



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

August, 2014

News from KSU Animal Sciences

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- Management Minute
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- 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.

➤ **Flint Hills Beef Fest planned for August** - Make plans now to attend the Flint Hills Beef Fest which will be held August 22-24, 2014. Founded in 1986, the Flint Hills Beef Fest is an annual celebration of the grass cattle industry for which the Flint Hills region of Kansas is known. Cattle Division Events include a Grass Futurity Contest, Live Stocker Cattle Show, Feedlot Contest and Carcass Competition. Events will take place on the Lyon County Fairground in Emporia, Kansas. For more details and a complete schedule of events, please visit <http://www.beefest.com>.

➤ The **Kansas Livestock Sweepstakes** has been scheduled for August 23-24, 2014. This all-around event will feature contests in Livestock Judging, Meats Judging, Livestock Skillathon, and Livestock Quiz Bowl. A special prize will be awarded to the county that does the best in all four contests. The tentative schedule includes:

Saturday, August 23

- 7:30 a.m. Sweepstakes Check-in Desk Opens (Coaches only) and Quiz Bowl Registration Opens (Coaches only) - Weber Hall West Lobby
- 8:00 a.m. Quiz Bowl Participants Qualifying Exam (30 Minutes) - Weber 123
- 8:15 a.m. Livestock Judging Check-in Opens (Coaches only) - Weber Hall West Lobby
- 9:00 a.m. Livestock Judging Contest Begins - Meet in Weber 123
- 12:00 p.m. Lunch for non-livestock judging participants (time approximate, must pre-order) – Weber Hall; Quiz Bowl Teams Posted by lunch throughout Weber Hall
- 3:00 p.m. (Time is Approximate) Break after the conclusion of livestock judging for dinner on your own and to check into hotel
- 5:00 p.m. (Time is Approximate) Quiz Bowl Competitions & Finals – Meet in Weber 123; Competition Rooms – Weber 111 & 146

Sunday, August 24

- 6:30 a.m. Meats Judging Contest Registration (Coaches only) – Weber 111
- 7:00 a.m. Meats Judging Contest Begins – Weber 111
- 10:00 a.m. Skillathon Check-in Opens (Coaches only) – Weber West Lobby
- 11:30 a.m. Lunch for participants (time approximate, must pre-order online)
- 12:00 p.m. Skillathon Begins for all Counties/Districts – Weber 123
- 4:00 p.m. Ice Cream Social -Weber West Hall Lobby; Awards Presentation - Weber 123 (We will proceed with the closing as quickly as possible following the Meats Judging contest and Skillathon tabulation to accommodate travel.)

Rules, schedule, and online registration information can be found at www.YouthLivestock.KSU.edu. For more information, contact Hilary Hawkins (hbhawkins@ksu.edu; 785-532-1264).



☞ **KSU Beef Stocker Field Day to be held September 25** - The 2014 KSU Beef Stocker Field Day will be held on Thursday, September 25 at the KSU Beef Stocker Unit in Manhattan. The schedule is as follows:

- 9:30 a.m. Registration/Coffee
- 10:15 a.m. Introductions
- 10:30 a.m. Forward Planning on the Implication of the Herd Rebuilding Phase – Where Does the Stocker Segment Fit? – *Dr. Glynn Tonsor, KSU*
- 11:15 a.m. Producer Panel – Our Receiving and Growing Philosophies
 Moderator: *Wes Ishmael, Contributing Editor, BEEF magazine*
Brian Barnhardt, Lebo, KS
Chad Cargill, Isabel, KS
Jaret Moyer, Emporia, KS
Jay Rezac, Onaga, KS
- 12:15 p.m. Barbeque Brisket Lunch – View posters/demonstrations
- 1:15 p.m. Stocker Parasite Control: A New Frontier - *Dr. Joe Dedrickson, Merial Animal Health*
- 2:15 p.m. Management Strategy Response to the FDA Phase Out of Antibiotics – *Dr. Mike Apley, KSU*
- 3:00 p.m. Break
- 3:30 p.m. Breakout Sessions (30 minutes/breakout)
 Coccidiosis: The Robber Baron – *Dr. Gregg Hanzlicek, KSU*
 Livestock Watering Options -
 Evaluating Environmental Impact of Small Receiving/Growing Facilities –
 KSU Watershed Specialists
Ron Graber, Central Kansas *Herschel George, Southeast Kansas*
Will Boyer, Northeast Kansas *Jeff Davidson, Flint Hills*
Stacie Minson, Big Creek, Middle Smoky Hill River
- 5:30 p.m. Cutting Bull's Lament 2014

The day will conclude with a good old-fashioned Prairie Oyster Fry and Call Hall ice cream. Pre-registration is \$25 by September 15. For complete details and registration, visit www.KSUbeef.org. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).

☞ **OSU to host national beef reproduction conference** - Cow-calf producers and large-animal veterinarians should plan now to attend the 2014 Applied Reproductive Strategies in Beef Cattle Conference hosted by Oklahoma State University's Division of Agricultural Sciences and Natural Resources Oct. 8-9.

The conference is an annual Beef Reproduction Task Force event that alternates from state to state. The task force is a multi-state extension activity in cooperation with the North Central Agricultural and Natural Resources Program Leaders Committee and the Cooperative State Research, Education and Extension Service. Key goals of the Beef Reproduction Task Force include promoting widespread adoption of reproductive technologies among cow-calf producers, educating producers in management considerations that will increase the likelihood of successful breeding of animals through artificial insemination and educating producers about marketing options to capture benefits that result from use of improved reproductive techniques.

A schedule of events is available online at <http://www.beefextension.com/genetics>. The two-day conference will take place in the OSU Student Union, located on the university's Stillwater campus. Anyone seeking additional information about the Oct. 8-9 conference should contact Megan Rolf by email at mrolf@okstate.edu or Dan Stein by email at daniel.stein@okstate.edu.

☞ **KSU Swine Day planned for November** - The 2014 KSU Swine Day will be held Thursday, November 20, at the KSU Alumni Center. Mark the date on your calendar and watch for more details.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
August 22-24, 2014	Flint Hills Beef Fest	Emporia, KS
August 23-24, 2014	Kansas Livestock Sweepstakes	Manhattan
September 25, 2014	KSU Beef Stocker Field Day	Manhattan
October 8-9, 2014	Applied Reproductive Strategies in Beef Cattle	Stillwater, OK
November 20, 2014	KSU Swine Day	Manhattan

WHAT'S NEW.....

Management Minute "Admonishing"

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

I once had a boss who said, "I welcome controversy in order to resolve it." And that guy was fearless with respect to taking on challenging business and interpersonal issues in the workplace; he didn't just talk it, he walked it.

Many employees offer tremendous value, commitment, loyalty, and work ethic to the organization. But many also may have one or two niggling issues which on rare occasion outshine their positive traits and, eventually, scream out to be addressed by the team leader.

If you've been keeping up with your obligation as a leader and mentor to "catch them doing something right" frequently, daily, and on an ongoing basis, then you have the right and the obligation to step in and address this valued employee's issue.

No decent leader relishes the responsibility to deal with some tough, disruptive issues in the workplace, especially in a valuable, respected team mate. But the good leader "welcomes controversy in order to resolve it."

It's been said thousands of times to lead with a positive, follow with correction, and finish with another positive. However, if the only time the person ever hears a positive from you is right before the correction, it will be predictable, and dubious at best. In other words, it will be perceived as a feeble, deceptive, management tool and you will be regarded as disingenuous---in short, a poor leader.

Instead, if you've been diligent---and genuine---in your regular and frequent acknowledgement of each team mate's valued efforts and contribution, then the opening positive will instead be accepted for what it is: a genuine compliment. This point is potent and dense: if they hear and accept the opening compliment, they are open and willingly vulnerable to the admonishment in the interest in making themselves and the team better. On the other hand, if they hear empty platitudes used only to get quickly from the "carrot" through to the "stick", they won't respect the intention of the corrective intervention, they won't welcome it, and they won't respond out of willing cooperation but instead out of begrudging toleration of an inept boss.

Perhaps the broader point is this: the management books all got it right. But if the methods promoted in the best-selling management book du jour are used simply as superficial methods to puppet employees into thoughtless compliance, you will get a result commensurate to your inconsequential investment. Conversely, if you invest in people as valuable, and flawed, and respect-worthy contributors, all through the day, week, and year, those very same suggested methods can steer you away from managerial missteps and toward hard-won leadership prowess.

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

Feedlot Facts "A Good Year for Early Weaning"

↪ **Feedlot Facts** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist **"A Good Year for Early Weaning"**

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

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

Although the actual amount of milk and grass consumed by calves varies greatly, it can be stated broadly that the calf's first choice for nutrients, as long as he can get away with it, is his mother's milk.

Feedlot Facts – “A Good Year for Early Weaning” (cont.)

Calves are fully functional ruminants by 60-90 days of age, and are fully capable of making use of good quality forage, but milk is always their first choice for nutrients, rather than their last. So every day they will go to their mother and consume as much milk as they can. And as the calf grows and its appetite climbs, mother's milk decreases, effectively pushing the calf to go to grass more and more in order to supplement his nutrition.

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

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

So if the cow goes into the winter in low body condition, we need to feed those reserves back into the cow or risk late breeding next summer and late calving in subsequent years or even open cows next fall. It is estimated that for each 2 weeks we leave cows grazing late season pasture with calves after about September 1, cows lose about 0.25 of a condition score. And each full condition score requires about 80-100 lbs of cow body weight to regain.

If calves are only gaining 1-1.5 lb per day on their dam late in the season, we can do better. By weaning (especially utilizing low-stress weaning methods), we can improve the nutritional supply available to the calf, meeting all the needs for energy, protein, vitamins, and minerals. Weaning during favorable weather also has the advantage of reducing stress and the risk of disease brought on by inclement, cold, wet, fall weather.


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


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

It's time to reconsider what we do and why we do it. “Because we've always done it this way...” is the worst reason to do anything. If there are legitimate, defensible reasons for what you do on your operation, then keep on truckin'. If not, seek wise counsel to find perhaps better, more efficient, and more effective practices that may lead to better outcomes for your calves, your cows, and hopefully, your bottom line.

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

 **Assistant Professor, Extension Specialist, Beef Veterinarian** – The Department of Animal Sciences and Industry at Kansas State University seeks applicants for an **Assistant Professor, Extension Specialist, Beef Veterinarian position**. This position is full-time, 12-month, tenure track, 70% Extension, 20% Research, 10% Teaching. An earned D.V.M. or equivalent degree is required at time of hire.. Review of applications begins August 20 2014 and continues until position is filled. View complete position announcement at: <http://www.asi.ksu.edu/about/job-announcements.html>.

 **Assistant Professor, Food Microbiology** – The Department of Animal Sciences and Industry at Kansas State University seeks applicants for an **Assistant Professor, Food Microbiology position**. This position is full-time, 12-month, tenure track, 60% Research, 40% Teaching. A Ph.D. or equivalent in Food Science, Animal Science, or related discipline strongly focused on food microbiology is required. Review of applications begins August 20, 2014 and continues until position is filled. View complete position announcement at: <http://www.asi.ksu.edu/about/job-announcements.html>.

 **Instructor, Equine Sciences and Rodeo Team Coach** – The Department of Animal Sciences and Industry at Kansas State University seeks applicants for an **Instructor, Equine Sciences and Rodeo Team Coach position**. This position is a full-time, 12-month, non-tenure track, term position. A B.S. degree or equivalent is required; M.S. preferred. Review of applications begins August 27 2014 and continues until position is filled. View complete position announcement at: <http://www.asi.ksu.edu/about/job-announcements.html>.

↪ **High-Dose Implants Improve Gain and Efficiency in Feedlot Steers** – The objective of this trial was to conduct a meta-analysis of existing data from peer-reviewed as well as industry sources to compare the effects of using implants containing 20:200 (mg estradiol:mg trenbolone acetate) vs. 24:120 on feedlot performance and carcass traits of steers. Individual trials were pooled to analyze the overall effects of different implant doses on feedlot performance and carcass traits. Implanting with 20:200 increased average daily gain and reduced feed:gain and percentage of carcasses grading Choice or greater compared with 24:120.

Bottom Line...Modern production practices and costs of production mandate that small improvements in productivity at the individual animal level, if real, must be investigated and captured. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

↪ **Performance and Health Effects of Zuprevo 18 in Newly Received, Highly Stressed Beef Cattle** – This experiment was designed to determine the health and performance effects of Zuprevo 18% (tildipirosin, 4 mg/kg body weight; Merck Animal Health; Summit, NJ) during a 42-day backgrounding period when administered to high-risk transported cattle within 24 hours after arrival. 721 high-risk calves, over 4 phases from 2012–2013, were randomly assigned to one of two experimental treatments: Control (no metaphylaxis), or mass medication on arrival with Zuprevo. Calves were fed a common diet for 42 days and monitored once daily for clinical signs of bovine respiratory disease. Calves were weighed at day 42, and dry matter feed consumption, average daily gains, feed efficiencies, morbidity, mortality, first-treatment success rates, chronicity rates, and case fatality rates were determined for each pen

Bottom Line...Pens given Zuprevo on arrival had significantly lower respiratory disease morbidity rates and fewer chronic cattle compared with pens that were not mass-medicated on arrival. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu).

↪ **Evaluation of Increasing Peptone Blend on Nursery Pig Performance from 15 to 40 lb** - A total of 270 pigs (PIC 327 × 1050, initially 15.7 lb BW) were used in a 28-d trial to evaluate the effects of increasing levels of a new peptone blend by-product on nursery pig growth performance. The product is the result of the pharmaceutical extraction of chondroitin sulfate from bovine cartilage and processing to form the peptone blend, which was mixed with soybean hulls and drum-dried. Pigs were weaned at 21 d of age and were fed a common pelleted diet for 5 d prior to the start of the experiment. Each treatment had 8 replicate pens and 6 or 7 pigs per pen. The 5 experimental treatments were: (1) a diet with 1% blood meal and 2% select menhaden fish meal (positive control), (2) a diet with no added specialty protein source (negative control), (3) a diet containing 4% peptone blend, (4) a diet containing 8% peptone blend, or (5) a diet containing 12% peptone blend. Experimental diets were fed for 14 d, then a common Phase 2 diet was fed for an additional 14 d to determine the residual treatment effects on growth performance.

From d 0 to 14, pigs fed increasing peptone blend had increased ADFI but poorer F/G. Pigs fed the positive control diet had increased ADFI compared with pigs fed the negative control diet. From d 14 to 28, when pigs were fed a common diet, pigs previously fed increasing peptone blend had increased ADFI and poorer F/G. Similar to d 0 to 14 data, pigs previously fed the positive control diet had increased ADFI compared with pigs previously fed the negative control diet from d 14 to 28. Overall (d 0 to 28), pigs fed diets with increasing peptone blend for the first 14 d had increased ADFI and poorer F/G with no differences in ADG. Pigs fed the positive control diet had increased overall ADFI compared with pigs fed negative control diet, with no differences in ADG or F/G.

Bottom Line...The peptone blend is not a suitable replacement for blood meal and select menhaden fish meal in nursery pig diets from 15 to 24 lb. Up to 4% of the peptone blend was a suitable replacement for soybean meal in the negative control diet, which contained no specialty protein sources. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by M.A.D. Goncalves, J.R. Flohr, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, and J.C. Woodworth.)

↪ **Effects of Copper Source (Intellibond C or Copper Sulfate) on Growth Performance, Carcass Characteristics, Pen Cleanliness, and Economics in Finishing Pigs** - A total of 1,143 pigs (PIC 337 × 1050, initially 55.3 lb) were used to determine the effects of tribasic copper chloride (TBCC; Intellibond C; Micronutrients Inc., Indianapolis, IN) or copper sulfate (CuSO₄) on growth performance, carcass characteristics, pen cleanliness, and economics in a 111-d study. Pens of pigs were randomly allotted to 1 of 6 dietary treatments and balanced based on average pen weight in a completely randomized design with 25

to 28 pigs per pen and 8 pens per treatment. Treatment diets included a corn-soybean meal positive control, a high by-product diet with 30% dried distillers grains with solubles (DDGS) and 15% bakery meal (negative control), or the negative control diet with 75 or 150 ppm copper from CuSO₄ or TBCC. All diets were formulated on a standardized ileal digestible (SID) amino acid basis and were 0.05% below the pig's estimated lysine requirement throughout the trial. Pigs fed the corn-soybean meal positive control diet had improved F/G and tended to have increased ADFI compared with those fed the negative control, high by-product diet. Pigs fed increasing copper had improved ADG and ADFI but tended to have slightly poorer F/G. Although no interactions were observed between copper source and level, pigs fed increasing CuSO₄ had increased ADFI, whereas pigs fed increasing TBCC had increased ADG, ADFI, and final BW.

Increasing added copper improved HCW and loin depth, with the greatest response in HCW for pigs fed TBCC. For pen characteristics, pigs fed the high by-product diet had greater manure buildup and longer wash time than those fed the corn-soybean meal control diet. Addition of copper to diets did not influence pen wash time and had no impact on manure buildup. Economics were calculated on both a constant days on feed and constant market weight basis. Pigs fed either source of copper to a constant days on feed had an increase in feed cost per pig as well as a higher revenue per pig. When economics were calculated on feeding pigs to a constant BW, facility costs decreased with feeding copper. Although no significant differences were detected in income over feed and facility cost for added copper, the greatest numerical advantage to individual copper sources occurred at 75 PPM for CuSO₄ (\$0.26) and at 150 ppm for TBCC (\$1.35 per pig).

Bottom Line... Feeding increased levels of copper sulfate or TBCC in diets formulated slightly below the estimated SID lysine requirement increased growth rate and feed intake, resulting in increased final BW and HCW. Pigs fed TBCC at 150 ppm had the highest final BW (+12.8 lb) and HCW (+7.7 lb). In addition, the use of added copper in the diets did not increase time required to wash pens. More research is needed to determine whether the amino acid concentration influences the response to copper source and level in diets for growing and finishing pigs. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by K.F. Coble, S.S. Dritz, J. Usry, M.D. Tokach, J.M. DeRouchey, R.D. Goodband, and J.L. Nelssen.)



Amino Acid Digestibility and Energy Concentration of Fermented Soybean Meal and Camelina Meal for Swine

- Two experiments were conducted to determine the amino acid and GE digestibility of fermented soybean meal and camelina meal. For Exp. 1, to determine standardized ileal amino acid digestibility, five growing gilts (BW= 60.4 lb) were surgically fitted with T-cannulas at the terminal ileum and randomly allotted to 1 of 3 dietary treatments in a crossover design with 3 periods. The basal diets were corn starch-based with adequate vitamins and minerals to meet the pigs' requirements. The experimental treatments consisted of the basal diet with 30% fermented soybean meal or 39.25% camelina meal as the sole protein sources. A third nitrogen-free diet was also fed to determine basal endogenous amino acid losses.

For Exp. 2, to determine energy concentrations, 6 growing barrows (BW = 64.8 lb) were randomly allotted to 1 of 3 dietary treatments in a crossover design with 3 periods. The corn-based treatment diets had 25% fermented soybean meal or 30% camelina meal. A third corn basal diet was also offered to allow for energy calculations by the difference method. All diets contained 0.25% titanium oxide as an indigestible marker. Digesta samples were collected and analyzed for amino acid concentrations, and fecal samples were collected and analyzed for energy concentrations. After chemical analysis, standardized and apparent ileal digestible (SID and AID, respectively) amino acids were determined, and DE, ME, and NE were calculated for each ingredient. On a DM basis, GE, DE, ME, and NE were 1,973, 1,377, 1,232, and 880 kcal/lb, respectively, for fermented soybean meal and 2,075, 1,150, 1,041, and 715 kcal/lb, respectively, for camelina meal. In fermented soybean meal, the AID for lysine, methionine, threonine, and tryptophan were 63.5 ± 7.5, 84.6 ± 1.0, 74.0 ± 3.5, and 81.8 ± 1.4%, respectively, and SID values were 71.1 ± 6.2, 89.2 ± 2.1, 88.0 ± 3.1, and 93.7 ± 2.0%, respectively. For camelina meal, the AID for lysine, methionine, threonine, and tryptophan were 47.3 ± 7.7, 74.6 ± 3.3, 39.7 ± 6.8, and 67.3 ± 8.3%, respectively, and SID values were 53.9 ± 6.4, 77.7 ± 3.5, 51.6 ± 6.7, and 79.7 ± 6.8%, respectively.

Bottom Line... The SID availability for amino acids in fermented soybean meal were relatively high and similar to published values for soybean meal, with the exception of lysine. Standardized ileal digestible amino acid availability values for camelina meal were low, indicating that it may have contained the high glucosinolate concentrations generally observed in camelina meal. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by A.B. Graham, J.M. DeRouchey, R.D. Goodband, M.D. Tokach, S.S. Dritz, and R.C. Thaler.)

AS&I Faculty Spotlight



Jennifer Bormann (jbormann@k-state.edu; 785-532-1222)
Associate Professor/Genetic Improvement of Beef Cattle

Originally from Muscatine, Iowa, Dr. Jennifer Minick Bormann grew up with Shorthorn cattle and horses. She earned a B.S. in Animal Science from Iowa State University in 1997, an M.S. in Animal Science from Oklahoma State University in 1999, and a Ph.D. in Animal Breeding and Genetics from Iowa State University in 2004. She joined the faculty at Kansas State University in 2004 with a 75% teaching and 25% research appointment. Dr. Bormann specializes in beef breeding and genetics and has worked on a number of projects, including collaborations with the NCBA and the American Angus Association. Currently, she teaches Genetics, Animal Breeding Principles, Advanced Animal Breeding, Equine Genetics and Introductory Horse Lab, and advises undergraduate students. She also is the head

advisor for the KSU Pre-Vet Club.

Dr. Bormann, her husband Dale, daughter Kate, and son Luke reside south of Manhattan with their horses and dogs.



James Marsden (jmarsden@k-state.edu; 785-532-1952)
Regents Distinguished Professor/Meat Science

James Marsden joined the ASI faculty in 1994 as the Regent's Distinguished Professor of Meat Science. He has a 100% research appointment. He also serves as the Associate Director of the National Agriculture Biosecurity Center – located at KSU.

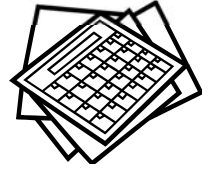
His research focus has been on the safety of meat products. This work has included the control of E. coli O157:H7 in raw ground beef and other processed beef products and Listeria monocytogenes in processed meats. He also acts as the Senior Science Advisor for the North American Meat Science Association and has been involved in food safety training for the meat industry. Dr. Marsden is the author of numerous publications and book chapters on food safety and quality and is the recipient of awards for research and teaching.

He serves on a number of Advisory Boards for companies that provide food safety technologies to the meat industry and is a regular contributor to the television program –“World Business Review with Alexander Haig”. He has also appeared on numerous television news programs as a food safety expert. Dr. Marsden will be inducted into the Meat Industry Hall of Fame in September and writes a regular blog in “Meatingplace” that addresses food safety issues.

He enjoys spending time with his wife and five children and two grandchildren. His hobbies include collecting rare books, music and theater.

What Producers Should Be Thinking About.....

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



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

Cowherd Management

- Given unforeseen weather and market price volatility, price byproducts, grains and other feedstuffs on a per nutrient basis.
- Do you have sufficient harvested forage to encounter a potentially severe winter feeding season? Conduct an inventory of harvested forages and determine if you have an adequate supply on hand.
- Pregnancy Check.
- Cull cows because of:
 - ◆ Open.
 - ◆ Late vs. Early calving.
 - ◆ Soundness - udder, feet/legs, eyes, teeth, disposition.
 - ◆ Productivity - Most Probable Producing Ability (from herd performance records).
 - ◆ Disposition
- 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.
- If body condition scores warrant it, you may want to start feeding supplements in late October 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
(heifers may need more supplement than older cows)
 - ◆ Supplement nutrients that are most deficient.
 - ◆ Compare supplements on a cost per pound of nutrient basis.
 - ◆ KSU research has reported early winter supplementation is not necessary if grazing forage supplies are adequate. Third trimester cows have had the ability to achieve their target calving weights with supplementation.
- Utilize crop residues. Grazing crop aftermath can reduce daily cow costs by 50¢ or more.
 - ◆ Strip graze or rotate fields to improve grazing efficiency.
 - ◆ Average body condition cows can be grazed at 1 to 2 acres/cow for 30 days assuming normal weather.
- Consider feeding cull cows to increase value, body weight, and utilize cheap feedstuffs. Seasonal price trends have allowed producers to take advantage of maximum profit opportunities with cull cow feeding programs. Healthy cows can gain extremely well on well balanced diets.
- Check individual identification of cows. Replace lost tags or redo brands.

Calf Management

- ☑ Wean calves:
 - ◆ Reduce stress. Provide a clean, dust-free, comfortable environment.
 - ◆ Provide balanced nutritional program to promote weight gain and health.
 - ◆ Observe feed and water intake. Healthy, problem free calves have large appetites.
 - ◆ Observe calves frequently, early detection of sickness reduces medical costs and lost performance.
 - ◆ Vaccinate calves and control internal/external parasites through veterinary consultation (ideally done prior to weaning).
 - ◆ Vaccinate all replacement heifer candidates for brucellosis if within 4-10 months of age.
 - ◆ Use implants and feed additives to improve efficient animal performance.
- ☑ Weigh all calves individually. Allows for correct sorting, herd culling, growing programs, replacement heifer selection, and marketing plans.
- ☑ Participate in Whole Herd Rewards, Performance Plus, and(or) other ranch record/performance systems.
- ☑ Finalize plans to merchandise calves or to background through yearling or finishing programs.
 - ◆ Consider feedstuff availability.
 - ◆ Limit feeding high concentrate diets may be a profitable feeding program.
- ☑ Select replacement heifers which are:
 - ◆ Born early in the calving season. This should increase the number of yearling heifers bred during the early days of the subsequent breeding season.
 - ◆ Daughters of above average producing cows. Performance traits are moderately heritable traits.
 - ◆ Of the proper frame size to compliment desired mature size and weight.
 - ◆ Structurally correct. Avoid breeding udder, feet and leg problems into the herd.
- ☑ Vaccinate replacement heifers with first round of viral vaccines.
- ☑ Plan replacement heifer nutrition program so that heifers will be at their “target weight” (65% of their mature weight) by the start of the breeding season.

Forage/Pasture Management

- ☑ Observe pasture weed problems to aid in planning control methods needed next spring.
- ☑ Monitor grazing conditions and rotate pastures if possible and(or) practical.
- ☑ Plan winter nutritional program through pasture and forage management.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) type supplement.

General Management

- ☑ Avoid unnecessary stress - Handle cows and calves to reduce shrink, sustain good health, and minimize sickness.
- ☑ Forage analyze for nitrate and nutrient content. Use these to develop winter feeding programs.
- ☑ Repair, replace and improve facilities.
- ☑ 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.*