KJLS Entry Deadline Approaching - The deadline for Kansas Junior Livestock Show entries is August 15. All entries must be made online, using the link on the https://kjls.org website. Families need to have their KSU Nomination # and YQCA certification numbers available to complete the process for each child. Agents and FFA advisors will receive instructions regarding approving entries for youth from their respective organization. This will all be done online, similar to last year. All families also need to look at the updated show schedule, which has been modified significantly this year. Everyone is encouraged to double check the rules for each show prior to entry and arrival, to make the check-in process goes as smoothly as possible.

Livestock Sweepstakes - Due to COVID-19 concerns, the 2020 Kansas 4-H Livestock Sweepstakes (consisting of the State Livestock Judging, Skillathon, Quiz Bowl and Meats Contest) will not be hosted in-person on the campus of Kansas State University as previously scheduled for August 22-23. Instead, Kansas 4-H and the Department of Animal Sciences and Industry are working on details to provide virtual alternatives for each state contest. Providing youth with a quality educational opportunity remains a high priority of contest coordinators and the Livestock Sweepstakes committee – second only to health and safety during the current pandemic. Youth will be able to display, through virtual means, their abilities and showcase the knowledge they’ve developed while participating in livestock programs and projects. All contests will be hosted virtually during the scheduled weekend. Registration information, revised rules, a tentative schedule and more details for the alternative format are available on the 4-H Livestock Sweepstakes page of the KSU Youth Livestock Program website (https://www.asi.k-state.edu/research-and-extension/youth-programs/4-h-livestock-sweepstakes.html). Entries are due August 15. Extension units will still need to pre-enter all participants through Cvent, using the link distributed via email, by the deadline. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

Livestock Projects Sold Through County Fair Premium Auctions - Now that county fair season is wrapping up, this is a reminder that livestock animals sold through a county fair premium sale OR ribbon auction are not eligible to be shown at the Kansas State Fair or the Kansas Junior Livestock Show. This is per the Kansas 4-H Policy, section J2.2 (https://www.kansas4-h.org/about/policy-guide.html). So, please refer to the policy guide on the state 4-H website for further details about the policy. As counties complete their fairs, please send a list of the STATE NOMINATED animals that participated in the premium auction. We only need the state nominated animals, not the entire sale bill/ribbon auction list. Please just email the official KSU nomination family name, specie, and tag #s. A list of animals state nominated from each county may be found on the state livestock nomination reports posted on the KSU Youth Livestock Program website: https://www.asi.k-state.edu/research-and-extension/youth-programs/nominated-livestock/check-nominated-livestock.html. This list includes official KSU nomination family names and tag numbers. For more information, contact Lexie Hayes at adhayes@ksu.edu or (785)532-1264.
The Kansas State Fair has reinstated the Open Poultry Show for this fall. Since the Open and 4-H Poultry Shows share resources and volunteers, we will be able to host the 2020 4-H Poultry Show at the Kansas State Fair, Hutchinson, KS, on September 5th. 4-H Judging begins at 9:00 am. The 4H Poultry Judging Contest will also be held at the Kansas State Fairground at the Poultry/Rabbit building on September 5, 2020 at 10:30 am. Both teams and individuals may judge seven classes. For more information, contact Scott Beyer (sbeyer@ksu.edu; 785-532-1201).

Developing and Implementing Your Company’s HACCP Plan for meat, poultry and juice processors will be September 30-October 2, 2020, in Olathe, KS. Information and registration for the 2.5 day International HACCP Alliance accredited workshop is online at http://haccp.unl.edu. For more information, contact Dr. Liz Boyle at lboyle@ksu.edu or 785-532-1247.

KSU Beef Stocker Field Day to be hosted virtually on October 1 – The 21st KSU Beef Stocker Field Day will be hosted virtually on Thursday, October 1. The day will start at 9:30 a.m. with a welcome and conclude by noon. The tentative schedule is as follows:

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30 am</td>
<td>Welcome – Mike Day, ASI Department Head, and Dale Blasi, KSU Extension Beef Specialist</td>
</tr>
<tr>
<td>9:45 am</td>
<td>Overview of the KSU Beef Stocker Unit</td>
</tr>
<tr>
<td>10:00 am</td>
<td>Beef Cattle Market Outlook - Glynn Tonsor, KSU Agricultural Economist</td>
</tr>
<tr>
<td>10:30 am</td>
<td>Making Alternative Ration Ingredient Changes Work – Justin Waggoner, KSU Extension Beef Specialist</td>
</tr>
<tr>
<td>11:00 am</td>
<td>Nutrition and Management – Limit Feeding – Dale Blasi, KSU Extension Beef Specialist</td>
</tr>
<tr>
<td>11:30 am</td>
<td>Economic Aspects – Limit Feeding – Glynn Tonsor, KSU Agricultural Economist</td>
</tr>
<tr>
<td>12:00 noon</td>
<td>Closing Remarks</td>
</tr>
</tbody>
</table>

Watch for more details on registering for the event and updated information at www.KSUbeef.org. For more information, contact Dale Blasi (dblas@ksu.edu; 785-532-5427).

Don L. Good Impact Award Virtual Program - A virtual ceremony will be held to honor Kelly & Marcie Lechtenberg and family as the winner of the 2020 Don L. Good Impact Award. Watch for more details on the virtual award ceremony at www.asi.k-state.edu/familyandfriends.

<table>
<thead>
<tr>
<th><strong>CALENDAR OF UPCOMING EVENTS</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>August 22-23, 2020</td>
</tr>
<tr>
<td>September 5, 2020</td>
</tr>
<tr>
<td>September 30-October 2, 2020</td>
</tr>
<tr>
<td>October 1, 2020</td>
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<tr>
<td>October, 2020</td>
</tr>
</tbody>
</table>
**Management Minute** – Justin Waggoner, Ph.D., Beef Systems Specialist

“Customer Service….More Important Than Ever”

Good customer service is essential to any business or organization. It does not matter if it is a restaurant or a tow truck service, having staff members who leave customers or anyone who encounters your business with that “wow, that was great” feeling directly influences the bottom line. Customer service has become more important than ever as more consumers are purchasing goods and services without ever crossing the threshold of a traditional storefront. So how do we generate those feelings with someone on the phone or in a chat box? Let us start with the basics. What is customer service? Customer service is simply defined as the assistance provided by a company to those who purchase the goods or services it provides. Now on to the tough part, how do we as business or organization provide that assistance?

Susan Ward (www.thebalancesmb.com) offers a few simple things that businesses can do to improve their customer service experiences. First, answer the phone. Potential customers want to talk to a person and don’t want to leave a message. Second, don’t make promises you can’t keep. As the old saying goes, “say what you are going to do, and do what you said you were going to.” Third, listen. Simply listening to what a potential customer’s need is important, there is nothing worse than listening to a sales pitch for something you don’t want. Fourth, be helpful even if you don’t make the sale, today. The service provided today has the potential to turn into something much larger in the future. Fifth, train your staff to go the extra mile by providing additional information about the product or other items commonly purchased with said goods. Lastly, empower your staff to offer something extra without asking permission, especially in those circumstances when the “customer is always right.”

For more information, contact Justin Waggoner at jwaggon@ksu.edu.

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**Feedlot Facts** – Justin Waggoner, Ph.D., Beef Systems Specialist

“Feedlot Steer Performance in 2019”

Each year I summarize the data from the K-State Focus on Feedlots in an effort to document annual trends in fed cattle performance. The Focus on Feedlot data for steers from 2019, 2018 and 2017 is summarized in the table below. In 2019, participating feedlots marketed 291,127 steers, approximately 58,000 fewer steers than were marketed in 2018. Both in weights and final weights were similar, averaging 771 lbs and final weights averaged 1,397 lbs in 2019, 1,398 lbs in 2018, and 1,387 lbs in 2017. Steers were on feed approximately 178 days; an increase of five days from 2018. Average daily gain and feed conversion were similar across years. However, death loss did increase to 1.72% relative to the 1.58% previously reported in 2018 and 1.52% reported in 2017. Reported total cost of gain averaged $84.37/ Cwt. in 2019, an increase of $6.27 above the $78.10 previously reported in 2018.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Head</th>
<th>In Weight</th>
<th>Final Weight</th>
<th>Days on Feed</th>
<th>Avg. Daily Gain</th>
<th>Feed/Gain (Dry Basis)</th>
<th>% Death Loss</th>
<th>Cost of Gain/Cwt</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>291127</td>
<td>771 (731-821)</td>
<td>1397 (1344-1464)</td>
<td>178 (161-191)</td>
<td>3.50 (3.13-3.85)</td>
<td>6.37 (6.03-7.08)</td>
<td>1.72 (1.40-2.34)</td>
<td>$84.37 (81.61-91.67)</td>
</tr>
<tr>
<td>2018</td>
<td>349595</td>
<td>779 (738-821)</td>
<td>1398 (1356-1444)</td>
<td>173 (163-182)</td>
<td>3.54 (3.34-3.66)</td>
<td>6.12 (5.96-6.34)</td>
<td>1.58 (1.27-2.12)</td>
<td>$78.10 (74.87-80.31)</td>
</tr>
<tr>
<td>2017</td>
<td>358092</td>
<td>796 (752-861)</td>
<td>1387 (1332-1429)</td>
<td>164 (142-174)</td>
<td>3.57 (3.21-3.81)</td>
<td>6.11 (5.94-6.34)</td>
<td>1.52 (1.16-2.43)</td>
<td>$74.34 (71.83-77.60)</td>
</tr>
</tbody>
</table>

For more information, contact Justin Waggoner at jwaggon@ksu.edu.
Sale Price of Holstein Feeder Steer Lots Relative to Other Breed Descriptions Sold Through Superior Livestock Video Sales from 2010 Through 2018 - The objective of this study was to determine the relative value of Holstein feeder steer lots compared to steer lots of other breed descriptions sold through video auctions while adjusting for all other factors that significantly influenced sale price. Data were analyzed from 14,075 lots of feeder steers sold via 211 livestock video auctions from 2010 through 2018. All lot characteristics that could be accurately quantified or categorized were used to develop a multiple regression model with backwards selection. A lot was categorized into one of four breed descriptions: 1) English, English crossed; 2) English-Continental crossed; 3) Brahman influenced; and 4) Holstein.

**Bottom Line**... The relative price discount for Holstein feeder steer lots compared with other breed descriptions appears to have increased from 2010–2018, and thus is likely indicating lessening interest in the feedlot sector to feed Holstein steers to harvest. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Karol Fike (karol@ksu.edu; 785-532-1104) or Bob Weaber (bweaber@ksu.edu; 785-532-1460).

Factors Affecting the Sale Price of Bred Heifers and Bred Cows Sold Through Superior Livestock Video Auctions - The objective of the study was to evaluate potential factors influencing the sale price of bred heifers and bred cows sold through video auctions while adjusting for all other factors that significantly influenced prices. Descriptive characteristics of lots offered for sale were obtained through a livestock video auction service (Superior Livestock Auction, Fort Worth, TX). Data were available on 1,870 lots of bred heifers sold through video auctions from 2010 through 2018 and 1,237 lots of bred cows sold through video auctions from 2011 through 2018. Two separate multiple regression models were developed to determine the factors influencing the sale price for each. Significant factors influencing the price of bred heifers and bred cows included sale year, breed description, weight, frame score, and flesh score. Results indicate that multiple elements influence the sale price of bred females, suggesting that buyers utilize several components of information at the time of sale.

**Bottom Line**... Understanding the various factors influencing the sale price of bred heifers and bred cows will allow producers to make more informed investment decisions. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Karol Fike (karol@ksu.edu; 785-532-1104) or Bob Weaber (bweaber@ksu.edu; 785-532-1460).

Effects of Conditioning Temperature on Pellet Quality of Nursery Pig Diets - The objective of this experiment was to determine the effect of conditioning temperature on pellet durability index (PDI) and pellet hardness. A phase 1 swine nursery diet was formulated to contain 25% spray-dried whey. The diet was manufactured and pelleted at the Kansas State University O.H. Kruse Feed Technology and Innovation Center, Manhattan, KS. The treatments consisted of three different conditioning temperatures: 130, 145, and 160°F. Diets were steam conditioned (10 in width × 55 in length Wenger twin staff pre-conditioner, Model 150) for approximately 30 sec on a 1-ton 30-horsepower pellet mill (1012-2 HD Master Model, California Pellet Mill) with a 3/16 in × 1 1/4 in pellet die (L:D 6.7). Treatments were pelleted at 3 separate time points to provide 3 replicates per treatment. Samples were collected directly after discharging from the pellet mill and cooled in an experimental counterflow cooler. Samples were analyzed for PDI using the Holmen NHP 100 in duplicate for each replicate. Pellet hardness was determined by evaluating the peak amount of force applied before the first signs of fracture. Pellets were crushed perpendicular to their longitudinal axis using a texture analyzer. A total of 30 pellets of similar length were selected at random from each replication to be tested and the force needed to crush each pellet was averaged within replication. Although conditioning temperature was increased in a linear fashion, a quadratic increase in hot pellet temperature was observed. Increasing conditioning temperature resulted in increased PDI and pellet hardness. There was a tendency for a low correlation between pellet hardness and PDI.

**Bottom Line**... Overall, increasing the conditioning temperature increased both pellet hardness and pellet durability; however, these two responses were not strongly correlated. Future research and more data need to be generated to determine the relationship between PDI and pellet hardness at varying levels of pellet quality to determine what factors influence this relationship. More information is available on this experiment and others in the KSU Swine Day Report at [www.KSUswine.org](http://www.KSUswine.org). (This study conducted by G.E. Nichols, C.R. Stark, A.M. Ogles, K.M. Dunmire, and C.B. Paulk)
**Evaluation of a Commercial Model for Predicting Growth Performance of Pigs with Varying Diet Composition and Stocking Density** - The objective of this study was to validate the growth performance predictions of a commercial model by comparing the optimally-solved estimates with observed growth performance from published studies. Three studies were selected to create 3 feeding scenarios: 1) variation in dietary energy concentrations and fiber sources; 2) variation in dietary lysine level; and 3) variation in space allowance. For each validation scenario, the growth performance of pigs from the best performing treatment group was first estimated, calibrated using the observed performance, and used as the baseline for the prediction of other treatment groups. The model estimates were then compared with the observed growth performance to determine the prediction accuracy: deviation, % = (estimated value – observed value) ÷ observed value × 100. Results from scenario 1 indicated that the model-estimated final body weight (BW), average daily gain (ADG), average daily feed intake (ADFI), and feed-to-gain ratio (F/G) were reasonably close to observed performance for pigs fed medium energy with 8.7% neutral detergent fiber (NDF) as well as those fed low energy with 22.1% NDF. For pigs fed medium energy with 16.1% NDF, the model accurately estimated final BW and ADG (0.5 and 1.1% deviation, respectively), but overestimated ADFI and F/G (3.3 and 2.1% deviation, respectively). The model underestimated the ADG and ADFI (-2.6 and -3.8% deviation, respectively) and overestimated the F/G (5.0% deviation) of pigs fed low energy with 16.4% NDF. Carcass yield differences were not accurately captured by the model among pigs fed various NDF levels. For validation scenario 2, model-estimated growth responses were generally underestimated (-5.5% deviation) and were not sensitive to changing dietary lysine levels. For validation scenario 3, the model accurately predicted final BW and ADG (< 0.9% deviation), but overestimated ADFI and F/G (3.6% deviation) of pigs allowed restricted space. Model-estimated growth responses were generally accurate for pigs that received increasing space by gate adjustment or pig removal, except for an overestimation of ADFI (3.0% deviation) for the pig removal treatment.

**Bottom Line**… In summary, the commercial model was able to capture changes in growth performance of pigs that received various dietary energy and fiber concentrations as well as pigs with changing space allowance. However, the model was not able to predict carcass yield in response to changes in dietary fiber nor the differences in growth performance due to variation in dietary lysine. For model improvements, the consistency of prediction accuracy and ease of user operability should be enhanced. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org.

(This study conducted by M.B. Menegat, F. Wu, J.C. Woodworth, M.D. Tokach, J.M. DeRouchey, S.S. Dritz, and R.D. Goodband)

**Effects of Diet Formulation and Supplementation of an Algoclay Complex-Based Feed Additive in Grow-Finish Diets on Pig Growth Performance and Carcass Characteristics** - The objective of this study was to evaluate the effect of feeding an algoclay complex-based feed additive on growth performance and carcass characteristics of finishing pigs fed two different diet formulation regimens. A total of 1,188 pigs were used in a 90-d study. Pens were blocked by initial weight and randomly assigned to diets with 11 pens per treatment and 27 pigs per pen. Dietary treatments were arranged in a 2 × 2 factorial with main effects of ACC addition (none or 0.1% until 220 lb and 0.05% thereafter) and diet formulation regimen (High vs. Low). The High diets were formulated to maximize growth performance and contained 3% added fat with no dried distillers grains with solubles (DDGS). The second feeding regimen (Low) included diets formulated with 70 kcal per lb less net energy, contained 30% DDGS, no added fat, and were formulated 0.10% below the standardized ileal digestible lysine requirement based on the same SID Lys:NE ratio used in the High diets. For overall performance, there were no interactions observed between diet formulation and added ACC for growth performance criteria, carcass data, or economics. From d 56 to 90, pigs fed the ACC diets had increased average daily gain (ADG) and improved feed efficiency (F/G) compared with the control fed pigs. Overall, ADG was greater for pigs fed ACC diets compared with those fed diets without ACC. Overall, pigs fed High diets had improved growth performance and heavier weights than pigs fed Low diets. For carcass characteristics, pigs fed High diets tended to have greater loin depth and greater carcass weight than pigs fed Low diets. No evidence for differences was observed for carcass characteristics between the control and the ACC fed pigs. For economic analysis, pigs fed High diets had increased feed cost and feed cost per lb gain, but also had greater revenue and income over feed cost (IOFC). No evidence for differences were observed for feed cost, feed cost per lb of gain, revenue, or IOFC between pigs fed diets with or without ACC.

**Bottom Line**… In conclusion, the addition of ACC to finishing diets showed an improvement in growth performance, but no differences were observed in the economic analysis. Feeding the High dietary regimen increased feed costs per pig, but the improvements in growth performance offset the added cost and improved IOFC compared with those pigs fed the Low diets. More information is available on this experiment and others in the KSU Swine Day Report at www.KSUswine.org. (This study conducted by L. Del Tuffo, J.C. Woodworth, S.S. Dritz, M.D. Tokach, J.M. DeRouchey, and R.D. Goodband)
Jeff Stevenson (jss@k-state.edu; 785-532-1243)
Professor/Reproduction Physiology of the Bovine

Jeff 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 southeastern 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 two and three years, respectively. He was honored as Utah’s Dairy Shrine Student Recognition Awardee in 1975. While a student at USU, he married Barta 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 Dairy Teaching and Research Center (DTRC) and 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, Animal Reproductive Science, and served as senior section editor for the Physiology and Management Section of the Journal of Dairy Science.


Scott Schaake (simmi@k-state.edu; 785-532-1242)
Associate Professor/Beef Cattle Production and Management

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 Meat Science.

He served as the coach of the Kansas State Livestock Judging Team from 1992 to 2013, leading his teams to five consecutive national championships during his tenure. Dr. Schaake has judged livestock shows in 40 states, Canada, Mexico and South America.

He and his wife, Kandi, live in Westmoreland, Kansas, where they manage more than 80 head of registered Simmental cattle. Their program utilizes an extensive AI and ET program designed around successful, proven cow families. They take pride in building their herd around cattle that are sound, functional and display genetic excellence not only in the show ring, but most importantly when put in production. Sons Shane, his wife, Melissa, and Shilo remain actively involved in the growth of Schaake Farms and assist with the marketing of their genetics.
WHAT PRODUCERS SHOULD BE THINKING ABOUT IN OCTOBER……

BEEF -- Tips by Dale Blasi, Extension Beef Specialist

Cow Herd 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 3s and 4s) 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.
    - Previous KSU research has reported early winter supplementation is not necessary if grazing forage supplies are adequate and cows have at least a 5 BCS. However, given the lower nutrient content of existing forage supplies due to ample rainfall, this year might be advisable to consider supplementing with levels of supplement mentioned above. If cow BCS is marginal, it would be prudent at this time to collect and submit standing forage samples to a laboratory to determine if supplementation during the fall period is necessary.
- 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 four to 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.

- Analyze forage 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.