, facilitating conflict resolution is perhaps the most difficult part of every manager’s job. But it is also absolutely essential to maintaining the team chemistry and ensuring a positive workplace environment.

Allowing conflict to simmer or assuming it will ‘work itself out’ is certain to erode job satisfaction in all parties directly involved in the conflict, but also in those on the sidelines who are affected by it. It is obvious that the conflicting parties will harbor bitterness toward one another resulting in poor cooperation. But what about their co-workers who get dragged in (and dragged down) by being exposed to negative comments from both sides and by potentially being forced to take sides. This is a classic ‘tip of the iceberg’ situation. Productive time is lost every time the offended parties take co-workers away from their duties to complain about the offending party, and often the manager for actions or inactions contributing to the conflict. The offended party is operating below their full potential and dragging down anyone who will listen.

The manager needs to step in as soon as they are aware of the conflict. Organizations invest resources (and there are really only 2 resources: time, and money) in what they value. If you value productivity, team work, and cooperation, you will invest time in investigating and resolving the conflict. A counselor was brought in to investigate a fist fight in the maintenance shop at a feedyard. After a few hours of discussion with all parties involved it was learned that the conflict was rooted in a teenage love-triangle during high school nearly twenty years before. That being said, there are rarely any easy answers where humans are involved. But resolution cannot be attained without intentionality on the part of management. “Inertia (the desire either to stay where we are or to keep moving in the same direction) is overcome with intentionality.”

Suggested steps to resolution include: (1) getting the conflicting individuals to sit down together with you and discuss their issues, (2) have antagonists suggest what they feel the other party needs to do to amend the situation, (3) you as manager make a commitment to follow up and hold parties accountable for making the needed changes, and (4) disciplinary action for non-compliance in the resolution process. All parties need to understand that they are adults and that responsibility for resolution ultimately resides with them, but if they do not take the needed steps, you as manager will be forced to intervene, possibly leading to termination.

This is not fun and is rarely simple, but early intervention will prevent the conflict from festering, chronically hurting team productivity, and potentially erupting later and creating greater wounds in the organization.

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

↪ **Feed Depredation by European Starlings** - Thirty individual feeding sites were constructed by dividing a concrete fence-line feed trough into 30-in. sections. Each feeding site received 30 lb of a different feedlot ration (i.e., four different meal-type rations and one extruded ration) prior to arrival of starlings. After starlings left the feedlot and returned to their evening roost, remaining feed was weighed and sampled. Samples of fresh and residual feed were then analyzed for crude protein, crude fat, starch, and crude fiber.

Bottom Line... Starlings preferentially select some feed ingredients, especially grains, thereby altering nutrient content of diets. Extruding the ration prevents feed depredation by starlings. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Jim Drouillard (785-532-1204; jdrouill@ksu.edu) or Charles Lee (785-532-5734; clee@ksu.edu).

↳ **Feedlot Facts** by Chris Reinhardt, Ph.D., Extension Feedlot Specialist

“Feedlot Nutrition Made Easy – Step Up Programs”

Last month we explored finishing diet roughage levels. This month we'll explore different ways to get there.

The initial roughage level of the receiving diet is determined by the kind and background of cattle we're feeding. If we've been developing calves on a moderate level of roughage (25 – 50%, dry matter basis) we can more rapidly move cattle toward the finishing ration. If we're working with young, light weight, high risk calves we'll have to move through the transition period more slowly. Like many issues in cattle feeding, success of the program is more often determined by *management* of the program than by the nature of the program itself.

The most common step up program involves a series of step up diets (either 4 or 5), starting with about 45% roughage (the #1 ration) and terminating in the finishing ration (the #5 ration; commonly 8 – 10% roughage). We then need 3 diets in between containing about 30-35% (#2 ration), 20-25% (#3 ration), and 12-15% (#4 ration), depending on final diet roughage content. The other component of the step up program is how many days to feed each of the first 4 step up rations. Again, on large, adapted cattle we can be more 'aggressive', meaning we can spend fewer days on each ration and on lighter, unadapted cattle we should move more slowly. A common guideline is that we will feed each step up ration a minimum of 5 days each, but we can reduce or extend the number of days depending on intake, respiratory disease or acidosis in the pen.

Being overly conservative with the step up transitions may ultimately add a few days to the total finishing program, but being overly aggressive may cause acidosis, cyclical intakes, and chronically poor intakes for the entire feeding period. This latter situation will dramatically extend the time to finish the cattle and greatly increase the cost of gain. Once again, *management* is much more important than what program you use. And one way to ensure good management of the step up program is to err on the side of caution. For more information, contact Chris Reinhardt at cdr3@ksu.edu or 785-532-1672.

↳ The new official Kansas **4-H Meat Goat Showmanship Scorecard** and updated official **Kansas 4-H Sheep Showmanship Scorecard** can be found at <http://www.oznet.ksu.edu/library/newpub/newpub.htm>. For more information, contact Brian Faris (785-532-1255; brfaris@ksu.edu)

↳ **Spotlight on Dry Aging of Beef: Effects of Loin Types, Aging Methods, and Aging Times** - Certified Angus Beef shell and strip loin pairs were obtained from a commercial facility; each pair was cut into four sections. Each section was assigned randomly to be aged for 21 or 28 days either unpackaged or in a bag with high moisture permeability. As expected, weight losses increased with aging time. This was the only significant difference between aging for 21 vs. 28 days. Both shell loins and dry aging in a bag reduced weight losses. Sensory traits were excellent for all treatments, and there were no practical differences in any sensory traits between shell and strip loins or between dry aging methods. Results:

- Dry aging in a bag produced dry-aged flavor equal to traditional (unpackaged) dry aging.
- Bone-in shell loins yielded more dry-aged product than boneless strip loins.
- Microbial growth was not significantly different in bag dry aging vs. traditional dry aging.
- Product dry aged for 21 days had the same flavor profile but less weight loss than product dry aged for 28 days.
- Dry-aged product can be vacuum stored post-dry aging without major loss in palatability.

Bottom Line.... Boneless strip loins aged in a bag that is highly permeable to moisture vapor will have significantly reduced weight loss but similar sensory properties compared with product dry aged traditionally. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Melvin Hunt (785-532-1232; hhunt@ksu.edu) or Liz Boyle (785-532-1247; lboyle@ksu.edu).

↳ **Rabies, Tetanus, Western and Eastern Equine Encephalomyelitis and West Nile Virus** are the four core vaccines recommended for all horses by the American Association of Equine Practitioners (veterinarians). Rabies vaccination is recommended because people commonly put their hands in horses' mouths when placing the bit in their mouth. They could be exposed and not realize their horse had rabies if it died and they didn't have the brain sent in and tested for rabies. For more information, contact Larry Hollis (785-532-1246; lhollis@ksu.edu).

↪ **Evaluation of Commercial Enzyme Supplementation on Growing Pig Performance** – A total of 1,129 pigs were used in a 56-d study to evaluate the effect of a commercial enzyme on growth performance and assess its energy replacement value in swine diets. Pigs were blocked on the basis of pen weights and allotted to 1 of 6 dietary treatments fed in 3 phases. Dietary treatments had increasing levels of fat (0, 2.5, and 5.0%) with or without added enzyme (0.05% or 0% Agri-King REAP). Phase 1 was fed from approximately 75 to 110 lb BW, phase 2 was fed from 110 to 160 lb BW, and phase 3 was fed from 160 to 200 lb BW. Diets were based on cornmeal and soybean meal with 15% added dried distillers grains with solubles (DDGS) and balanced to a constant lysine to calorie ratio (2.98, 2.68, and 2.38 g/Mcal ME for phases 1, 2, and 3, respectively) within diet phase. Pen weights and feed intake were obtained every 2 wk from d 0 to 56 to determine ADG, ADFI, and F/G. There were no interactions ($P > 0.11$) between the addition of enzyme and added fat for ADG, ADFI, or F/G of pigs throughout the duration of the 84-d experiment. There was no difference ($P = 0.53$) in ADG, ADFI, or F/G between pigs fed diets with and without added enzyme. However, pigs fed diets with increasing added fat levels had improved (linear, $P < 0.03$) ADG and F/G. In conclusion, the addition of the commercial enzyme did not affect growth performance of pigs in this study, but ADG and F/G improved with the addition of fat in the corn-soybean meal-based diets with 15% DDGS. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by J.Y. Jacela, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, J.L. Nelssen, R.D. Goodband, and P. Brown.)

↪ **Effects of Increasing Glycerol and Dried Distillers Grains with Solubles on the Growth Performance and Carcass Characteristics of Finishing Pigs** - A total of 1,160 barrows (PIC, initially 68.4 lb) were used in a 97-d study to determine the influence of glycerol and dried distillers grains with solubles (DDGS) on growing-finishing pig performance, carcass characteristics, and fat quality. Pigs were blocked by weight and randomly allotted to 1 of 6 dietary treatments with 7 replications per treatment. Pigs were fed corn-soybean meal-based diets arranged in a 2 × 3 factorial with main effects of glycerol (0, 2.5, or 5%) and DDGS (0 or 20%). Overall (d 0 to 97), there were no glycerol × DDGS interactions ($P > 0.12$) for growth performance, carcass characteristics, and carcass fat iodine value (IV). Increasing glycerol did not affect ($P > 0.14$) ADG or F/G. Adding 20% DDGS to the diet did not affect ADG. However, pigs fed diets with 20% added DDGS had greater ($P < 0.02$) ADFI resulting in poorer ($P < 0.01$) F/G than pigs fed diets with no DDGS. For carcass characteristics, pigs fed increasing glycerol tended to have increased (linear, $P < 0.11$) yield. Pigs fed diets with added DDGS had increased ($P < 0.01$) jowl fat, belly fat, and backfat IV compared with pigs fed diets with no DDGS. However, increasing dietary glycerol tended to decrease (linear, $P < 0.11$) backfat IV. In conclusion, feeding pigs 20% DDGS worsened F/G and increased carcass fat IV, whereas feeding glycerol did not influence growth performance but tended to improve carcass yield and reduce backfat IV. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by A.W. Duttlinger, J.M. Benz, T.A. Houser, M.D. Tokach, S.S. Dritz, J.M. DeRouchey, J.L. Nelssen, R.D. Goodband, and K.J. Prusa.)

↪ **Effects of Feeding Excess Crude Protein on Growth Performance and Carcass Traits of Finishing Pigs** - A total of 176 pigs (88 barrows and 88 gilts, average initial BW of 209 lb) were used in a 33-d experiment to determine the effects of excess dietary CP on growth performance and carcass measurements of finishing pigs. Pigs were sorted by sex and ancestry and blocked by weight with 11 pigs per pen and 4 pens per treatment. Treatments were corn-soybean meal based and formulated to a minimum of 0.80% total lysine but with 12, 14, 16, and 18% CP. Feed and water were consumed on an ad libitum basis until pigs were slaughtered (average final BW of 275 lb) at a commercial abattoir. Increasing CP concentration had no effect ($P > 0.20$) on ADG, ADFI, F/G, and HCW. With HCW used as a covariate, there were linear decreases in dressing percentage ($P < 0.01$) and loin depth at the last rib ($P < 0.04$) as CP concentration in the diet was increased from 12 to 18%. However, fat thickness at the last rib and percentage carcass lean were not affected ($P > 0.34$) by CP treatment. Our results indicate that increasing CP from 12 to 18% in diets for late-finishing pigs does not affect growth performance or carcass leanness but has small negative effects on dressing percentage and loin depth. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by S.M. Williams, J.D. Hancock, C. Feoli, S. Issa, and T.L. Gugle.)

UPCOMING EVENTS...

- ↪ **Developing and Implementing Your Company's HACCP Plan** for meat, poultry, and food processors will be held June 16-18, 2009 in Weber Hall, Kansas State University, Manhattan. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://animalscience.unl.edu/haccp/>. For more information, contact Dr. Liz Boyle (785-532-1247; lboyle@ksu.edu).
- ↪ **The "Champion" Livestock Judging Camp** is designed for 4-H and FFA members (ages 14-18) who are seriously interested in enhancing their livestock judging and oral communication skills. Camp participants will be exposed to livestock evaluation skills and incorporating performance records in the decision making process.
- Mini camps will be conducted throughout the month of June. Each camp will be limited to 25 students and will be accepted on a "first come-first serve" basis. The following dates are set for the 2009 camps.
- Camp A June 16-18 (Tuesday-Thursday)
 - Camp B June 19-21 (Friday-Sunday)
 - Camp C June 22-24 (Monday-Wednesday)
- For more information, contact Scott Schaaque (simmi@ksu.edu; 785-532-1242) or Kristi Hageman (klsmith@k-state.edu; 785-532-2996).
- ↪ The **2009 Dr. Bob Hines Swine Classic** is scheduled for July 10-11, 2009 at CiCo Park in Manhattan. This two-day event is open to all Kansas youths ages 7 through 18 as of January 1, 2009. New for this year will be a Swine Skillathon where youth will test their knowledge and compete for prizes. This highly interactive event will offer three age divisions: 7 - 9, 10 - 13, and 14 - 18. After completing each station, all youth and adults will have the opportunity to view the answers and other age division's stations.
- A Photography Contest will also be featured. Youth may submit up to 2 photos for the contest. Photos should be 8x10 size and should not be framed or matted. Photos will be placed in plastic sleeves and displayed throughout the weekend. Prizes will be awarded in three age divisions: 7 - 9, 10 - 13, and 14 - 18. Everyone will also have the opportunity to vote on "The People's Choice" award. Outlined below is a schedule of this year's program.
- Friday, July 10
- | | |
|------------|----------------------------------|
| 12:00 p.m. | All hogs in place |
| 1:00 p.m. | Photo Check-in |
| 1:30 p.m. | Swine Skillathon |
| 4:00 p.m. | Ice cream party by the show ring |
| 5:30 p.m. | Showmanship Contests |
- Saturday, July 11
- | | |
|-----------|---------------------------------------------------------------|
| 8:30 a.m. | Prospect Hog Show followed by Barrow and Gilt Market Hog Show |
|-----------|---------------------------------------------------------------|
- Visit www.KSUswine.org for a registration form. For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu), Sharon Breiner (785-532-1264: sbreiner@ksu.edu), or Jim Nelssen (785-532-1251; jnelssen@ksu.edu)
- ↪ K-State will be hosting the **Junior American Boer Goat Association Leadership Conference** on July 13-16, 2009. Youth that are 14-21 years of age, that are members of the Junior ABGA, are eligible to attend. Students will arrive on July 12th and leave on July 17th. Brian Faris, Sharon Breiner, and Susan Shipman will be featured speakers for the event.
- Topics will include goat-related management issues, farm tours, building leadership skills, and a number of fun activities such as the ropes course, bowling, scavenger hunts, and more. For more information, contact Dr. Brian Faris (785-532-1255; brfaris@ksu.edu).

↪ The **K-State Beef Conference** will be held on August 13, 2009, in Frick Auditorium, College of Veterinary Medicine on the KSU Campus. This one-day conference is especially geared for cow-calf producers and designed to provide take-home knowledge that will enhance the ability of cow/calf producers to improve profitability. The theme for this year's conference will be "Making Money in Hard Times" and will feature keynote speaker, Troy Marshall.

The conference will begin at 8:00 a.m. with registration and conclude at 5:00 p.m. The registration fee is \$60.00 which includes proceeding material, lunch and breaks. Early registration ends on July 31. For a complete schedule and registration form, visit www.KSUbeef.org and follow the K-State Beef Conference link. For more information, contact Larry Hollis (785-532-1246; lhollis@ksu.edu) or Linda Siebold (785-532-1281; lsiebold@ksu.edu).

↪ Make plans now to attend the **Flint Hills Beef Fest** which will be held August 14-16, 2009. Cattle Division Events include a Grass Futurity Contest, Stocker Cattle Show, Best of Grass and Show, Feedlot Contest and Carcass Show. Events will take place on the Lyon County Fairground in Emporia, Kansas. Other Beef Fest Activities include Arena Events such as Ranch Rodeo, Team Roping, Ranch Horse Competition and more. For more details and a complete schedule of events, please visit <http://www.beefest.com>.

↪ *New in 2009:* **4-H Livestock Sweepstakes** - Make plans to attend the new 4-H Livestock Sweepstakes to be held on August 22-23! This all-around event will feature contests in Livestock Judging, Meats Judging, Livestock Skillathon, and Livestock Quiz Bowl. Belt Buckles will be awarded to the county that does the best in all four contests. A county or district may choose to use the same four 4-Hers for all contests or use any combination of students for each contest. Teams may also come for only a portion of the contests. The Livestock Judging Contest will be held on Saturday with rounds 1-3 of the Quiz Bowl. A dance and social activity will be available to 4-Hers on Saturday evening, as well as workshops throughout the weekend. On Sunday, participants will compete in the Livestock Skillathon and Meats Judging Contest. We will hold Round 4 of the quiz bowl just prior to the award ceremony for all events. Each participating county will be required to provide a minimum of one volunteer for the event. Please look for a sign-up sheet, complete rules, and registration materials coming soon.

Please Note: The event will be held during K-State Move-in Weekend. Reserve your hotel rooms as soon as possible. No activities will take place at the hotel so stay wherever you like. For your convenience two sets of room blocks have been made for August 21-23: Clarion Hotel (\$90 - "KSU Department of Animal Science and Industry" Block; 785-539-5311) or Super 8 Motel (\$65 - "K-State 4-H" Block; 785-537-8468).

For questions contact, Sharon Breiner, K-State Youth Livestock Coordinator at sbreiner@ksu.edu.

↪ The **2009 KSU Beef Stocker Field Day** will be held on Thursday, September 24 at the KSU Beef Stocker Unit in Manhattan. Mark the date on your calendar for watch for more details.

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
June 16-18, 2009	Developing your Company's HACCP Plan	Manhattan
June 16-18, 2009	Champion Livestock Judging Camp A	Manhattan
June 19-21, 2009	Champion Livestock Judging Camp B	Manhattan
June 22-24, 2009	Champion Livestock Judging Camp C	Manhattan
July 10-11, 2009	Dr. Bob Hines Swine Classic	Manhattan
July 13-16, 2009	Junior American Boer Goat Association Leadership Conference	Manhattan
August 13, 2009	K-State Beef Conference	Manhattan
August 14-16, 2009	Flint Hills Beef Fest	Emporia, KS
August 22-23, 2009	4-H Livestock Sweepstakes	Manhattan
September 24, 2009	KSU Beef Stocker Field Day	Manhattan

AS&I FACULTY SPOTLIGHT



Ron Pope (rvpope@k-state.edu; 785-532-5404)
Instructor

Ron Pope is a native of Oklahoma and Texas. He received a BS degree in Animal Science from Oklahoma State University in 1974, a Master of Agriculture in Animal Science from Texas A& M University in 1976 and a PhD in Animal Sciences and Industry from Kansas State University in 2000.

He took a position as a Research Assistant in charge of the Beef Research Unit at Kansas State University in 1977. Dr. Pope is currently an instructor in the Animal Sciences and Industry department. He teaches Animal Sciences and Industry Laboratory during the fall and spring semesters. He advises 35 undergraduate students. He is also responsible for conducting tours of the department for outside visitors. This includes school field trips, prospective students and interested groups. Ron is currently serving as one

of the Block and Bridle Chapter advisors. He is chairman of the ASI Safety Committee.

Ron and his wife Nita have four children (all K-State graduates) and two grandchildren Blake and Vanessa. Their children are: Russell ASI, BS 1999 and his wife Misty EDEL, BS 1999; Marie EDEL, BS 2002 and her husband Jeff Jones ASI, BS 1999; Bill ASI, BS 2005 and his wife Heather (Colorado State) BS, 2005 and current senior VMS: Ronny ASI, BS 2006 and his fiancé Kelsey Frasier AGECE, BS 2008 and current MS student.



Jack Riley (jriley@k-state.edu; 785-532-7624)
Professor/Beef Production and Management

Dr. Jack G. Riley is a native of Hamilton, Missouri and obtained his B.S. (1962) and M.S. degrees (1963) in Animal Husbandry from the University of Missouri. From 1963 to 1965 he served as Extension Livestock Specialist and from 1965-1966 was an instructor, both in the University of Missouri, Animal Husbandry Department. He returned to college and received a Ph.D. in Ruminant Nutrition from the University of Missouri in 1968. He accepted a full-time teaching position in Animal Science at Western Illinois University where he stayed until 1971 at which time he moved to Kansas State University for a 70% teaching - 30% research assignment in the Animal Sciences and Industry Department. Dr. Riley's main interest has always been teaching and he has

taught more than 7000 students in 35 years of active classroom involvement. In addition, he advised at least 30 undergraduate students each year until becoming department head in 1987.

Dr. Riley was active in beef cattle research, especially in the areas of protein requirements, crop residue utilization, growth promoting implants and feed additives. He was faculty coordinator of the beef research unit for 16 years and coordinator of all research activities in the Animal Sciences and Industry Department for three years.

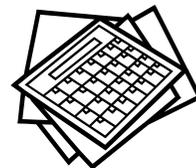
Since becoming department head in 1987, Dr. Riley has encouraged undergraduate and graduate student participation in the department. Courses have been revised to provide greater "hands-on" experiences and curriculum modification and innovation have been implemented. The K-State Animal Sciences department is the second largest in the U.S. and their students receive the most recognition for extramural activities such as National Champion Livestock Judging five consecutive years.

After completing 17 years as department head, Dr. Riley entered a phased retirement program and maintains a 50% appointment now until he is fully retired in early January 2010. His primary responsibilities include teaching Senior Seminar, Internship and Principles of Feeding.

Dr. Riley is a Fellow in ASAS and has served as officer and/or director of many professional and university organizations including the Manhattan Rotary Club. He and his wife Jan have two sons that are graduates of KSU.

WHAT PRODUCERS SHOULD BE THINKING ABOUT...

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN AUGUST



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

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions.

Breeding Season

- Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.
- Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers.

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

Cowherd Nutrition

- Provide ample amounts of clean, fresh drinking water.
- Conduct an inventory of forage needs for the winter feeding period
- Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical 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 (consult your local veterinarian).
- ◆ Control face flies.
- ◆ Clip pastures with tall, coarse grasses that may irritate eyes.
- ◆ Provide ample shade.

Therapy:

- ◆ Administer an intramuscular injection of long-acting oxytetracycline 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 for sufficient standing pasture for winter grazing needs.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

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 earlier than normal weaning, but have a marketing plan in place.

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.