

News from KSU Animal Sciences

September, 2009



Newsletter from the Department of Animal Sciences and Industry
213 Weber Hall, Kansas State University, Manhattan, KS 66506
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WHAT'S NEW...

↪ **Soybean meal prices jump through the roof!** - Recently soybean meal prices have jumped from approximately \$360 per ton up to approximately \$460 per ton. At the same time the prices of dried distillers grains with solubles (DDGS) has dropped below \$100 per ton. With these changing ingredient prices it is extra important for swine producers to evaluate their diet formulations. With the high soybean meal price, adding 20 to 30% DDGS can save \$5 to \$9 per pig. Even as soybean meal prices drop below \$400/ton, DDGS is still a big savings for most producers. Feel free to contact one of your swine extension specialists to evaluate your diets and see if the economics will work in your situation.

↪ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist
“Maximizing ROI: The New Hire”

This has been a long, difficult, sometimes frustrating process: one of your good people left for a new opportunity or you had to let someone go; you struggled over how best to fill the void; written a detailed job description; interviewed some qualified (and not-so-qualified) people; and hired the best person for the job. You don't want to go through this all again anytime soon. How do you ensure you get the new person started out right for long-term success?

First, make sure that the person to whom the new hire will report is integrally involved in setting job expectations, the interviews, and the hiring process. This will most likely be the person you rely on for feedback on the new hire's progress: don't sabotage this all-important feedback process by hiring someone whose eventual supervisor is against from the very beginning.

Communication is obviously important in all working relationships, but it certainly is even more so with new employees, because they come in with few or no preconceptions about the workplace. Whatever you fail to communicate effectively, the employee will have to “make up”. And it will very likely be wrong. More likely, they will come in with an understanding of how they “did it at my old job”, which may be entirely different from your procedures. Take time and be intentional about communicating EVERYTHING to your new hire. You may think something is obvious; it probably is not to a new employee. As a side note, make sure that everyone involved in providing this communication are those in your organization who you believe are really making every effort to do things properly. The less time the new hire spends with the “corner-cutters”, the better at this stage.

Training will begin on day one, but if your workplace involves dangerous equipment or procedures, or involves working with livestock or horses, safety should be the first place to start the training process. Safety is too important and the risks simply too great to ignore. Again, what may seem obvious to you or your existing employees may not be to the new person. Better to over-communicate from the very beginning than to deal with the consequences of ignorance later.

This is how creating a culture of safety begins.

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

↪ **Dried Corn Germ in Natural Finishing Programs Reduces Incidence of Liver Abscess** - Yearling steers and heifers (n = 4,199; initial body weight = 703 lb) were used to characterize feedlot performance, health, incidence of liver abscess, and carcass traits of feedlot cattle produced under a natural feeding regimen with and without GERM added to the finishing diet. Cattle were housed at a commercial feedlot in central Kansas. Diets contained either 0 or 5% GERM. Addition of GERM increased carcass-adjusted average daily gain and reduced severe liver abscesses. The objectives of this experiment were to assess the effect of supplemental fat in the form of dried, full-fat corn germ (GERM) on growth performance, carcass yield and quality grades, and incidence of liver abscesses when fed to finishing cattle as part of a “natural” feeding regimen applied under commercial feeding conditions.

Bottom Line... Adding GERM to the diet may help control incidence of liver abscess in naturally raised cattle, a problem incurred by many producers who raise beef naturally, without use of tylosin. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Jim Drouillard (785-532-1204; jdrouill@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

↳ **Consider DDGS as a Winter Supplement** - It is once again time to begin thinking about purchasing supplemental feed resources for the upcoming winter months. Many of the commodity feedstuffs that may be used as supplemental feeds for the cowherd (dried distiller's grains (DDGS), corn gluten feed, cottonseed meal, and soybean meal) in most years can often be purchased at lower prices during August, and September than in December or January. Supplemental feeds should be always be evaluated on a cost per unit basis of the most limiting nutrient (Protein for the winter cowherd). Dried distiller's grains are currently one of the most economical sources of protein available. Additionally, DDGS is an excellent source of phosphorous. The combination of protein and phosphorous, two of the most limiting and often expensive nutrients required by cattle, make DDGS a very attractive winter supplement for cattlemen. For more information, contact Justin Waggoner (jwaggon@ksu.edu; 620-275-9164

Cost per Unit of Crude Protein in Common Winter Supplemental Feeds

Feedstuff	Unit, lbs	\$/unit	DM, %	CP, %	\$/lb CP
Alfalfa, Utility-Fair	2000	90.00	91	17	0.29
Soybean Meal	2000	398.50	90	49	0.45
Cottonseed Meal	2000	350.00	92	41	0.46
Corn Gluten Feed	2000	104.50	90	26	0.22
Dried Distiller's Grains	2000	90.00	90	31	0.16

*Feedstuff prices exclude freight and were obtained from the Kansas Hay Market Report (Southwest region; USDA #DC_GR310), Kansas City Weekly Feedstuff Review (USDA #SJ_GR215), and various personal communications.

↳ **IRM Redbooks for Sale** – For more than twenty years, cattlemen have used the IRM Redbook to keep better records and track the profitability of their cow-calf operations. The 2010 IRM Redbooks will be sold on a first come first serve basis. The price of the redbooks will be: For orders of less than 10 = \$5.00/book; Orders of 10 or more = \$4.75/book which includes postage. To order your supply of redbooks, please contact Lois (Ischrein@ksu.edu; 785-532-1267).

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

“Weaning Calf Rations”

‘Tis the season: weaning time. This month we’ll address on-the-farm weaning rations.

The biggest hurdle in getting calves started off right in the fall is the weather. That’s one reason to consider early weaning and subsequent backgrounding. If calves get through the stressful process of weaning from their dam and onto feed ahead of the annual late-October 35^o rain, they have a good chance at success.

Good quality grass hay is very palatable and a good way to attract bawling calves to the bunk. Don’t use a bale ring; you’ll just need to re-train them to the bunk later. After 1-2 days of hay feeding, limit hay consumption to about 1.0% of bodyweight (5 lb for 500 lb calf) and top-dress 3-5 lb/head (for 500 lb calf) of the weaning ration on top of the hay. As calves consume this small amount of mixed diet, begin to further reduce the amount of hay you feed each day and increase the amount of mixed diet. CAUTION: Increase the feed offered per head very gradually. Excessive consumption of even a moderate energy starter diet can cause acidosis in a calf which hasn’t been fully adapted to grain. Increase the ration no more than 2 lbs/head every other day. If calves are hungry, feed 1-2 lbs of extra hay in the bunk. If stools become loose, you may have increased the ration too rapidly. If this happens, feed an additional 1-2 lbs/head of hay. Healthy calves should consume about 3% of bodyweight by 14 days on feed. Sick calves may take longer to reach this level of consumption. Gauge any changes you make to feed deliveries on cattle behavior and disease status---slower may be better in the long run.

You want to make the weaning diet as easy of transition for the calves as possible. You need to deliver energy, protein, vitamins, and minerals, all in a form that they will readily consume. A standard mixture of 50% ground hay (grass or grass/alfalfa mix), 50% concentrate (including cracked or ground grain and starter supplement) can be fairly easy to blend and manage. However, if byproduct feeds such as wheat midds, soy hulls, distillers grains, or corn gluten feed are available and inexpensive, they can be substituted for a portion of the grain component. Silage should be limited to ≤10% in the starter ration but can be increased in later step-up diets.

Avoid the temptation to skimp on QUALITY of starter ingredients; also, avoid the temptation to rush the QUANTITY of starter ration you provide for the calves to eat. When calves have consumed 3% of their body weight of the starter ration continuously for 3-5 days, you can move them up to the next step-up ration. For more information, contact Chris Reinhardt at cdr3@ksu.edu or 785-532-1672.

↳ **Using Sequential Feeding of Optaflexx and Zilmax to Improve Performance and Meat Quality in Cull Cows** - Sixty cull cows were assigned to one of four treatments: (1) Control = concentrate fed for 82 days, (2) Optaflexx = concentrate fed for 57 days and supplemented with Optaflexx for 25 days, (3) Zilmax = concentrate fed for 59 days and supplemented with Zilmax for 20 days with a 3-day withdrawal, and (4) Optaflexx + Zilmax = concentrate fed 34 days and supplemented with Optaflexx for 25 days followed by Zilmax for 20 days with a 3-day withdrawal. Cattle were harvested, carcass data were collected, and muscle tenderness was evaluated. The objectives of this experiment were to determine the effects of implanting and feeding a concentrate ration plus supplementation with Optaflexx® and Zilmax® or a sequence of Optaflexx followed by Zilmax on cow performance, carcass characteristics, and meat tenderness.

Bottom Line.... Feeding a sequence of Optaflexx followed by Zilmax can improve tenderness compared with feeding Zilmax alone and could increase marbling and lean color scores. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Michael Dikeman (785-532-1225; mdikeman@ksu.edu) or Liz Boyle (785-532-1247; lboyle@ksu.edu).

↳ **Validation of Control Diets for Lactose and Fish Meal Replacement Studies in Nursery Pigs** – The objective of this study was to develop and validate control test diets to be used for lactose and fish meal replacement studies in nursery pigs. A total of 180 nursery pigs (PIC, initially 16.6 lb and 28 ± 2 d of age) were blocked by initial weight and randomly allotted to 1 of the following 6 dietary treatments: (1) negative control (NC) diet based on corn-soybean meal, (2) NC + 10% food-grade whey, (3) NC + 10% feed-grade whey, (4) Diet 2 + 4.5% select menhaden fish meal, (5) Diet 2 + 2.25% select menhaden fish meal and 1.25% spray-dried blood cells, and (6) Diet 2 + synthetic amino acids. Diets 4 to 6 also contained 10% food-grade whey. Each treatment had 5 pigs per pen and 6 replications (pens). Diets were formulated to contain 1.37% standardized ileal digestible lysine and 1,495 kcal ME/lb and were fed in meal form. Newly-weaned pigs (21 ± 2 d of age) were fed a common segregated early weaning and transition diet for 7 days then fed the experimental phase 2 diets for 21 d. From d 0 to 7 and 0 to 14, pigs fed the diet containing 10% feed-grade whey tended to have greater ADG and heavier BW than pigs fed the negative control diet, with pigs fed the diet containing 10% food-grade whey being intermediate. Pigs fed the negative control diet with either added food- or feed-grade whey tended to have better F/G than pigs fed the phase 2 diet solely based on corn and soybean meal. Pigs fed phase 2 diets containing either 4.5% select menhaden fish meal or the combination of 2.25% select menhaden fish meal and 1.25% spray-dried blood cells tended to have greater ADG and BW than pigs fed the diet containing 10% food-grade whey. Pigs fed the diet with increased synthetic amino acids had similar ADG and BW compared with pigs fed the diet containing the same food-grade whey without specialty proteins but tended to have poorer F/G than pigs fed the diet containing food-grade whey during d 0 to 7. Overall (d 0 to 21), only numerical differences were observed in ADG, ADFI, F/G, and pig BW among the dietary treatments. More research is needed to evaluate the use of synthetic amino acids as a replacement for high quality protein ingredients in nursery diets. When reviewing data from previous studies, it is apparent that further development of the control diets for testing lactose and fish meal sources is needed so that the predicted response is consistent. More information is available on this trial in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by R.C. Sulabo, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, S.S. Dritz, and J.L. Nelsens.)

↳ **Amino Acid Digestibility of High-Protein Corn Dried Distillers Grains with Solubles in Pigs** – The objective of this experiment was to determine the digestibility of amino acids (AA) in a high-protein dried distillers grains with solubles (DDGS) product. Six growing barrows (initially 50 lb) were surgically fitted with a T-cannula at the terminal ileum to allow for ileal digesta collection. After recovery, the pigs were randomly allotted to 2 dietary treatments in a crossover design with 2 periods. The first diet contained high-protein DDGS (67% of the diet) as the sole protein source; the second was a nitrogen-free diet for determining basal endogenous AA loss. Chromic oxide was added to both diets as an indigestible marker. Ileal digesta samples were collected each period and analyzed for AA concentration. Standardized and apparent ileal digestibilities (SID and AID, respectively) of AA were calculated after chemical analysis of the high-protein DDGS, diets, digesta, and fecal samples. Nutrient composition analysis of the high-protein DDGS showed a CP value of 36.5%, crude fat of 4.8%, and phosphorous content of 0.38%. The AID for lysine, methionine, threonine, and tryptophan were 65.9, 87.0, 72.8, and 76.2%, respectively. Values for SID AA were calculated to be 67.8, 87.5, 75.0, and 78.6% for lysine, methionine, threonine, and tryptophan, respectively. In conclusion, this high-protein DDGS product has greater AA digestibility values than traditional DDGS. Therefore, this product appears well-suited for use in swine diets but needs further evaluation to determine its effects on pig growth performance. 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, J.L. Frobose, J.M. DeRouchey, S.S. Dritz, M.D. Tokach, J.L. Nelsens, and R.D. Goodband.)

UPCOMING EVENTS...

↳ **FAMACHA Training** – Here is a great opportunity for sheep and goat producers to learn more about FAMACHA, which is a system to help control stomach worms (*Haemonchus contortus*) in sheep and goats. It is a simple way to decide which sheep/goats do and do not need treatment. There are still two opportunities to participate in the FAMACHA training:

- 1) September 22, 2009: 5:30 – 9:00 p.m., Saline County Fairgrounds, Salina, KS
- 2) September 29, 2009: 5:30 – 9:00 p.m., Coffey County Fairgrounds, Burlington, KS

You must pre-register to be guaranteed a packet that contains the FAMACHA© card. The packet consists of a color chart, instruction pamphlet, records charts and the training program. A meal will be provided for a minimal cost. For more information or to register for the course, contact Brian Faris (brfaris@ksu.edu; 785-532-1255)

↳ Come help celebrate the 10th anniversary of the **KSU Beef Stocker Field Day** which will be held on Thursday, September 24, 2009 at the KSU Beef Stocker Unit in Manhattan. It's not too late to register for this educational event. The program will include:

- 9:30 Registration/Coffee
- 10:15 Introductions
- 10:30 Buying and Selling Right - *Dr. Kevin Dhuyvetter, KSU*
- 11:15 Panel: Partnering with Feedlots – Who Brings What to the Table?
Jerry Bohn, Pratt Feeders
Dan Dorn, Decatur County Feed Yard
Jim Reeves, JMR Cattle Company
- 12:00 BBQ Lunch by Coco Bolos/Cox Brothers
- 1:00 Thinking Outside the Shots - *Dr. Dan Thomson, KSU*
- 1:45 Panel: Negotiating Custom Grazing Arrangements
Mike Collinge, Hamilton, KS
Tim Miser, Cottonwood Falls, KS
Alan Hess, Alma, KS
- 2:30 - 5:00 *Breakout Sessions*

- Cattle Financing in a Tight Credit Market – *Gary Cotterill, Community National Bank, Chanute, KS*
- Producing Value-Added Cattle – *Brian Bertelson, US Premium Beef*
- Weed and Woody Plant Control for Pastures – *Dr. Walt Fick, KSU*
- Utilization of Byproducts on Pasture – *Dr. Lyle Lomas, KSU*

After the program, stay around for a good old-fashioned Prairie Oyster Fry, Pitchfork Fondue and Dutch Oven Desserts. Innovations and applications for the stocker segment will be highlighted during the evening including

- Cattle-handling facilities – *Jon Mollhagen, Moly Manufacturing*
- PI testing – *Gary Anderson, KSU Diagnostics Lab and Cliff Cain, Enfer Diagnostics*
- Record-keeping systems – *Danna Schwenk, CattleXpert Management Software*

Pre-registration fee is \$30.00 by September 15 or \$40.00 at the door. For complete details, including on-line registration, visit www.KSUbeef.org. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).



↳ The **Kansas State University Wildcat Steer Futurity** is an educational program that allows beef cattle producers to learn about the cattle feeding industry, and provides producers with an information feedback system regarding the performance and carcass composition of their cattle. A minimum entry of five steers per producer is required. Only cattle weighing 450-850 pounds at feedlot entry will be accepted. Cattle will be received mid-November. Receiving date will be determined after nominations have been received.

Nomination forms are due by October 1, 2009. For a complete list of Program Guidelines, along with a nomination form, contact Justin Waggoner (620-275-9164; jwaggon@ksu.edu) or Karl Harborth (620-431-1530; harborth@ksu.edu).

- ↳ **Developing and Implementing Your Company's HACCP Plan for Meat, Poultry, and Food Processors** will be held October 14-16, 2009, 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://animalscience.unl.edu/haccp/KansasCity.html>. The workshop fee is \$295, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Liz Boyle (lboyle@ksu.edu; 785-532-1247).
- ↳ Join us for the second "**Youth Livestock Listening Session**" on November 12 at the Kansas State Fairgrounds in Hutchinson. We will begin at 1:00 p.m. Representatives from Kansas State Fair, Kansas Junior Livestock Show, Kansas FFA, Kansas 4-H, and K-State Research and Extension will be on hand to hear your comments and suggestions. Please contact Sharon Breiner, Youth Livestock Coordinator, with questions at (785) 532-1264 or sbreiner@ksu.edu. If you are unable to attend, please send written comments to Sharon Breiner.
- ↳ The **2009 KSU Swine Day** will be held Thursday, November 19, at the KSU Alumni Center. The Swine Day will include an expert panel, coordinated by Steve Henry from the Abilene Animal Hospital on the "*Impact of H1N1 Virus on the Global Swine Industry.*" The panel will include Dr. Henry along with Dr Ingrid Garrison, State Public Health Veterinarian, and Dr. Richard Hesse, Director of Diagnostic Virology at KSU. The program will also feature "*What Do Current Economic Signals Mean for the Future of the Swine Industry?*" presented by Kent Bang, Central Plains Ag Group, Bank of the West, Omaha, Nebraska. *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 will be coming shortly to www.KSUswine.org. For more information, contact Jim Nelssen (jnelssen@ksu.edu; 785-532-1251).
- ↳ The **2009 Range Beef Cow Symposium** is scheduled for December 1 – 3, at the Casper Events Center in Casper, Wyoming. Focused on beef production issues, this meeting regularly attracts 8000 to 1,200 attendees and more than 80 agribusiness booth vendors for the three day event. One of the most popular aspects of the Range Beef Cow Symposium is the the nightly "Bull Pen Sessions" where the invited speakers are brought back as panelists and are available for informal questions-and-answer sessions. For more details on the program and registration, contact Steve Paisley at the University of Wyoming (307-837-2000; spaisley@uwyo.edu). For more information, contact Sandy Johnson (785-462-6281; sandyj@ksu.edu)

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
September 22, 2009	FAMACHA Training	Salina, KS
September 24, 2009	KSU Beef Stocker Field Day	Manhattan
September 29, 2009	FAMACHA Training	Burlington, KS
October 1, 2009	Nominations for Wildcat Steer Futurity Due	
October 14-16, 2009	HACCP Plan Training	Overland Park, KS
November 12, 2009	Youth Livestock Listening Session	Hutchinson, KS
November 19, 2009	KSU Swine Day	Manhattan
December 1-3, 2009	Range Beef Cow Symposium	Casper, WY

AS&I FACULTY SPOTLIGHT



Scott Schaake (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 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.



Jeff Stevenson (jss@k-state.edu; 785-532-1243)
Professor/Reproduction of the Bovine

Dr. Jeff Stevenson was born June 15, 1951, in Salt Lake City, Utah, and attended elementary and secondary schools in Salt Lake City before relocating to Gresham, Oregon in 1967 and graduating from Gresham Union High School in 1969. He attended Utah State University (USU) from 1969-1970 and from 1972-1975, graduating with a B.S. in Dairy Science in 1975. During summers, Jeff worked on his uncle's dairy farm in southern Idaho and spent two school years milking cows on a private dairy in Smithfield, Utah and feeding experimental cows for Dr. Melvin C. Anderson, USDA-ARS in Logan, Utah. While a student at USU, he was active in Alpha Zeta (officer) and Dairy Club for 2 and 3 years, respectively. He was honored as Utah's Dairy Shrine Student Recognition Awardee in 1975. While a student at USU, he married Barta Lee Morrill in 1974.

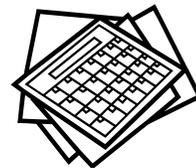
He entered graduate school in Dairy Science at Michigan State University in 1975 and served as a graduate research and teaching assistant until completing the requirements for a M.S. in Dairy Science in 1977. That same year, he relocated to Raleigh, North Carolina, and enrolled in a Ph.D. program in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

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

Jeff received the 1990 American Dairy Science Association Agway Inc. Young Scientist Award, 1998 National Association of Animal Breeders Research Award, 2002 American Dairy Science Association Pharmacia Animal Health Physiology Award, 2002 Kansas State University Research and Extension Team Award, 2006 Kansas Dairy Leader, and the 2009 American Society of Animal Science Animal Management Award. In June, 1992, he is a monthly contributing author for the Artificial Breeding column in *Hoard's Dairyman*. He is the author or coauthor of 132 peer-reviewed journal articles, 15 invited papers, 9 book chapters, 186 popular press articles, and 127 paper presentations at professional meetings.

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, or phone 785-532-1267.