



News from KSU Animal Sciences

August, 2016

News from KSU Animal Sciences

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UPCOMING EVENTS...

➤ **Entry Deadline Approaching** - Entries for KJLS are due by August 15th. Only online entries will be accepted. The direct link is <https://kansasjls.fairwire.com/>. For further entry details, please visit the KJLS website (www.kjls.org). Late entries will be accepted through August 31st, at double the original entry fee per animal. Please contact KJLS directly with questions regarding show entry.

➤ The **2016 Kansas 4-H Livestock Sweepstakes** will be held Aug. 20-21 on the K-State campus in Manhattan, KS. The entry deadline has passed, but correspondence and reminders about the event will be sent directly to the county agents and coaches who entered teams. The weekend will kick off with the quiz bowl qualifying exam at 8:00am on Saturday morning, followed by the livestock judging contest, then the skillathon. The preliminary quiz bowl rounds will wrap up an action packed Saturday. Sunday will begin with the meat judging contest, followed by the semi-final and final quiz bowl rounds. The awards ceremony for all events will be held on Sunday afternoon. Please refer to the youth livestock website for rules, and details about the event. A tentative schedule includes:

Saturday, August 20

- 7:30 a.m. Sweepstakes Check-in Desk Opens (Coaches only); Livestock Judging Contest Check-in (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 & Orientation – Meet in Weber 123
(Time is tentative, will begin at the conclusion of Quiz Bowl Exam)
- 9:00 a.m. Livestock Judging Contest Begins - Meet in Weber 123
- 12:00 p.m. Lunch is provided for Livestock Judging Contest participants. Non-participants may eat at this time, but must have purchased meal tickets during online registration– Weber Hall
Quiz Bowl Teams and Skillathon Team Round Rotations posted by lunch throughout Weber Hall
- 3:30 p.m. Skillathon Check-in Opens (Coaches Only) – Weber 123
- 4:00 p.m. Skillathon Begins for all Counties/Districts – Weber 123
- 5:30 p.m. Skillathon Team Rotations (designated times will be announced and posted by 12:00 pm) **First flight will begin immediately following skillathon individual rounds.*
- 7:30 p.m. Quiz Bowl Prelims – Meet in Weber 123
Competition Rooms – Weber 111 & 146
**Quiz Bowl Semi-finals & Finals will take place Sunday afternoon.*

Sunday, August 21

- 6:30 a.m. Meats Judging Contest Registration (Coaches only) – Weber 111
- 7:00 a.m. Meats Judging Contest Begins – Weber 111
- 11:30 a.m. LUNCH ON YOUR OWN
- 12:30 p.m. Quiz Bowl Semi-finals – Weber 146 & Umberger 105
- 1:30 p.m. Ice Cream Social -Weber Hall West Lobby
- 2:00 p.m. Quiz Bowl Finals – Umberger 105
Awards Presentation to immediately follow – Umberger 105
**We will proceed with the Awards Program as quickly as possible following the Quiz Bowl Finals and Sweepstakes tabulation to accommodate travel.)*

For more information, contact Lexie Hayes (adhayes@ksu.edu; 785-532-1264).



↪ **2016 Applied Reproductive Strategies in Beef Cattle (ARSBC) Workshop** - The premier national event in beef cattle reproductive management will be held at the Embassy Suites in Des Moines, Iowa, on Sept. 7-8. The Applied Reproductive Strategies in Beef Cattle Workshop will include information for cow-calf producers, bovine veterinarians, industry representatives, extension personnel and students. Online registration and a link to print a form for mailing are on the conference website at <http://www.aep.iastate.edu/arsbc/>. The website also provides the workshop schedule, including a printable version, as well as links to lodging options, sponsorship opportunities, and travel and direction details. For more information, contact Sandy Johnson at sandyj@ksu.edu.

↪ **KSU Beef Stocker Field Day to be held September 22** - The 2016 KSU Beef Stocker Field Day will be held on Thursday, September 22, 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. Beef Cattle Outlook –
Dr. Glynn Tonsor, Agricultural Economist, KSU
- 11:15 a.m. Producer Panel – Pasture Burning Issues – The necessity, alternatives and consequences
Moderator: *Wes Ishmael, Contributing Editor, BEEF magazine*
Clenton Owensby, Kansas State University
Mike Holder, KSU Extension Agent, Chase County
Mike Collinge, Stocker Operator, Hamilton, KS
Matt Teagarden, CEO, Kansas Livestock Association
- 12:15 p.m. Barbeque Brisket Lunch – View posters/demonstrations
- 1:00 p.m. Animal Health Research Update –
Dr. Tim Parks, Technical Services Veterinarian, Merck Animal Health
- 2:00 p.m. Receiving diets: Implications on health and performance –
Dr. Sean Montgomery, Corn Belt Livestock Services and KSU Adjunct Professor
- 2:45 p.m. Break
- 3:00 p.m. Parasite and fly control options –
Dr. Justin Talley, Oklahoma State University
- 3:45 p.m. Technology applications for Beef Cattle Operations –
Dr. Ray Asebedo, Kansas State University
- 4:00 p.m. Beef Cattle Handling –
Dr. Tom Noffsinger, DVM, Benkelman, NE
- 5:30 p.m. Cutting Bull's Lament 2015

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).

↪ **Developing and Implementing Your Company's HACCP Plan** for meat, poultry, and juice processors will be held October 5-7, 2016 in Olathe, KS. Information and registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://haccp.unl.edu>. The workshop fee is \$400 per person, and participants will be presented with a certificate with an International HACCP Alliance seal upon completion of the course. For more information, contact Dr. Liz Boyle at lboyle@ksu.edu or 785-532-1247.

↪ Join us for the 2nd annual **AS&I Family and Friends Reunion to be held on Friday, October 7, 2016**, from 6:00 – 9:30 p.m. at the Stanley Stout Center, 2200 Denison Avenue, Manhattan, Kansas. Last year's event was truly amazing with over 1,100 family and friends reuniting at the inaugural event. The Don L. Good Impact Award will be presented to Certified Angus Beef, LLC. Other activities will include great food, live music, Junior Wildcat Barn Yard and more surprises!! Check www.asi.k-state.edu/familyandfriends for updates.



The new **K-State Ranching Summit** which will be held Friday, October 7, at the K-State Student Union Ballroom. The program will begin at 9:30 a.m. with registration and will conclude by 4:30 p.m. A tentative schedule includes:



Agenda

- 9:30 – 10:00 AM Registration and social
- 10:00 – 10:10 AM Welcome, Goals
- 10:10 – 10:55 AM Defining the unit of profit in cow/calf operations
Burke Teichert, Teichert Consulting
- 10:55 – 11:55 AM Evaluating the cost of alternative and new grazing opportunities
Mykel Taylor and Dustin Pendell, Kansas State Univ., Ag. Economics
- Noon – 12:45 PM Lunch (45 min)
- 12:45 – 1:30 PM Solving complex problems in ranching
Rich Machen, King Ranch Institute for Ranch Management
- 1:30 – 2:15 PM Profitable systems approaches to ranch (resource) management
Trey Patterson, Padlock Ranch
- 2:15 – 2:30 PM Break
- 2:30 – 3:15 PM Farm Economy and Financial Implications
Allen Featherstone, Kansas State Univ., Ag. Economics
- 3:15 – 4:00 PM Building communities to support ranching in 2050
Chuck Schroeder, Rural Futures Institute, Univ. of Nebraska
- 4:00 – 4:30 PM Q & A with all speakers

Watch for more details on registration and schedule updates at www.KSUbeef.org. For more information, contact Bob Weaber (bweaber@ksu.edu; 785-532-1460), Sandy Johnson (sandyj@ksu.edu; 785-462-6281), or Justin Waggoner (jwaggon@k-state.edu; 620-275-9164).

| CALENDAR OF UPCOMING EVENTS | | |
|------------------------------------|---|-------------------|
| Date | Event | Location |
| August 16, 2016 | KLA/KSU Ranch Management Field Day | Wallace, KS |
| August 18, 2016 | KLA/KSU Ranch Management Field Day | Junction City, KS |
| August 20-21, 2016 | Kansas 4-H Livestock Sweepstakes | Manhattan |
| September 7-8, 2016 | Applied Reproductive Strategies in Beef Cattle Workshop | Des Moines, IA |
| September 22, 2016 | KSU Beef Stocker Field Day | Manhattan |
| October 5-7, 2016 | HACCP Workshop | Olathe, KS |
| October 7, 2016 | KSU Beef Ranching Summit | Manhattan |
| October 7, 2016 | AS&I Family and Friends Reunion | Manhattan |

WHAT'S NEW.....

Management Minute "Teaching"

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

"Teaching"

"*There's no leadership without teaching,*" said a speaker at a conference I recently attended. And at the time it felt like one of those sayings that at once seems obvious and profound at the same time. But the more I unpacked that statement, I decided it wasn't obvious at all, and yet needs to be internalized by all managers.

How rarely do the management books and pamphlets and websites discuss the teaching element of management. But at its very core, that's exactly what management needs to be about.

We talk about managing budgets and line items and forecasting and development, but how intentional are we as managers taking our teaching role? If you've accepted the role of manager, then you are also both a mentor and a teacher, and there is a hefty responsibility that goes with both of those.

So hefty in fact, many simply shirk the responsibility and ignore this necessary function of their title and their office, because it's "easy" to manage numbers and line items and budgets, but managing people is difficult. Teaching can be frustrating. "That's not what I signed on for!" you exclaim. Wrong answer.

If you don't actively and intentionally embrace the role of teacher, then you get what you deserve. You'll have direct reports who either (a) don't grow in their abilities and opportunities and will be incapable of growing the organization and changing with the fluid marketplace; or (b) they DO grow (through no contribution of yours) and then leave for a better opportunity, leaving you with only stunted, complacent, mediocre clock watchers.

And if that's what you want, then you are just a manager, not a leader. Leaders lead, and to actively lead, you need to engage with your team members. And once you engage, at an intimate, face-to-face, heart-to-heart level, it will become abundantly clear to you what the people on your team need in order to develop and grow, and you will eagerly and desperately desire to fulfill those needs, because you know that intellectual development is exactly what stands between your organization and greatness.

It's a fatal fallacy to say that leaders only want followers; real leaders want to build and develop new leaders who will carry the organization forward. That is the legacy of the real leader: the new leaders they have trained who follow in their path after they choose to step aside. If you refuse to teach and develop your people, your legacy will retire with you and your shadow will fade with the next sunrise.

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

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

"Preconditioning for Profit"

Vaccine and antimicrobial technologies continue to improve at a breakneck pace. Yet we continue to see that calves which are unprepared for life in the feedlot and which undergo significant stress during and after weaning *en route* to the feedlot will have morbidity upwards of 30% and first treatment success is often only about 50%. Calves which get mild respiratory disease in the feedlot will have 0.2-0.4 lbs lower ADG and those calves requiring multiple treatments for respiratory disease will gain 0.6 lbs less for the entire feeding period. This translates to about 15 lb less carcass weight and 10-15% fewer choice carcasses. It pays to keep calves healthy.

Preconditioning can mean different things to different people, from giving calves a single vaccination prior to weaning, all the way up to 2 full rounds of vaccination, before and after weaning, weaning the calves from their dams for 45 to 60 days, and transitioning the calves onto a total mixed ration, eating from feedbunks, and drinking from waterers. As far as animal performance is concerned, the extent of preconditioning needed to minimize problems at the feedlot and maximize feedlot performance depends on the extent of stress imposed on the calf during transition.

Feedlot Facts "Preconditioning for Profit"

↪ **Feedlot Facts – “Preconditioning for Profit”** (cont.)

Recent studies here at K-State suggest that single-source calves shipped 4 hours to a feedlot will benefit from pre-weaning vaccination, weaning, and feeding for at least 2 weeks before shipment to the feedlot. However, if calves are going to be shipped more than 8 hours from home, they will be commingled with other sources of calves either in transit or upon arrival at the feedlot, and are likely to experience adverse weather conditions during the transition period to the feedlot, vaccination and weaning for 6-8 weeks before shipment would be preferred.

Investing time, technology, and labor into the calf crop has very real costs for the rancher. But the high purchase price of weaned calves entering the feedlot means the financial risk of respiratory disease and the uncertainty that respiratory disease causes feedlot producers has very real costs as well. Many feedlot producers are willing to pay ranchers a premium to mitigate some of this disease risk which causes the feedlot economic uncertainty---consider it “biological risk management.” When certified preconditioned calves are sold at special preconditioned calf sales, they have the potential to bring significant premiums over non-preconditioned, “commodity” calves.

The decline in calf prices over the past year or so has drained a substantial amount of dollars from the sale value of weaned calves. Preconditioning and effective targeted marketing of your value-added calves to buyers willing to pay for this value has the potential to gain much of that lost income opportunity back.

Respiratory disease is the most costly disease in the cattle industry, and the greatest factor affecting calf performance in the feedlot. If you can prevent or control disease, you can, to a certain extent, control performance of calves. Feedlots are paying premiums for calves which are prepared for life at the feedlot. Why? Because they perform and are predictable---predictability is the opposite of risk. As a rancher, you can and should get paid for your investments of time, money, and management.

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

↪ The Department of Animal Sciences and Industry at Kansas State University seeks applicants for a **Fellow Post Doc (Applied Ethology and Physiology)**. This is a full-time, 12-month, term position (Job #496048). For position announcement, go to <http://careers.k-state.edu/cw/en-us/job/496048/fellow-post-doc>. Screening of applications begins August 15, 2016, and continues until a suitable candidate is identified. For more information, contact Dr. Lindsey Hulbert at lhulbert@ksu.edu.

↪ **Ruminally-Protected Lysine (Metabolys®) Improves Performance of Growing Beef Cattle**— Synthetic lysine, while routinely added to pig diets, is ineffective in fulfilling lysine requirements of cattle due to extensive degradation by microbes within the rumen. Utilization of lysine can be improved by encapsulating with compounds, such as saturated fats, that minimize degradation by ruminal microbes. The purpose of this experiment was to measure the impact of Metabolys® (H.J. Baker & Bro. Inc., Tulsa, TX), an encapsulated form of lysine sulfate, on rate of gain and feed efficiency in backgrounding cattle.

A total of 448 crossbred heifers (632 ± 31 lb initial body weight) were used in a 112-d growth trial. Heifers were blocked by body weight and randomly allotted to 64 concrete-surfaced pens, with seven animals assigned to each pen, and 16 pens for each of four dietary treatments that provided differing amounts of Metabolys. Diets contained (dry matter basis) 45% brome hay, 25% wet corn gluten feed, 25% steam-flaked corn, and 5% supplement. Supplements provided 0, 15, 30, or 45 grams per heifer daily of Metabolys. Heifers were fed once daily for 112 days. Daily feed intake decreased and average daily gain decreased linearly with each incremental addition of Metabolys, thus improving feed: gain.

Bottom Line.... Feeding Metabolys, a ruminally protected lysine source, is an effective strategy for improving gain and feed efficiency of backgrounding cattle. 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 (785-532-1627; cdr3@ksu.edu).

↪ **Enhancement Increases Consumer Acceptability of Beef Strip Loin Steaks** – USDA Prime, Low Choice, and Low Select strip loins (n = 72) were divided into two treatment groups: enhanced and non-enhanced. Enhanced loins were injected to 108% of the original weight with a solution of water, phosphate, and salt. Steaks were cooked to three degrees of doneness: rare, medium, and very well done. Each panel consisted of seven consumers served six samples. Panelists recorded their preferences for tenderness, juiciness, flavor liking, and overall liking on a 100 point in line scale.

Bottom Line.... Consumers preferred enhanced steaks over non-enhanced steaks, regardless of USDA quality grade. Within enhanced treatments, USDA quality grade had no effect on consumer palatability ratings, indicating no additional benefit to enhancing higher quality beef; however, enhancement technology offers a large opportunity for palatability improvement of a lower grading product. View the complete research report at www.asi.ksu.edu/cattlemensday. For more information contact, Travis O’Quinn (785-532-3469; travisquinn@ksu.edu).

↪ **Effects of Increasing Crystalline Amino Acids in Sorghum- or Corn-based Diets on Finishing Pig Growth Performance and Carcass Composition**

A study was conducted to determine the impact of increasing crystalline amino acids in either sorghum- or corn-based diets on finishing pig growth and carcass composition. A total of 288 pigs (PIC 327×1050; initially 101.1 lb) were used in a 90-d study with 8 pigs per pen and 6 pens per treatment. Treatments were arranged in a 2 × 3 factorial with main effects of grain source (sorghum vs. corn) and crystalline AA supplementation (low, medium, or high). Amino acids ratios to Lys as well as standardized ileal digestibility coefficients used were set by NRC (2012). All diets were formulated to the same Lys:NE ratio and at 95% of the pig's estimated Lys requirement to ensure that AA were not above the pigs' requirement. The grain sources and soybean meal were analyzed for AA profile and diets formulated from these concentrations. The low AA fortification contained L-lysine HCl and DL-methionine. The medium AA fortification contained L-lysine HCl, DL-methionine, and L-threonine. The high AA fortification contained L-lysine HCl, DL-methionine, L-threonine, and L-valine in sorghum- or L-tryptophan in corn-based diets.

Bottom Line...Overall, there were no grain source × crystalline AA level interactions observed for any response criteria measured. Pigs fed corn-based diets tended to have greater ADG and had better F/G than those fed sorghum-based diets. As crystalline AA increased, ADG tended to increase then decrease, and ADFI decreased resulting in a tendency for improved F/G. Pigs fed sorghum had decreased jowl fat iodine value in comparison to those fed corn-based diets. Crystalline AA level did not impact carcass characteristics. In conclusion, diets with high AA fortification had decreased ADG and ADFI with slightly improved F/G compared with low or medium AA fortification. Furthermore, grain sorghum had approximately 97% of the feeding value relative to corn based on F/G. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by K. E. Jordan, R. D. Goodband, J. C. Woodworth, M. D. Tokach, S. S. Dritz, and J. M. DeRouchey)

↪ **Effect of Diet Type and Added Copper on Growth Performance, Carcass Characteristics, Energy Digestibility, Gut Morphology, and Mucosal mRNA Expression of Finishing Pigs**

A total of 757 pigs (PIC 337 × 1050, initially 60.8 lb) were used to determine the effects of added Cu (TBCC, tribasic copper chloride, IntelliBond C; Micronutrients, Inc., Indianapolis, IN) and diet type on growth performance, carcass characteristics, energy digestibility, gut morphology, and mucosal mRNA expression of finishing pigs. Pens of pigs were allotted to 1 of 4 dietary treatments, balanced on average pen weight in a randomized complete-block design with 26 to 28 pigs per pen and 7 replications per treatment. Treatments were arranged as a 2 × 2 factorial with main effects of diet type, a corn-soybean meal-based diet or a high by-product diet with 30% distillers dried grains with solubles (DDGS) and 15% bakery meal (by-product), and with or without added Cu (0 or 150 ppm added Cu). There were no Cu × diet type interactions for growth performance. Overall, neither added Cu nor diet type influenced growth performance. Pigs fed the by-product diet had decreased carcass yield and HCW F/G, and tended to have decreased HCW and HCW ADG compared to pigs fed the corn-soybean meal-based diet. A Cu × diet type interaction existed for DM and GE digestibility during the early finishing period as added Cu improved digestibility of DM and GE in the corn-soybean meal-based diet, but not in the by-product diet. During the late finishing period, added Cu increased DM and GE digestibility, while pigs fed the by-product diet had decreased DM and GE digestibility. For gut morphology, pigs fed added Cu had decreased crypt depth in the distal small intestine. Relative mRNA expression of intestinal fatty acid binding protein (iFABP) was decreased in pigs fed added Cu.

Bottom Line...In summary, adding 150 ppm added Cu or including 30% DDGS and 15% bakery meal into a corn-soybean meal-based diet did not influence growth performance. However, HCW ADG and HCW G/F were reduced in pigs fed the by-product diet. Only minor differences in gut morphology or mRNA expression were observed from pigs fed diets with high levels of Cu or by-products compared to those fed a corn-soybean meal-based diet. 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, D. D. Burnett, R. D. Goodband, J. M. Gonzales, J. Usry, M. D. Tokach, J. R. Pluske, J. M. DeRouchey, J. C. Woodworth, S. S. Dritz, J. R. Flohr, M. A. Vaughn)

AS&I Faculty Spotlight



Bob Goodband (goodband@k-state.edu; 785-532-1228)
Professor/Extension Swine Specialist

Dr. Bob Goodband is originally from Walpole, Massachusetts. He graduated from The Pennsylvania State University in 1984. He obtained his M.S. (1986) and Ph.D. (1989) in Swine Nutrition at Kansas State University, and then joined the Department of Animal Sciences and Industry. Today, Bob is involved with Teaching (40%), Extension (40%) and Research (20%). Bob's current teaching assignment includes ASI 535, Swine Science and ASI 679, Swine Nutrition. The classes cover the basics of modern, sustainable swine production and nutrition. Bob also advises approximately 40 undergraduate students each year and has been the major professor for 14 M.S. and five Ph.D. students. As part of his extension program, he works closely with the swine nutrition team on diet formulation and production records for various producers across the state. Bob enjoys spending time with his family on their small farm outside of Randolph, KS.



Tim Carson (tcarson@k-state.edu; 785-532-1191)
Computer Information Specialist/Instructor

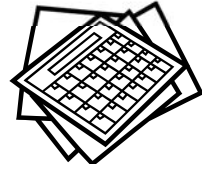
Tim Carson was born in Bartlesville, Oklahoma in 1976. He grew up in rural Coffeyville on his parent's small farm. He graduated from Caney Valley High School in 1994. He attended Coffeyville Community College on a journalism scholarship and served as the Sports Editor of the CCC Collegian for two years before moving on and earning his B.S. in Agriculture with a major in Animal Sciences and Industry from Kansas State University in 1999.

Tim worked for Sprint in Kansas City after graduation before coming back to Manhattan and joining the ASI department as a Computer Information Specialist in August of 1999. Tim started teaching ASI 290, Microcomputer Application, in August, 2002 and is also responsible for maintenance of the computers and wireless system at the farm units North of campus.

Tim and his wife Melissa have three children, Brett, Cade, and Callie.

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.*