

## NEWS FROM KSU ANIMAL SCIENCES September, 2011



WEBER HALL  
ANIMAL SCIENCE & INDUSTRY



**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**

# UPCOMING EVENTS...

- ↳ The **2011 KSU Beef Stocker Field Day** will be held on Thursday, September 22 at the KSU Beef Stocker Unit in Manhattan. It is not too late to register. For complete details and registration, visit [www.KSUbef.org](http://www.KSUbef.org). For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).
- ↳ **Developing and Implementing Your Company's HACCP Plan for Meat, Poultry, and Food Processors** will be held October 3-5, 2011, in Regnier Hall, University of Kansas Edwards Campus, 127th & Quivira Road, Overland Park. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://HACCP.unl.edu>. The workshop fee is \$325, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu); 785-532-1247).
- ↳ Kansas State University will host a **Sheep & Goat Conference** on November 4-6, 2011 on the KSU campus. The objective of the conference is to educate sheep and/or goat producers on current industry practices and trends, and provide an introduction for new producers to the respective industries. The tentative schedule includes:



### **Friday, November 4 – Live Animal Evaluation**

- 1:00 p.m. Welcome
- 1:30 p.m. Market Animal Evaluation
  - Sheep – Dr. Frank Craddock; Goats – Mr. Preston Faris
- 3:30 p.m. Breeding Animal Evaluation: Keep/Cull
  - Sheep – Dr. Frank Craddock; Goats – Mr. Preston Faris
- 6:00 p.m. Dinner

### **Saturday, November 5**

- 8:00 a.m. Coffee and Donuts
- 9:00 a.m. Commercial Crossbreeding Programs
  - Sheep – Dr. Kreg Leymaster; Goats – Mr. Preston Faris
- 10:15 a.m. Break
- 10:45 a.m. Multi-species Grazing – Dr. Brian Faris
- 12:00 noon Lunch
- 1:00 p.m. – 5:45 p.m. Breakout Sessions including:
  - Predator Management & Guardian Dogs – Dr. Charlie Lee and/or Mr. Bob Buchholz
  - Common Diseases and Abortion Storm Prevention and Treatment – Dr. Shelia Laflin
  - Managing Internal and External Parasites – Dr. Brian Faris and/or Dr. Frank Craddock
  - Working with Natural Fiber – Mrs. Melissa Urick
  - Use of distiller's grains in sheep and goat diets – Dr. Justin Waggoner
  - Fencing and Facilities – Dr. Frank Craddock
  - Reproductive Management & New Technologies – Dr. Brian Faris
  - More than meat: Milk, cheese, dips and more - TBA
  - Disbudding, Hoof trimming, Tattooing – Mr. Preston Faris
- 6:30 p.m. Dinner

### **Sunday, November 6 – Reproduction and Carcass Evaluation**

- |            |  |
|------------|--|
| 8:30 a.m.  | Marketing Value Added Lamb/Chevon Products – <i>Mr. Steve Burton</i> |
| 10:00 a.m. | Break  |
| 10:15 a.m. | Carcass Evaluation – <i>Dr. Dan Hale</i>                             |
| 11:45 a.m. | Closing Remarks  |
| 12:00 noon | Adjourn  |

Registration for this educational weekend is \$100 for the primary registrant and \$75.00 for additional attendees from the same family or company if received by October 15. For a complete schedule and registration information, visit [www.asi.ksu.edu/sheep](http://www.asi.ksu.edu/sheep) and click on the Upcoming Events tab. If you have any questions or would like more information, please contact Dr. Brian Faris at 785-532-1255 or [bfaris@ksu.edu](mailto:bfaris@ksu.edu).

- ↳ The **International Conference on Feed Efficiency in Swine** will be held November 8-9, 2011 in Omaha, Nebraska. This conference, hosted by Kansas State University and Iowa State University, is being organized as a forum to present the full breadth of knowledge on swine feed efficiency. As such, it will cover topics that range from the influence of feed processing on feed efficiency, or the role of dietary amino acids (or energy) on feed efficiency through to the role of genetic selection on feed efficiency. The program will appeal to anyone involved in the more technical aspects of pork production, including producers, nutritionists, veterinarians, geneticists, etc.

Information on the complete program, registration, lodging, etc. can be found at <http://www.ans.iastate.edu/ICFES/?pg=index>. For more information, contact Mike Tokach ([mtokach@ksu.edu](mailto:mtokach@ksu.edu); 785-532-2032) or Joel DeRouchey ([jderouch@ksu.edu](mailto:jderouch@ksu.edu); 785-532-2280).

- ↳ The **23rd Range Beef Cow Symposium** will be Nov. 29 - Dec. 1, 2011 in Mitchell, Nebraska. This is an excellent professional development opportunity for agents. We will plan to coordinate transportation for those interested in attending. For more information, contact Sandy Johnson, [sandyj@ksu.edu](mailto:sandyj@ksu.edu).

- ↳ The **2011 KSU Swine Day** will be held Thursday, November 17, at the KSU Alumni Center. The Swine Day will include a presentation by Dr. Steve Henry, Dr. Lisa Tokach, and Dr. Megan Potter from the Abilene Animal Hospital on “Failure to Thrive: The Effect of Vitamin D at Processing.” The program will also feature “Global Grain and Livestock Outlook: How It Will Impact You” presented by Joe Kerns, Risk Assessment and Management, Ames, Iowa. An Update of Current K-State Swine Research to Help Improve the Net Return of a Swine Business will be presented by the K-State Swine Team.

The day will conclude with an Ice Cream Reception. A complete schedule along with registration information is available at [www.KSUswine.org](http://www.KSUswine.org). For more information, contact Jim Nelssen ([jnelssen@ksu.edu](mailto:jnelssen@ksu.edu); 785-532-1251).

- ↳ Mark your calendar and watch for more details on the upcoming **K-State Junior Beef Day** which has been scheduled for Saturday, December 3, 2011 at Weber Hall/Arena on the K-State campus.

### **CALENDAR OF UPCOMING EVENTS**

Date	Event	Location
September 22, 2011	KSU Beef Stocker Field Day	Manhattan
Sept. 30 – Oct. 1, 2011	Applied Reproductive Strategies in Beef Cattle	Boise, ID
October 3-5, 2011	HACCP Workshop	Overland Park, KS
November 4-6, 2011	KSU Sheep and Goat Conference	Manhattan
November 8-9, 2011	International Conference on Feed Efficiency in Swine	Omaha, NE
November 17, 2011	KSU Swine Day	Manhattan
Nov. 29 – Dec. 1, 2011	Range Beef Cow Symposium	Mitchell, NE
December 3, 2011	K-State Junior Beef Day	Manhattan

For a variety of agent resources and professional development opportunities, agents should visit <http://www.asi.ksu.edu/p.aspx?tabid=1271>

# WHAT'S NEW...

## Management Minute – Chris Reinhardt, Ph.D., Extension Feedlot Specialist “Team Player”

After working as part of a dysfunctional team on a project this past month I realized that sometimes we take good team work and team atmosphere for granted. The team was dysfunctional for a number of reasons: (1) lack of effective leadership; (2) lack of common goals. There are probably many more, but that's enough.

The team leader had a selfish agenda, not what was best for the team or team members. It can be said that the coach must be the ultimate team player, or there is no team. In sports, the coach cannot run out onto the field and take the snap from under center, or make the big shot. The coach needs to communicate a vision and plan to the team, then cheer the team on toward execution. The coach who will not delegate the authority and responsibility of execution to the team will not build a winner. Read “control-freak”.

Team members must be incentivized to share the common goals of the team. Unlike the production workplace, in academia there is wide liberty given to establish collaborative teams to get things done. A faculty member once said of building these collaborative teams, “You’ll work with who you’ve worked with in the past.” There are at least 2 obvious reasons for this: (1) You have common goals, or; (2) You like working together. If you have common goals essential for your individual success, you will find a way to work through potential differences to achieve mutual success. Your individual existence relies on team work and synergy. It’s hard to deny the power of this association.

If working together is a painful, uncoordinated experience, the ends eventually will not be worth the means to get there. Even if the project is successful, it won’t be rewarding because all that was gained will have a very temporary feeling and will not satisfy. However, if everyone on the team genuinely enjoys working with the team, successes will be made even larger, because the team was made stronger and individual members were made better through the work and through the success. I guarantee you will want to work with this team again in the future.

You already know if you’ve got a good vs. dysfunctional team. If your team has good chemistry and is cranking along, keep working hard and making the needed sacrifices to keep this team together and productive. And if your team is dysfunctional, it’s time for the “manager” to “manage”.

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

### “Are You Marketing or Are You Selling?”

You’ve made the investments: time, labor, genetics, risk, snow storms, and summer heat. Now it’s time to make sure you get back MORE than you’ve put in.

But there’s a huge difference between marketing and selling; between being a price taker and a price maker; between just putting your calves up for sale and actually finding the best marketing outlet and buyer for your calves.

The first rule of marketing is: “You can’t market something that’s not different.” So, are your calves any different than what I can pick up anywhere for the market average? What have you done to add value? If you’ve got value-added genetics, for either growth or carcass merit, you’ll need the data to demonstrate that added performance.

There’s tremendous value and interest in truly preconditioned calves. But to glean that value from the marketplace, you’ll need to find the market and buyers who place that value in preconditioning and are willing to pay for it. Some feedyards make a living adding value to calves by buying low and upgrading them by turning them into fed cattle. This often takes a great deal of time and labor to get these calves started, keep them alive, and performing. Other feedyards would rather simply deliver feed---that’s what they do best. THESE are the yards that value a calf that will walk up to the bunk and eat. Your job is to find these buyers and find the markets where they shop.

The analogy is the expensive grocery store vs. the bargain store. Everybody knows which is which. You make an agreement when you walk into the expensive store, that you are willing to pay more, but you expect top quality. The same is true with marketing your preconditioned calves. Provide true value, find the right market, and you will be rewarded for your efforts.

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

↳ **Assistant Professor, Food Science** - The Department of Animal Sciences and Industry is looking for an Assistant Professor in Food Science. This position is a full time, 12 month, tenure track position with 0.6 teaching and 0.4 research. Ph.D. or equivalent at time of hire in Food Science, Dairy Science, Food Engineering, Animal Science or related discipline is required. Experience and knowledge in the dairy foods industry is preferred. View complete position announcement at: <http://www.asi.ksu.edu/positions>. Review of applications begins November 1, 2011, and continues until a suitable candidate is identified.

↳ **IRM Redbooks for Sale** – The 2012 IRM Redbooks have arrived and will be sold on a first come first serve basis. The price of the redbooks will be: For orders of less than 10 = \$5.25/book; Orders of 10 or more = \$5.00/book which includes postage. To order your supply of redbooks, please contact Lois (lschrein@ksu.edu; 785-532-1267).

↳ **Grazing Wheat Did Not Reduce Beef Cow Pregnancy Rates** - Cows were assigned to graze either mixed-grass native rangeland from early spring until late fall in a season-long continuous grazing system (Native) or winter annual wheat in early spring followed by mixed-grass native rangeland until late fall in a seasonal complementary forage system (Wheat). Fixed-timed artificial insemination (AI) was conducted on all cows following a melengesterol acetate-Select protocol. Cleanup bulls were turned in 10 days after fixed-timed AI. Pregnancy was determined by transrectal ultrasonography 30 to 40 days after timed AI to determine pregnancy rate to AI and on days 76 to 141 to determine final pregnancy rate. Cows grazing wheat before and during breeding had similar pregnancy rates to AI as cows that grazed on native rangeland prior to and during breeding. Average pregnancy rates to fixed-time AI over all years were 51.7% and 57.7% for Wheat or Native cows, respectively. Final pregnancy rate was also similar between the two grazing groups, and overall years averaged 94.4 and 95.9% for the Wheat and Native groups, respectively.

**Bottom Line...** This trial showed no evidence that the high-protein diet of wheat pasture reduces pregnancy rate of beef cows. However, because timing of the breeding season remained constant, protein content of diet may have moderated prior to breeding. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Sandy Johnson (785-462-6281; [sandyj@ksu.edu](mailto:sandyj@ksu.edu)).

↳ **Forage Selection Preferences of Experienced Cows and Naïve Heifers Grazing Native Tallgrass Range in Winter** - Cows were randomly grouped by parity status and randomly assigned to graze four of eight pastures in the Kansas Flint Hills in four consecutive 48-hour periods. Fecal samples were collected from each animal during each period. Samples were prepared and viewed on a microscope slide to determine the frequency of appearance of plant fragments, which was assumed to be equivalent to prevalence in grazed diets.

**Bottom Line...** Differences observed in diet selection patterns between multiparous and primiparous cows during a short-term winter grazing period could be indicative of differences in long-term foraging strategies. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact KC Olson (785-532-1254; [kcolson@ksu.edu](mailto:kcolson@ksu.edu)) or Dale Blasi (785-532-5427; [dblasi@ksu.edu](mailto:dblasi@ksu.edu)).

↳ **The Effects of Feeder Design and Changing the Availability of Water from a Wet-Dry Feeder at 4 and 8 Weeks Prior to Marketing on Growth Performance and Carcass Characteristics of Growing-Finishing Pigs** - A total of 1,296 pigs (PIC, 337 x 1050) were used to evaluate the effects on growth performance and carcass characteristics of feeder design (conventional dry feeder vs. wet-dry feeder) and changing availability of water from a wet-dry feeder at 4 and 8 wk prior to marketing. There were 27 pigs per pen (14 barrows and 13 gilts) and 24 pens per feeder-type. Pigs were fed identical corn-soybean meal diets with 15% dried distillers' grains with solubles (DDGS). Pens with a wet-dry feeder had a separate cup waterer, but the feeder provided the sole water source until d 69. The water supply to the wet-dry feeder was shut off in 8 pens on d 69 (WD8) and another 8 pens on d 97 (WD4), and the cup waterer was turned on. For the remaining 8 pens, the wet-dry feeder provided the sole water source for the entire experiment (WD0). From d 0 to 69, pigs using the wet-dry feeder had improved ADG, ADFI, F/G, and d 69 BW. Overall (d 0 to 124), pigs using WD0 had greater ADG, ADFI, final BW, and HCW than all other treatments. Pigs using WD4 had greater ADG than pigs that used a conventional dry feeder, and WD8 was intermediate. Pigs using WD4 had greater ADFI than

WD8, and conventional dry was intermediate. Pigs using WD0 had poorer F/G than WD8 and conventional dry, and pigs using WD4 were intermediate. Backfat depth of pigs using WD8 was reduced compared to all other treatments, and loin depth was greater than that of pigs using a conventional dry feeder and WD4. Loin depth of pigs using WD0 was also greater than that of pigs with the conventional dry feeder. The percentage fat-free lean of pigs using WD8 was greater than WD4, and WD0, and pigs that used the conventional dry feeder were intermediate. Income-over-feed cost was numerically greatest for pigs using WD8.

**Bottom Line....**In conclusion, pigs using WD0 had better growth rates than pigs using the conventional dry feeder, WD4, or WD8. Although measures of carcass leanness were improved with WD8, the reduction in growth rate observed for this treatment during the last 8 wk eliminated any net improvement in the overall growth rate from using a wet-dry feeder. 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.R. Bergstrom, M.D. Tokach, S.S. Dritz, J.L. Nelssen, J.M. DeRouchey, and R.D. Goodband.)

↳ **Effects of Mixing Late-Finishing Pigs Just Before Marketing on Growth Performance** - A total of 512 commercial finishing pigs were used in a 15-d trial to determine the effects of mixing late-finishing pigs from 1 or 2 barns at different stocking densities on pig performance prior to marketing. Close-to-market-weight pigs from 2 barns (north barn or south barn) were placed in 32 single-sex pens in the north barn at densities of either 12 or 20 pigs per pen. Pens of pigs were allotted to 1 of 4 mixing treatments (8 pens per treatment). Mixing treatments were: (1) nonmixed pens with 12 north barn pigs (control), (2) mixing 6 north barn pigs with 6 south barn pigs (Mix 1), (3) mixing 10 north barn pigs with 10 south barn pigs (Mix 2), and (4) mixing 10 north barn pigs with 10 more north barn pigs (Mix 3). All pigs were fed a common diet during the trial. Pens of pigs were weighed and feed disappearance determined on d 0, 8, and 15 to determine ADG, ADFI, and F/G. All response criteria were adjusted to a common initial weight in the analysis. Results from this trial indicate that pen inventories had a large impact on performance, with pigs stocked at 12 pigs per pen having greater ADG and ADFI than those stocked at 20 pigs per pen. Overall, there was no difference in performance for nonmixed control pigs and mixed pigs when stocked at a similar density (12 pigs per pen).

**Bottom Line....**These data indicate, in the 2 wk prior to market, increasing the number of pigs per pen had a larger effect on performance than mixing pigs. Although performance was negatively affected immediately after mixing, overall performance of mixed pigs was not different than that of nonmixed pigs. Therefore, given adequate time to adjust to a new environment and establish a new social order, mixing pigs does not appear to affect overall 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 M.L. Potter, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, J.R. Bergstrom, and J.L. Nelssen.)

↳ **Effects of Increasing Stocking Density on Finishing Pig Performance** - A total of 1,201 finishing pigs (initially 63 lb) were used in a 99-d growth trial to evaluate the effects of increasing stocking density on finishing pig growth performance. Single-sex pens of barrows and gilts were blocked to minimize variation due to gender and barn location. There were 12 pens per block with 3 replication pens per treatment within each block. Pens of pigs were randomly allotted to 1 of 4 treatments with 12 pens per treatment. Treatments were stocking pens with 22, 24, 26, or 28 pigs each, allowing 8.2, 7.5, 6.9, and 6.4 ft<sup>2</sup> per pig, respectively. Pens of pigs were weighed and feed intake was determined on d 0, 14, 28, 42, 56, 70, 84, and 99 to calculate ADG, ADFI, and F/G. Pigs were fed common diets throughout the trial. No adjustments were made at the pen level to account for space increases because of removed pigs.

Overall, as stocking density increased, ADG and ADFI decreased, but there were no differences in F/G. These performance differences resulted in off-test (d 99) pig weights decreasing as stocking density increased.

**Bottom Line....**These data indicate that in this commercial barn, finisher pig ADG and ADFI improved as the number of pigs in each pen was reduced. However, based on an economic model, income over feed and facility cost per pig placed was numerically optimized when pens were stocked with 24 pigs each, allowing 7.5 ft<sup>2</sup> of floor space per pig. 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 M.L. Potter, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, and J.L. Nelssen.)

# AS&I FACULTY SPOTLIGHT



## **Bob Weaber ([bweaber@k-state.edu](mailto:bweaber@k-state.edu); 785-532-1460) Assistant Professor/Extension Beef Specialist**

Bob Weaber, Ph.D. joined the faculty of the Department of Animal Sciences and Industry at Kansas State University in August of 2011 as Cow-Calf Extension Specialist. Previously, Weaber served in the Division of Animal Sciences at the University of Missouri (MU) as Extension Specialist-Beef Genetics and was responsible for educational programming in the area of beef cattle genetics. Dr. Weaber also serves as central regional secretary of the Beef Improvement Federation, is a co-coordinator of the National Beef Cattle Evaluation Consortium education programs and has served as a member of the National Cattlemen's Beef Association Policy Division Board of Directors.

The focus of his extension and research programs have been to broaden the availability, use and understanding of genetic selection tools (Expected Progeny Differences, DNA markers and selection indexes) as well as

performance data collection schemes implemented by cattle producers. His novel work in new trait development has included the elucidation of the genetic and phenotypic effects of animal temperament on production efficiency and meat palatability attributes. This work lead to his involvement in a large, industry funded genetics and genomics discovery project focused on the genetics of feedlot cattle health traits. Bob has also undertaken beef cattle genetics and genomics research in the important area of feed intake and efficiency including a work as a co-investigator involved in a new \$5 million, five year USDA funded integrated research and extension project. In addition to his work in selection systems, Bob works to expand the use of structured crossbreeding systems by beef producers, where appropriate, to leverage breed complementarity and hybrid vigor to improve production efficiency, sustainability and profitability.

Bob's nationally recognized extension programming has resulted in more than 145 publications and more than \$13 million from 42 awards of grants and gifts for research and extension programming. Weaber's extension program leadership has been recognized with MU Provost's Innovative Extension Programming by New Faculty, the MU CAFNR J.W. Burch State Extension Specialist award, and the Beef Improvement Federation's Continuing Service Award.

Dr. Weaber grew up on a cow-calf operation in southern Colorado and went on to earn a BS in animal science followed by a Master of Agriculture degree in the Beef Industry Leadership Program at Colorado State University. He completed his doctoral studies in the Animal Breeding and Genetics Group at Cornell University. While there, he served as the Interim Director of Performance Programs for the American Simmental Association for three and a half years. Previously, Weaber was Director of Education and Research at the American Gelbvieh Association. Bob and his wife, Tami, and their young children, Maddie, Cooper and Wyatt, reside near Wamego, KS.

## **Scott Schaake ([simmi@k-state.edu](mailto:simmi@k-state.edu); 785-532-1242) Associate Professor/Livestock Judging Team Coach**

Dr. Scott Schaake was raised on a cow-calf ranch/row crop operation near Lawrence Kansas. He graduated from Kansas State University in 1984 with a B.S. in Animal Sciences and Industry. He earned his M.S. at Clemson University and Ph.D. at the University of Kentucky, specializing in the area of Meat Science.

Currently he serves as the coach of the Livestock Judging Team. His teams have won five National Championships and eight Reserve National Championships during his tenure as a coach at Kansas State University. Besides coaching, he is involved with teaching Introductory Animal Science Lab, Livestock and Meat Evaluation, Form and Function of Livestock and Principles of Livestock Selection. In addition to his teaching responsibilities he advises 30-40 undergraduate students each year. Dr. Schaake has an 80% Teaching appointment and 20% Extension appointment.

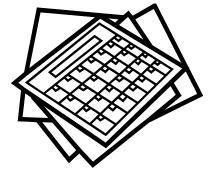
Dr. Schaake has judged livestock shows in 32 states, Canada, South America and Mexico. His personal interest includes all types of sports, hunting, fishing and attending his sons' sporting events. His family includes wife, Kandi, and sons Shane and Shilo.



# WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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

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



### Spring Calving Cows

#### *Cowherd Management*

- Pregnancy Check (if not already completed)
- If candidates for culling were not selected in September or October, it should be completed now.
- Consider feeding cull cows to increase body weight, value, and utilize cheap feedstuffs. Value of gain is equal to the difference between the ending value and beginning values divided by the gain. Compare this to cost of gain figures. When cost of gain is less than value of gain, profit will be realized.
- Body Condition Score
  - Provide thin cows (body condition score 3's and 4's) extra feed now. Take advantage of weather, stage of pregnancy, lower nutrient requirements, and quality feedstuffs.
- In late fall and early winter, start feeding supplement to mature cows using these guidelines:
  - Dry grass      1½ - 2 lb supplement/day of a 40% CP supplement
  - Dry grass      3 - 4 lb supplement/day of a 20% supplement
  - Dry grass      10 lb good nonlegume hay, no supplement needed
  - Compare supplements on a cost per pound of nutrient basis.
- Utilize crop residues.
  - Average body condition cows can be grazed at 1 to 2 acres/cow for 30 days assuming normal weather. Available forage is directly related to the grain production levels.
  - Limiting nutrients are usually protein, phosphorus, and vitamin A.
  - Strip graze or rotate fields to improve grazing efficiency.
- Discontinue feeding tetracycline if used for anaplasmosis control

#### *Calf Management*

- Participate in National Level Breed Association Performance Programs CHAPS, and(or) other ranch record systems.
- Finalize plans to merchandise calves or to background through yearling or finishing programs

#### *Forage/Pasture Management*

- Plan winter nutritional program through pasture and forage management

#### *General Management*

- Document cost of production by participating in Standardized Performance Analysis (SPA) programs.
- Review management decisions, lower your costs on a per unit of production concept.
- 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.*