News from KSU Animal Sciences

- **Livestock Nominations** - All small livestock and commercial heifer state nominations (non-market beef) are due June 15, which is a postmark deadline. This includes commercial heifers, market swine, commercial gilts, market lambs, commercial ewes and ALL meat goats. Market livestock projects and commercial females must be formally nominated to be eligible for the Kansas State Fair Grand Drive and/or KJLS. This year's current nomination information may be found on the KSU Youth Livestock Program website (www.asi.k-state.edu/research-and-extension/youth-programs). The 2021 Declaration and Specie Nomination Forms MUST be used for nominations to be accepted. All families are encouraged to use the specie checklist as a guide to ensure their nominations are complete upon submission. This resource may be found on the Youth Livestock Program website as well. As part of the family nomination process, all eligible exhibitors within a family should submit one set of paperwork and DNA envelopes, with the signatures of ALL children within the family, in addition to the parent/legal guardian and county agent or FFA advisor. Please double check that there are not any blank fields or questions on the Declaration and Nomination Forms before placing them in the mail. There is a $20 incomplete fee penalty for families who have incomplete materials that must be returned for completion. The YQCA requirement initiated in 2019 will continue, so all exhibitors must be YQCA certified to participate in either state show. A copy of each child's YQCA certificate needs to be attached to the Declaration Form. Youth who only have registered breeding females will submit this information at the time of entry.

  Both state shows now have a breeding doe show. However, there is not a separate division for registered breeding does at either show, so all meat goats must be nominated to be eligible to show.

  Continuing this year, ear notches are required for swine nominations and full scrapie tag numbers are required for sheep and goats. Ear notches must be written and drawn, and both the Flock/Premise ID and individual animal number need to be submitted on scrapie tags (ex: KSS0035 16121). Nominations received without this information will be considered incomplete and returned to the family for completion. Confirmation letters will be sent to families once their nominations have been processed, and reports will be updated on the Youth Livestock Program website on Tuesdays and Fridays until we reach the deadline, then more frequently after that. Families are encouraged to use one of these options to verify their nominations.

  REMINDER - A complete nomination does NOT constitute show entry. The Kansas State Fair entries are already available on their Grand Drive website, and KJLS will release entry information to agents and through its website soon. State Fair Grand Drive entries will be due July 15 and KJLS entries will be due August 15. Animals who are nominated, but do not follow the appropriate entry processes set forth by each show, will not be permitted to show. For nomination questions, please contact Lexie Hayes at adhayes@ksu.edu. Questions regarding show rules or entries should be directed to each show - KSF Grand Drive (620-669-3623); KJLS (316-706-9750).

- The **2021 KSU Pullet Sale Pick-up** will be held on Saturday, June 26th. Orders are currently being accepted online at https://www.asi.k-state.edu/research-and-extension/poultry/pullettsale.html. The pullets will be fully vaccinated and ready to lay in the following weeks after placement. Look for more information on the website or call the Poultry and Gamebird Research Center at (785) 539-5041. Pick-up will take place in front of the KSU Poultry and Gamebird Research Center at 3058 Animal Science Rd., Manhattan, Kansas. Pullets will be loaded from 7:30 am to 11 am. Please bring your ID so your order sheet can be verified. For questions regarding pick-up, please e-mail Lindsey at lleiser@ksu.edu. For more information, contact Scott Beyer at sbeyer@k-state.edu or 785-532-1201.

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June 2021 issue

Kansas State University Animal Sciences and Industry
K-STATE Research and Extension

UPCOMING EVENTS…

- The 2021 **Dr. Bob Hines Kansas Swine Classic** will be hosted July 9-10 at the Riley County Fairgrounds in CiCo Park in Manhattan, KS. This two-day event includes an educational swine skillathon for each age group, photography contest, showmanship, and a prospect and market hog show. It is open to all Kansas youth ages 7-18 as of January 1, 2021. Online entries are required at http://bit.ly/21SwineClassicEntry. Checks to accompany entry receipt must be postmarked by June 15. The schedule includes:

  June 15
  - 5 p.m. Deadline for online registration and payment to be postmarked for entries

  Friday, July 9
  - 8:30 a.m. Barn open for arrival
  - Noon All pigs in place
  - 1 p.m. Swine photo check-in
  - 1 – 3 p.m. Swine Skillathon
  - 4 p.m. Ice cream party by the show ring
  - 5:30 p.m. Showmanship contests

  Saturday, July 10
  - 8 a.m. Prospect Pig Show followed by Barrow and Gilt Market Pig Show

  Watch the youth livestock program website, as well as the KSU Swine website and Facebook, for the latest details! For more information, contact Joel DeRouchey (785-532-2280; jderouch@ksu.edu) or Lexie Hayes (785-532-1264; adhayes@ksu.edu).

- **State Show Entry Deadlines** - The entry deadlines for the state youth livestock shows are approaching. Exhibitors need to remember that a complete nomination does NOT constitute entry; it is only the first step in animals being eligible for the state fair and KJLS. Youth who only nominate, but do not officially enter the show in which they would like to participate, will not be permitted to show. Entries for the Kansas State Fair Grand Drive (4-H/FFA youth livestock show) are due July 15. Entries are being accepted now through their website. All animals must be entered directly through the state fair using the online system — ShoWorks. Only online entries will be accepted. Families who state nominated livestock (market animals or commercial females) this year should have their KSU Nomination # ready when they begin the entry process. All exhibitors will also need to be prepared to submit their YQCA number. Late entry forms will be accepted until July 25, with a late fee. No entries will be accepted after July 25. For more information, visit https://www.kansasstatefair.com/p/participate/grand-drive. Continuing this year, county agents and ag teachers will receive instructions from the state fair regarding how to log in to the ShoWorks system and approve the entries for exhibitors from their county/school. Entries for KJLS will be due by August 15, also using ShoWorks. However, they are separate shows, so families will need to create a new account when entering KJLS. All exhibitors must register online, using the link found on the KJLS website: https://kjls.org/. Families who state nominated livestock this year will need their KSU Nomination #. All youth need to be prepared to submit their YQCA number as well. Late entries will be accepted until August 25, but will cost double the listed original entry fee. Families are encouraged to enter early to avoid missing the deadline and experiencing technical difficulties. Exhibitors also need to read the rules for each show before submitting their entries. Questions regarding entries need to be directed to each show, as they manage their own entry processes. Grand Drive – 620-669-3623; KJLS – 316-706-9750.

- **Livestock Sweepstakes** - The 2021 Kansas 4-H Livestock Sweepstakes is scheduled for August 21-22 on the K-State campus in Manhattan, KS. The 4-H Livestock Sweepstakes event includes the state 4-H livestock judging contest, meat judging contest, livestock skillathon, and livestock quiz bowl. We have been approved to host the event in-person, on campus! Rules and information will be released later this month. The deadline to enter will be August 1. All entries must be made by your local Extension Unit using Cvent. For more information, contact Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

- Mark Thursday, September 30, 2021, on your calendar for the **KSU Beef Stocker Field Day** hosted at the KSU Beef Stocker Unit. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).

UPCOMING EVENTS…

- Friday, October 15, 2021, is the date set for the **ASI Family and Friends Reunion**. This year we will be honoring US Premium Beef with the Don L. Good Impact Award. Make plans now to attend. Watch for more details coming soon.

- **Youth for the Quality Care of Animals Requirement** - All exhibitors are required to have quality assurance certification for the 2021 state shows. This includes 7-year-old exhibitors showing at KJLS. Youth who state nominate livestock projects MUST have a current and valid Youth PQA+ certification number or Youth for the Quality Care of Animals (YQCA) number at the time of nomination. A copy of each child's YQCA certificate or Youth PQA+ card must be attached to the Declaration Form. Certification(s) must be valid through October 3, 2021, to be accepted. YQCA is an annual certification program. Any nominations received without the appropriate YQCA or Youth PQA+ number will be considered incomplete. The Youth PQA+ program was discontinued on May 31, 2018. Youth who need quality assurance certification will need to complete YQCA training. Exhibitors only showing purebred, registered females will submit their certification information at the time of entry. Youth may complete the training through an in-person instructor led class, web-based course, or testing out. The test-out option is only available to 12-year-olds and 15-year-olds, but if they pass the test, their certification will be valid until they advance to the next age division (3 or 4 years, depending on their age). All participants must sign up through the YQCA website prior to training to receive their certificate and official number. Visit www.yqca.org to sign up or contact your local extension office for information. After completing the training, families will need to sign in to their YQCA user account, using the same method they did to register for a class, to view and print their YQCA certificate. While families will use their 4HOnline credentials to sign in and create an account, they must go through the YQCA website to successfully complete the certification process. There are resources on the program, signing up and printing certificates on the Quality Assurance tab of the KSU Youth Livestock Program website (https://www.asi.k-state.edu/research-and-extension/youth-programs/YQCA.html). For more information, please contact your local extension office or Lexie Hayes at adhayes@ksu.edu or 785-532-1264.

- Watch the **KSU ASI Headlines** for May 2021 and find out the latest happenings in the department. Follow the link at https://youtu.be/rzlmYieMwDU. For questions about the department, contact Dr. Mike Day, ASI Department Head, at 785-532-1259; mlday@k-state.edu.

- **Have you joined the LMIC FAMILY NETWORK?** - The goal of the LMIC Family Network is to cultivate relationships with individuals involved or interested in the livestock and meat industry and with a passion for the K-State Animal Sciences and Industry department. **Membership is free and open to anyone. Members will receive three email newsletters a year.** The e-newsletters will include department highlights, LMIC projects and other industry news. Visit the LMIC Family Network Website to signup.

CALENDAR OF UPCOMING EVENTS

Date	Event	Location
June 15-18, 2021	K-State Animal Science Leadership Academy-Hybrid	
June 15, 2021	Small Livestock & Commercial Heifer Nominations Due	
June 26, 2021	KSU Pullet Sale	Manhattan
July 9-10, 2021	Dr. Bob Hines Kansas Swine Classic	Manhattan
July 15, 2021	Kansas State Fair Grand Drive entries due	
August 15, 2021	Kansas Junior Livestock Show entries due	
August 21-22, 2021	Kansas 4-H Livestock Sweepstakes	Manhattan
September 30, 2021	KSU Beef Stocker Field Day	Manhattan
October 15, 2021	K-State Family and Friends Reunion	Manhattan

WHAT'S NEW…

Management Minute – Justin Waggoner, Ph.D., Beef Systems Specialist

"Think Safety this Summer, Agriculture is a High-Risk Occupation"

Most of you reading this are likely involved in agriculture in some capacity. Do you think being a farmer or rancher is a high-risk occupation?

The reality is that farming and ranching is a high-risk occupation. A 2019 report from the U. S. Department of Labor contains some staggering statistics and emphasizes the need for safety. There were 5,333 fatal work-related injuries in 2019. Farmers, ranchers, and agriculture managers were the second greatest civilian occupation with regard to fatal work-related injuries; with 291 reported fatalities in 2019. Nearly 1 out of every 5 fatally injured worker was employed as a driver/sales worker or truck driver. The leading cause of injuries was transportation incidents (2,122). These statistics are sobering. Agriculture is a dangerous occupation, and many times our daily activities put us on the road hauling commodities, equipment and livestock. Summer is "go time" for those of us involved in agriculture. However, the need for safety is real. Don't be complacent about your safety and the safety of those around you.

The full report from the U.S. Department of Labor may be accessed at:
https://www.bls.gov/news.release/pdf/cfoi.pdf

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

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

"Got Water…But How Much Do Those Cows Need?"

Most cattle producers fully understand the importance of water. After all, providing an adequate supply of clean, fresh water is the cornerstone of animal husbandry and there are very few things that compare to the feeling of finding thirsty cows grouped around a dry tank on a hot day. Water is important, and in situations where the water supply is limited or we are forced to haul water, one of the first questions we find ourselves asking is "how much water do those cows need?" The old rule of thumb is that cattle should consume 1-2 gallons of water per 100 lbs of bodyweight. Accurately determining the amount of water cows will voluntarily consume is difficult and is influenced by several factors (ambient temperature, moisture and salt content of the diet, body weight, lactation, etc.). Water consumption increases linearly as ambient temperature increases above 40° Fahrenheit such that cows require an additional gallon of water for every 10 degree increase in temperature. Additionally, lactation also directly increases the amount of water required by beef cows. The table below summarizes the daily water requirements of beef cows of several different body weights, milk production levels, and ambient temperatures.

		Average Daily Temperature, °F		
		40	65	90
Cow weight, lb	Milk Production, lb/d	Gallons of Water/day		
1100	0	8.2	10.8	13.4
	10	10.5	13.1	15.7
	25	12.8	15.4	17.9
1300	0	9.2	11.8	14.3
	10	12.2	14.8	17.4
	25	14.5	17.1	19.7
1500	0	10.2	12.7	15.3
	10	14.0	16.5	19.1
	25	16.3	18.8	21.4

The daily water requirements of beef cows represented are estimates and water consumption varies greatly during the summer months when temperatures exceed 90° Fahrenheit. Therefore, these recommendations should be regarded as minimum guidelines.

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

WHAT'S NEW…

- **Animal Technician II (Dairy Unit - 2 positions)** - This position exists to milk, feed, and provide care of Dairy Teaching and Research Center dairy herd, which is used for teaching and research purposes. This is a full-time, University Support Staff position (Job #510744). Screening of applicants will begin immediately and will continue until a suitable candidate is identified. To apply, go to https://careers.pageuppeople.com/742/cw/en-us/job/510744/animal-technician-ii. For more information, contact Mike Scheffel, Search Committee Chair, at 785-537-0941 or scheffel@k-state.edu.

- **Carcass Trait Trends for Steers and Heifers Finished Through the Tri-County Steer Carcass Futurity Cooperative from 2002 Through 2018** - The objective of this study was to evaluate trends in carcass characteristics for steers and heifers finished through the Tri-County Steer Carcass Futurity Cooperative. Data analyzed included 74,207 steers and 33,529 heifers finished at the Tri-County Steer Carcass Futurity Cooperative and harvested from 2002 through 2018. Steers and heifers were harvested at liveweights of 1,235.0 +/- 119.8 lb and 1,124.2 +/- 106.7 lb, respectively. Carcass trait trends evaluated for steers and heifers included calculated yield grade score, backfat thickness, hot carcass weight, kidney, pelvic, heart, fat percentage, marbling score, and ribeye area. Calculated yield grade scores increased from 2002 through 2018 for steers and heifers. Fat thickness increased 0.08 in for steers and 0.07 in for heifers, both peaking in 2017 at 0.55 and 0.59 in, respectively. Hot carcass weights ranged from 727 to 780 lb for steers and increased over the 17-year period. Hot carcass weights for heifers ranged from 671 to 711 lb and increased slightly from 2002 through 2018. Kidney, pelvic, heart, fat percentage did not change for steers and heifers. Marbling score increased from 422 to 456 for steers and 449 to 493 for heifers. Ribeye area increased slightly for steers while decreasing slightly for heifers over the 17-year period.

  The Bottom Line… Corresponding with increases in fat thickness and minimal to no improvement in ribeye area, yield grade scores increased over the past 17 years. Genetic selection pressure on marbling within the beef industry is evident from these data. More information is available on this experiment in the KSU Cattlemen's Day report at www.KSUBeef.org. *(This study conducted by E.D. McCabe, M.E. King, K.E. Fike, M. Groves, and K.G. Odde.)*

- **Effects of Prescribed Fire Timing on Native Plant Composition, Forage Biomass Accumulation, and Root Carbohydrate Reserves in the Kansas Flint Hills: Year 2 of 6** - The objective of this study was to document the effects of prescribed fire timing on native plant composition, forage biomass, and root carbohydrate concentrations in key native tallgrass species in the Kansas Flint Hills. This experiment was conducted at the Kansas State University Beef Stocker Unit. Eighteen pastures were grouped by watershed and assigned to one of three prescribed-burn treatments: spring (April 7 ± 2.1 days), summer (August 21 ± 5.7 days), or fall (October 2 ± 9.9 days). Botanical composition, forage biomass, and root carbohydrate concentrations in big bluestem, little bluestem, Indian grass, and purple prairie clover were evaluated annually.

  The Bottom Line… Data from the first two years of a six-year study were interpreted to indicate that basal cover of forage grasses and forbs, forage biomass accumulation, and root carbohydrate concentrations in key tallgrass species did not differ between prescribed-fire treatments. More information is available on this experiment and others in the KSU Cattlemen's Day report at www.KSUBeef.org. (This study conducted by *Z.M. Duncan, A.J. Tajchman, M.P. Ramirez, J. Lemmon, W.R. Hollenbeck, D.A. Blasi, and KC Olson.)*

- **Evaluation of Dietary Inclusion of Specialty Protein Ingredients on Nursery Pig Performance** - A total of 1,215 pigs were used in a 42-d growth trial to evaluate a new specialty protein blend prototype on nursery growth performance. Pigs were randomly assigned to pens and pens were allotted by weight to 1 of 5 dietary treatments in a randomized complete block design with 9 pens per treatment. Treatments were arranged in a 2 × 2 + 1 negative control factorial arrangement with main effects of protein source (HP300, Hamlet Protein, Findlay, OH; and Protein Blend) and 2 dietary levels (5 and 10%). Treatment diets were fed in two phases for 21 days (phase 1 = d 0 to 7; phase 2 = d 7 to 21). All pigs were then fed a common phase 3 diet from d 21 to 42. For the treatment period (d 0 to 21), there was a protein source effect with pigs fed diets containing HP300 having greater average daily gain and average daily feed intake and improved feed efficiency compared to pigs fed diets containing the Protein Blend. Also, ADG and ADFI decreased for pigs fed increasing levels of Protein Blend. Furthermore, pigs fed increasing levels of the Protein Blend had worse F/G. Overall (d 0 to 42), there was a protein source effect in which pigs fed HP300 had improved ADG and tendency for improved F/G compared to pigs fed diets with the Protein Blend. Subsequent lab analysis revealed that Protein Blend was lower in crude protein and amino acids than formulated values.

  In conclusion… Feeding the Protein Blend at increasing levels decreased performance compared to feeding diets containing HP300. More information is available on this experiment and others in the KSU Swine Day report at www.KSUswine.org. (This study conducted by *H.R. Williams, J.M. DeRouchey, M.D. Tokach, J.C. Woodworth, R.D. Goodband, S.S. Dritz, J.W. Frank, and T. Wang*.)

WHAT'S NEW…

- **Effect of Coarse Wheat Bran and Crude Protein Level in Nursery Pig Diets Without Pharmacological Levels of Zinc Oxide** - A total of 360 pigs were used in a 45-d growth trial to evaluate the effects of coarse wheat bran and crude protein level in diets without pharmacological levels of zinc oxide (ZnO) on growth performance of nursery pigs. Upon arrival to the nursery research facility, pigs were randomly assigned to pens with 5 pigs per pen. Pens were allotted to 1 of 6 dietary treatments in a completely randomized design with 12 pens per treatment. Treatment diets were offered in two dietary phases (phase 1 fed from d 0 to 7 and phase 2 from d 7 to 21 post-weaning). A post-treatment period with a common diet was fed from d 21 to 45. Treatment diets included a positive control diet with pharmacological ZnO (3,000 ppm Zn in phase 1 and 2,000 ppm in phase 2), negative control without pharmacological ZnO (110 ppm Zn added from premix), and negative control with 4% coarse wheat bran and formulated to contain 21, 19.5, 18, or 16.5% CP. The two control diets and the 21% CP diet contained 1.40% SID lysine in phase 1 and 1.35% SID lysine in phase 2, with the 19.5, 18, and 16.5% CP diets containing 1.33, 1.25 and 1.20% lysine, respectively in both phases. Fecal samples were collected from the same three pigs per pen on d 7, 14, 21, and 45 then pooled within pen for each day of collection and dried at 55 degrees C in a forced air oven. All pens were individually scored on d 7, 14, 21, and 45 by the same three individuals to determine visual fecal consistency. Data were analyzed using the lmer function from the lme4 package in R. From d 0 to 21, pigs fed the positive control diet containing ZnO had increased ADG and ADFI and improved F/G compared to the negative control and the high CP coarse wheat bran diet. Reducing crude protein levels in diets containing coarse wheat bran resulted in decreased ADG and poorer feed efficiency; however, fecal dry matter percentage was increased, suggesting a greater occurrence of solid feces throughout the experimental period. Overall, from d 0 to 45, decreasing crude protein level decreased ADG, ADFI, and d 45 body weight. Pigs fed the positive control diet with ZnO experienced increased ADG and increased ADFI compared to the negative control. There was no evidence for differences in overall growth for the positive control compared with the 21% CP diet with coarse wheat bran.

  In conclusion… Decreasing crude protein in diets with coarse wheat bran decreased overall ADG and ADFI resulting in lower body weight throughout the study. The pigs fed these diets had poorer feed efficiency and decreased ADG during the experimental period; however, these pigs had increased fecal dry matter. Further research is warranted to determine if low crude protein diets can be modified to achieve increased fecal dry matter while maintaining growth performance of nursery 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.L. Batson, H.I. Calderón, M.D. Tokach, J.C. Woodworth, R.D. Goodband, S.S. Dritz, and J.M. DeRouchey.)*

- **Evaluating the Effects of Pharmacological Levels of Zinc Oxide, Diet Acidification and Dietary Crude Protein on Growth Performance of Nursery Pigs** - A total of 360 weaned pigs were used in a 42-d growth study to evaluate the effects of pharmacological levels of zinc oxide (ZnO), diet acidification, and dietary crude protein (CP) on pig performance. Pigs were weaned at approximately 21-d of age and were randomly assigned to pens and allotted to 1 of 8 dietary treatments with 9 pens per treatment. Experimental diets were fed from d 0 to 21 with a common diet fed from d 21 to 42. The eight treatment diets were arranged as a 2 × 2 × 2 factorial with main effects of Zn from ZnO (110 ppm from d 0 to 21 or 3,000 ppm from d 0 to 7, and 2,000 ppm from d 7 to 21), diet acidification (without or with 1.2% sodium diformate), and dietary CP (21 or 18%, [1.40 vs 1.20% standardized ileal digestible Lys, respectively]). Fecal samples were collected weekly to determine dry matter content. No 2 or 3-way interactions were observed throughout the 42-d growth study for growth performance; however, there was a ZnO × acidifier × CP interaction for fecal dry matter on d 7 and overall, where reducing CP without acidification increased fecal DM when ZnO was not in the diet, but had little effect when ZnO was present in the diet. From d 0 to 21, pigs fed added ZnO had improved ADG, ADFI, F/G and increased d 21 BW compared to those fed 110 ppm Zn. Added sodium diformate improved, ADG, F/G and BW. Pigs fed 21% CP had improved ADG and F/G and tended to have increased d 21 BW. In the subsequent period (d 21 to 42) after the experimental diets were fed, there was no evidence of difference in growth performance among treatments. Overall (d 0 to 42), adding ZnO or sodium diformate from d 0 to 21 tended to increase ADG with no evidence of difference in ADFI and F/G. Increasing dietary CP from 18 to 21% from d 0 to 21 improved overall F/G.

  In conclusion… Dietary addition of ZnO or sodium diformate independently improved nursery pig performance. More information is available on this experiment and others in the KSU Swine Day report at www.KSUswine.org. (This study conducted by *W.M. Hutchens, M.D. Tokach, S.S. Dritz, J.C. Woodworth, J.M. DeRouchey, R.D. Goodband, and H.C. Cartagena.)*

ASI FACULTY SPOTLIGHT…

Jaymelynn Farney (jkj@k-state.edu; 620-820-6125)
Associate Professor/Extension Beef Specialist

Jaymelynn Farney grew up in Fort Sumner, New Mexico, where her family had a cow-calf operation. Jaymelynn was very active in 4-H and FFA and because of this after graduating high school she went to El Dorado, KS, to be a member of the livestock judging team at Butler Community College. She completed her A.S. in agriculture degree and then continued her education at Kansas State University in Animal Science. Jaymelynn then went to Oklahoma State University to complete her M.S. in Ruminant Nutrition with an emphasis on receiving calf management. She then returned to Kansas State University to complete her PhD in Ruminant Nutrition, using the dairy cow as the model for how inflammation impacts production.

Jaymelynn focuses her applied research programs on dealing with issues pertaining to Southeast Kansas cattle producers. Subsequently, she researches fescue management, heifer and bull development programs, and stocker/backgrounding management systems. Jaymelynn is using her extension appointment to provide producers with knowledge of new technologies, feeds, and management strategies to improve efficiency of production in both cow-calf and stocker/backgrounder operations.

Jaymelynn lives in Southeast Kansas with her husband, Garet, and works at the Southeast Agricultural Research Center in Parsons.

Sandy Johnson (sandyj@k-state.edu; 785-462-6281)
Professor/Extension Beef Specialist

Sandy Johnson was raised on a diversified livestock farm north of Blair, Nebraska. An active 4-Her, her projects included cattle, swine, sheep, and horses. She received a B.S. degree in Animal Science from the University of Nebraska in 1982 and a M.S. degree in Reproductive Physiology from the University of Missouri in 1984. A deep appreciation for applied integrated research was developed during three years spent working as a research technician at the University of Nebraska West Central Research and Extension Center in North Platte. A move to West Virginia was made to pursue a PhD. Her dissertation examined the role of the follicle in the formation of short-lived corpora lutea in postpartum beef cows. Sandy received a PhD degree from West Virginia University in Reproductive Physiology in 1991 and continued there as a post-doctoral fellow until 1993. She held a teaching position at Fort Hays State University before beginning her current position in October of 1998 as Extension Livestock Specialist at the Northwest Research and Extension Center in Colby.

Sandy is a founding member of the Beef Reproductive Task Force, which has hosted the Applied Reproductive Strategies in Beef Cattle Workshops, updated the Estrus Synchronization Planner, and organized the Beef Cattle Reproduction Leadership Team. Group efforts are aimed at promoting wider adoption of reproductive technologies among cow-calf producers and to educate cow-calf producers in management considerations that will improve profitability. Her research interests include the areas of estrus synchronization, costs of breeding systems and cow-calf management.

Justin Waggoner (jwaggon@k-state.edu; 620-275-9164)
Professor/Extension Beef Specialist

Justin Waggoner serves as the Beef Systems Specialist at Kansas State University's Southwest Area Extension Office in Garden City. Waggoner was raised on his family's farm in central Kansas and obtained his Bachelor's (2000) and Master's (2001) degrees in Animal Science from Kansas State University. He completed his Doctorate in Ruminant Nutrition at New Mexico State University in 2007 where his work evaluated the impacts of morbidity on performance and profitability in feedlot cattle and nutrient utilization in stressed cattle.

Waggoner assists beef cattle producers in all sectors of the industry by providing them with information regarding nutritional and management strategies that improve profitability. Waggoner also continues pursuing his research interests regarding the influence of nutrition and management practices on cattle health and performance.

WHAT PRODUCERS SHOULD BE THINKING ABOUT

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN AUGUST…

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

August is when forages are maturing, weaning time is approaching, and weather dictates several key management decisions.

Breeding Season

- ☑ Given high feed price inputs, ruthlessly cull all unsound cows from the herd. Cull cows that do not conceive after three services by a fertile bull.
- ☑ Limit the breeding season. Remove bulls after 60 days with cows, 45 days with heifers.

These methods contribute to a more uniform calf crop, makes winter feed management easier and increases the success rate of next year's breeding season.

Cow Herd Nutrition

- ☑ Provide ample amounts of clean, fresh drinking water.
- ☑ Conduct an inventory of forage needs for the winter feeding period.
- ☑ Plan ahead and price availability of byproducts, such as wheat-middlings, dried distillers grains, etc. prior to typical seasonal price increases.

Herd Health

- ☑ If pinkeye is likely to be a problem, consider the following preventive and therapeutic measures.
  Preventive:
  - ♦ Make sure the herd is receiving adequate vitamins and trace minerals in their diet.
  - ♦ Consider vaccination for pinkeye and IBR (consult your local veterinarian).
  - ♦ Control face flies.
  - ♦ Clip pastures with tall, coarse grasses that may irritate eyes.

  Therapy:
  - ♦ Administer an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
  - ♦ Shut out irritating sunlight by patching eyes, shade, etc.
  - ♦ Control flies.
  - ♦ Consult your veterinarian.
- ☑ Consider revaccinating for the respiratory diseases in any animals that will be taken to livestock shows.
- ☑ Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least three weeks prior to weaning.
- ☑ Revaccinate all calves for blackleg.
- ☑ Vaccinate replacement heifers for brucellosis (4 to 10 months of age).
- ☑ Monitor and treat footrot.

Forage/Pasture Management

- ☑ Enhance grazing distribution with mineral mixture placement away from water sources.
- ☑ Observe pasture weed problems to aid in planning control methods needed next spring.
- ☑ Monitor grazing conditions and rotate pastures if possible and(or) practical.
- ☑ If pastures will run out in late summer, get ready to provide emergency feeds. Start supplemental feeding before pastures are gone to extend grazing.
- ☑ Harvest and store forages properly. Minimize waste by reducing spoilage.
- ☑ Sample harvested forages and have them analyzed for nitrate and nutrient composition.
- ☑ Plan for sufficient standing pasture for winter grazing needs.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore (feed additive) type supplement.

General Management

- ☑ Avoid unnecessary heat stress - Don't handle and/or truck cattle during the heat of the day.
- ☑ Repair, replace and improve facilities needed for fall processing.
- ☑ Order supplies, vaccines, tags and other products needed at weaning time.
- ☑ Consider earlier than normal weaning, but have a marketing plan in place.

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.*