News From KSU Animal Sciences

SEPTEMBER 2025

K-State Beef Stocker Field Day to be Hosted September 25

Come help us celebrate this year's 26th annual KSU Beef Stocker Field Day which will be hosted in Manhattan, KS on Thursday, September 25 at the KSU Beef Stocker Unit. The day will start at 10:00 a.m. with registration and coffee and will conclude with a good old-fashioned Prairie Oyster Fry and Call Hall ice cream.

The schedule is as follows:

10:00 a.m. Registration/Coffee
10:30 a.m. Introductions
10:45 a.m Navigating the Unknowns for the Stocker Operator
Lance Zimmerman, RaboBank
Glynn Tonsor, K-State
Moderator: *Wes Ishmael, Hereford World Executive Editor*
Noon BBQ Brisket Lunch – View Posters
1:00 p.m. Fueling Performance from the Inside Out: Gut Integrity and Micronutrient Support - *Sara Trojan, Kemin Industries*
2:00 p.m. Making Treatment Choices for Reducing BRD and Death Loss - *David Renter, K-State College of Veterinary Medicine*
2:45 p.m. Break
3:00 p.m. Theileria, the Anaplasmosis of Stocker Cattle
Gregg Hanzlicek, K-State Veterinary Diagnostic Laboratory
4:00 p.m. Managing Growth in the Dry Lot – the K-State Program Feeding Approach - *Colton Weir, K-State PhD Student*
Beef x Dairy Growing Strategies - *Cole Ellis, Manager and MS Student, K-State Beef Stocker Unit*
5:00 p.m. Cutting Bull's Lament 2025

Registration is available on site for $35 per person. For complete details, visit www.KSUBeef.org. For more information contact Dale Blasi (dblasi@ksu.edu or 785-532-5427) or Katie Smith (katiesmith@ksu.edu or 785-532-1267).

Register Now - ASI Family & Friends Reunion

Registration is now open for this year's K-State ASI Family & Friends Reunion to be hosted Saturday, October 18 at the Stanley Stout Center. The event will start at 4 p.m. with dinner served at 5:30 p.m. Activities available during the event include great food, live music, Junior Wildcat Barnyard, Willie the Wildcat and more. The K-State Applied Swine Nutrition Team will be presented as the 2025 Don L. Good Impact Award Winner. Cost for adults is $30, students are $10 and children under the age of 5 are free. Registration costs increases to $50 for adults after October 6. For more information or to register visit asi.ksu.edu/familyandfriends. For questions contact Katie Smith (katiesmith@ksu.edu or 785-532-1267).

HACCP Workshop Hosted in September

Implementing Your Company's HACCP Plan will be September 24-26 2025, in Olathe, Kansas. This workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors. The registration fee is $450 per person and is available online at *http://bit.ly/HACCPCourse*. For more information, contact Dr. Liz Boyle *lboyle@ksu.edu* or 785-532-1247.

Upcoming Events

September 24-26, 2025
HACCP Workshop - Olathe, KS

September 25, 2025
Beef Stocker Field Day

October 18, 2025
ASI Family & Friends Reunion

November 15, 2025
Grilling Academy - Holiday Edition

November 20, 2025
Swine Day

Department of Animal Sciences and Industry
Kansas State University
218 Weber Hall, 1424 Claflin Road
Manhattan, KS 66506
785-532-6533 | asi@ksu.edu

Upcoming Events

KSU Swine Day to be Hosted November 20

Registration is now open for KSU Swine Day, to be hosted at the K-State Alumni Center in Manhattan, Kansas, on Thursday, November 21. The trade show, with more than 30 exhibitors, will begin at 8 a.m., followed by a great program with updates on K-State Applied Swine Nutrition Research, and featuring a presentation from Dr. Arkin Wu, Director of Nutrition and Technical Service at Riverstone Farms in China on "Understanding China's ever-changing pork production landscape."

The schedule is as follows:

8:00 a.m.	Technology Trade Show *The trade show will conclude at 4 p.m.*
9:15 a.m.	Welcome
9:30 a.m	Latest Update on K-State Applied Swine Nutrition Research, K-State Swine Faculty *Research highlights of Nutrition, Management, Feed Processing and Feed Safety*
11:30 a.m.	Lunch with Technology Trade Show
1:30 p.m.	Latest Update on K-State Applied Swine Nutrition Research, continued
2:30 p.m.	Understanding China's everchanging pork production landscape - Dr. Arkin Wu, Director of Nutrition and Technical Services, Riverstone Farms, China
3:15 p.m.	Question-and-Answer Session
3:30 p.m.	Reception with K-State Call Hall Ice Cream

Pre-registration is $25 per participant and due by November 7. On-site registration is $50 per participant. There is no charge for any students if they are pre-registered. The complete schedule and online registration information can be found at KSUswine.org. For more information, contact Katie Smith (katiesmith@ksu.edu or 785-532-1267).

Youth for the Quality Care of Animals (YQCA) New Program Year

Youth for the Quality Care of Animals (YQCA) is a national, multi-species youth livestock quality assurance program that launched in 2017. Youth may participate in the program online or through a face-to-face class with a certified instructor. This is a fee-based program, which is $12/child for the online course or $3 for a face-to-face session. Kansas has renewed its partnership with the program for 2025-2026, which allows extension agents and ag teachers to have the opportunity to complete the certification process and teach youth the curriculum through face-to-face sessions. The current program year is coming to a close on September 30 and the new curriculum will launch in early October. Agents who were certified last year will receive information on re-certifying as the new program year approaches. Any new or additional agents or ag teachers who would like to become certified need to contact Lexie Hayes to be added to the approved list for Kansas. Once agents complete the certification process, the YQCA staff will distribute the new materials, and their certification will be valid until September 1, 2025. It is an annual training for youth and approved instructors.

Although a final decision will be confirmed by each respective show board later this fall, we do anticipate exhibitors will continue to be required to complete YQCA certification annually to participate in the Kansas State Fair Grand Drive and the Kansas Junior Livestock Show.

Grilling Academy Holiday Edition to be Hosted November 15

Save the date for this year's Holiday Edition of the K-State Grilling Academy to be hosted on November 15 at Weber Hall in Manhattan, KS. This single day grilling academy is a chance to learn more about the science and meat cookery, techniques, methods, and seasonings while having a chance to showcase your skills in a cooking contest. This event will focus on proteins that are Holiday Favorites. More details including registration will be available on October 1 at https://bit.ly/ksu-grilling. For questions, contact Erin Beyer at erbeyer@ksu.edu or 832-276-3350.

What's New

Management Minute

"How do you find your leadership style?"

Justin Waggoner
KSU Extension Beef Cattle Specialist
Garden City, KS

The most commonly recognized leadership styles are authoritarian, democratic and laissez-faire. However, there may be 7-12 different leadership styles that include techniques such as transformational, transactional, servant, charismatic, and situational. Although some of these styles are unique, there is also some degree of similarities or overlap as well. Additionally in some situations, a leader may change their leadership methodology to fit the situation (situational).The concept of situational leadership was first recognized by Paul Hersey and Ken Blanchard (author of the "One Minute Manager"). They recognized that successful leaders often adapted their leadership style or styles to the individual or group they were leading. Collectively these different leadership approaches remind us that not all leaders lead the same way, and some leaders even change styles. There is no one way to lead, motivate and inspire individuals or groups to succeed. So how do you gain a better understanding or your preferred leadership style? Some simple questions regarding your personality can help determine what styles you may exhibit a preference for. Are you driven by setting specific goals or building relationships? Do you prefer creativity or structure? As an example, authoritarian leaders tend to prefer goals, and clearly defined structure. Whereas democratic and servant leaders tend to place more value on people and relationships.

Feedlot Facts

"What's it cost to produce a calf"

Justin Waggoner
KSU Extension Beef Cattle Specialist
Garden City, KS

Recently the beef industry social media channels and email newsletters have been full of historically high sales reports for a particular class or weight of calves. It is easy to get caught up in record high sales reports. However, the real question is are these calves more profitable? Calf revenue is only one component of the profit equation (Revenue - Expenses = Profit) and thus we must also consider the costs associated with producing a calf. What does it cost to produce a calf (in Kansas)? The Kansas Farm Management Association (KFMA) Enterprise Reports (https://www.agmanager.info/kfma) are an excellent resource for production cost data in Kansas. The total feed and operational costs (total of all non-feed costs) per cow from 2020 to 2024 for all KFMA cow-calf operations (both Spring and Fall calving herds) is illustrated in the figure below.

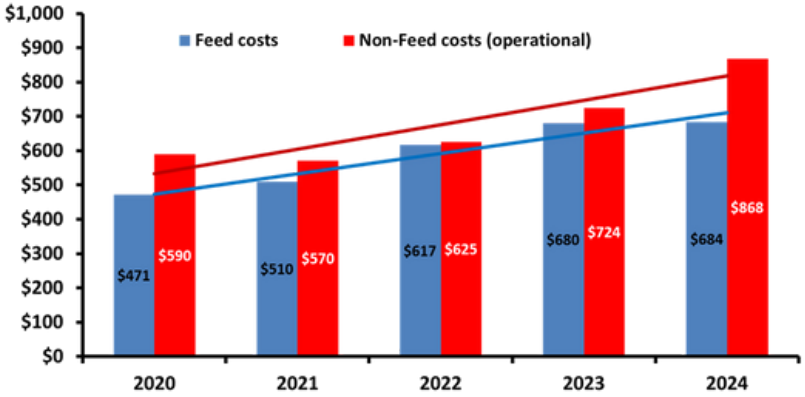

Figure 1. Total feed and non-feed costs (operational) of Kansas cow-calf producers

This figure demonstrates that both feed and non-feed costs have increased over the last 5 years and that non-feed costs are often greater than or equal to feed costs. The average cost to produce a calf in 2020 was $1061/cow and rose to $1552/cow in 2024. When expressed as a percentage the total cost to produce a calf in Kansas has increased 46% since 2020. Although calves are being sold for historically high prices, the costs associated with producing a calf have also increased.

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

KSU Cow-Calf Checklist - September 2025

Management Considerations for November 2025

By Jason M. Warner, Ph.D., Extension Cow-Calf Specialist

Cow Herd Management

- For spring-calving cowherds:
  - If not already done, make plans for weaning calves.
    - Test your forages and have feedstuffs on hand prior to weaning.
    - Check and clean waterers and prepare weaning/receiving pens.
  - Evaluate cow BCS at weaning.
    - Record scores with the BCS Record Book (https://bookstore.ksre.ksu.edu/Item.aspx?catId=562&pubId=19320) from KSRE!
    - Use BCS to strategically supplement cows during fall, if needed.
    - Female requirements are lowest at weaning so weight and BCS can be added more easily in early fall rather than waiting until closer to calving.
  - Schedule pregnancy checking and fall health work if not already done.
    - How were pregnancy rates relative to last year?
    - Do we need to re-think our fall/winter nutrition program?
  - Evaluate the cost of gain relative to the value of gain when making feeding and marketing decisions for cull cows.
- For fall-calving cowherds:
  - If not already done, review your calving health protocols as needed.
  - Have calving equipment cleaned and available to use as needed.
  - Plan to adjust your nutrition program to match needs of lactating cows.
  - Use the estrus synchronization planner (https://www.iowabeefcenter.org/estrussynch.html) to help plan fall synchronization protocols.
- Plan your mineral supplementation for this coming fall and winter.
  - Record date and amount offered and calculate herd consumption.
  - If consumption is 2X the target intake, then cost will be too!
  - Risk of grass tetany is greatest for lactating cows. Consider magnesium levels in mineral supplements for cows grazing cool-season forages and winter annuals this fall.
- Schedule breeding soundness exams for bulls used for fall and winter service.
  - Monitor BCS, particularly on young bulls.
  - If bulls are BCS ≤ 5.0, consider supplementing to regain BCS going into winter.

Calf Management

- Consider the economic value by implanting nursing fall-born calves and weaned spring-born calves.
- If not already done, schedule your breeding protocols for fall replacement heifers in advance of the breeding season.
  - If synchronizing with MGA, make sure intake is consistent at 0.5 mg of melengestrol acetate per hd per day for 14 days, and remove for 19 days prior to administering prostaglandin.

General Management

- Take inventory of and begin sampling harvested forages for fall feed needs.
  - Be aware of possible presence of molds and other anti-nutritional compounds in hay harvested at higher than typical moisture levels.
  - Test for nitrates and prussic acid when appropriate.
  - Use the forage inventory calculator (https://www.agmanager.info/hay-inventory-calculator) to balance forage inventories with fall/winter grazing acres.
- If grazing crop residues following harvest, keep the following in mind:
  - The bottom 1/3 of the stalk is where nitrates accumulate.
  - Be aware of prussic acid in new regrowth of sorghum plants, and the time around frost is the greatest risk.
  - High amounts of down grain will require a change in management.
- Use the Management Minder tool on KSUBeef.org (https://www.asi.k-state.edu/extension/beef/tools.html) to plan key management activities for your cowherd for the rest of the year.
- With high feeder calf prices, consider price risk management tools.
- Begin preparing for cold weather (i.e. tank heaters, windbreaks, bedding).

What's New for Cattle Producers

greatOplus (Extruded Blend of Flaxseed and Nannochloropsis oculata Biomass) Improves Finishing Cattle Performance and Carcass Characteristics- This study investigated feeding greatOplus (GOP), an extruded mixture of flaxseed and Nannochloropsis oculata microalgae biomass (NBO3 Technologies LLC; Manhattan, KS) on feedlot cattle performance and carcass characteristics.

Yearling steers (n = 700; 825 lb ± 18.07 lb initial body weight (BW)) were blocked by initial BW and assigned randomly, within block, to 28 feedlot pens containing 25 animals/pen. Cattle were vaccinated against viral and clostridial pathogens and treated for internal and external parasites (Bovishield Gold 5, Ultrabac 7 Somubac, and Dectomax injectable; Zoetis Animal Health), and implanted with a combination implant (Component TE-200; Elanco USA). The control diet (CON) consisted of 58.3% steam-flaked corn, 20% wet corn gluten feed, 2.56% soybean meal, and 4.17% vitamin/mineral/feed additive premix. For the greatOplus (GOP; an extruded blend of flaxseed and Nannochloropsis oculata microalgae) diet, a portion of the corn and all the soybean meal were replaced with 10% GOP (dry basis) to create isonitrogenous diets. Cattle were fed once daily, ad libitum. After 175 days on feed, animals were weighed and transported to a commercial abattoir for harvest. Animal performance measurements included average daily gain (ADG), dry matter intake (DMI), and gain:feed (G:F). Hot carcass weight (HCW) and incidence of abscessed livers were assessed on the day of harvest, and marbling score, 12th rib fat thickness, longissimus muscle area, and U.S. Department of Agriculture (USDA) yield and quality grades were determined following 48 hours of refrigeration.

Results: Cattle fed GOP had greater DMI and ADG ($P < 0.05$) compared to cattle fed CON, but G:F was not affected by treatment ($P > 0.10$). Cattle fed GOP had greater HCW compared to those fed CON (932.11 versus 902.79 lb; $P < 0.01$) and tended to produce more Prime and Choice carcasses (87.4 versus 83.0%; $P = 0.11$) with greater 12th rib backfat (0.61 versus 0.59 in; $P < 0.02$) and greater yield grades (2.91 versus 2.75; $P < 0.01$). Marbling score (488 versus 491), longissimus muscle area (14.6 versus 14.5 in^2) and liver abscess incidence (12 versus 16% for CON and GOP, respectively) were unaffected by treatment ($P > 0.10$). Carcass values were calculated using base prices, premiums, and discounts published by the USDA, and were greater for cattle fed GOP compared to cattle fed the CON diet ($2,122 versus $2,059; $P < 0.01$).

The Bottom Line: Including greatOPlus at 10% of the diet dry matter improved cattle performance, largely as the result of its impact on DMI and ADG. More information is available on this study and others like it at KSUBeef.org. (This study conducted by *Firman Nasiu, Luis F.B.B. Feitoza, A. N. Baker, L. R. Thorn, Ludmila S. Monteiro, and James S. Drouillard).*

The Impact of Degree of Doneness, Muscle Source, and Bloom Time on Cooked Color and Cooked Color Stability- This study examined the differences in color stability between three different muscles cooked to varying degrees of doneness by taking color readings at four different time points. longissimus lumborum (LL), psoas major (PM), and semitendinosus (ST) were cooked to medium rare (MR), medium (MED), or well done (WD) degree of doneness (DOD). Color was measured at 0, 3, 6, and 9 minutes to observe color stability changes.

Results: There was an interaction ($P < 0.05$) between DOD and muscle for L* (lightness) readings. The ST had the highest L* reading within the MR and MED DOD followed by the LL; however, there were no differences between muscles ($P > 0.05$) within the WD DOD. The 0-minute readings had a lower ($P < 0.05$) L* reading in comparison to 9 minutes, while not being different ($P > 0.05$) from 3 or 6 minutes. Similar to the L* readings, there was an interaction ($P < 0.05$) between DOD and muscle for a* readings. Within the MED DOD, the ST had the highest ($P < 0.05$) a* reading followed by the LL, while the LL had the highest ($P < 0.05$) a* reading within the MR and WD DOD. There was an interaction ($P < 0.05$) between DOD and muscle and DOD and time for the oxymyoglobin (OMb) percentage. Within the MR samples, the LL and ST muscles resulted in similar ($P > 0.05$) OMb percentage. The MR DOD had the highest ($P < 0.05$) OMb percentage for 3, 6, and 9 minutes while the 0-minute readings for MR and MED were similar ($P > 0.05$) and higher ($P < 0.05$) than all-time points for the WD DOD.

The Bottom Line: Muscle influences cooked color and its stability, so if there are significant differences among muscles, it might be necessary to provide consumers with specific cooking instructions for each muscle. More information is available on this study and others like it at KSUBeef.org. (This study conducted by Greta E. Huber, Taylor M. Dieball, Natalie T. Acosta Castellanos, Kiersten M. Gundersen, Kasey R. Maddock Carlin, Michael D. Chao, Jessie L. Vipham, Morgan D. Zumbaugh, Travis G. O'Quinn, and Erin S. Beyer).

What's New for Swine Producers

Effects of Increasing Histidine:Lysine Ratio During Lactation on Sow and Litter Performance- A total of 88 sows (Line 241, DNA) and their offspring were used to evaluate the effect of increasing SID His:Lys ratio in lactating sow diets on sow and litter performance. Sows were blocked by parity and body weight (BW) on approximately d 110 of gestation and allotted to one of three dietary treatments of increasing SID His:Lys ratios (40, 50, or 60% of Lys). Sows were fed approximately 6 lb/d of their treatment diet from d 110 of gestation until farrowing, after which they were allowed ad libitum access to their treatment diet. Litters were cross fostered within 48 h after farrowing to equalize litter size. Increasing SID His:Lys ratio did not affect (P > 0.10) sow BW, backfat, caliper score, or loin depth on d 110 of gestation or at weaning and did not alter the change in those measurements over the lactation period. Total born did not statistically differ (P < 0.10) based on sow lactation diet, however, there were numerical differences between treatments. Increasing SID His:Lys ratio tended to increase and then decrease (quadratic, P ≤ 0.062) d 7 and weaning litter weight with sows fed a SID His:Lys ratio of 50% having the greatest litter weight. Increasing SID His:Lys ratio tended to increase d 7 to wean piglet ADG (linear, P = 0.100) but did not impact litter ADG or pre-weaning mortality (P > 0.10). Increasing SID His:Lys ratio increased and then decreased (quadratic, P = 0.027) total milk yield from d 2 of lactation until weaning and tended to increase and then decrease average daily milk yield (quadratic, P = 0.078) with sows fed a SID His:Lys ratio of 50% having the greatest total and average daily milk yield. Increasing SID His:Lys ratio (P > 0.10) did not affect milk composition. These results suggest that increasing the SID His:Lys ratio to 50% tended to increase litter weight on d 7 and at weaning and average daily milk yield. More information is available on this study and others like it at KSUSwine.org. *(This study conducted by Abigail K. Jenkins, Mikayla S. Spinler, Jason C. Woodworth, Jordan T. Gebhardt, Robert D. Goodband, Mike D. Tokach, Joel M. DeRouchey, and Keith D. Haydon).*

Effects of Standardized Ileal Digestible Lysine:Crude Protein Ratio on Growth Performance of 25- to 55-lb Pigs- A total of 4,167 pigs (initially 28.7 ± 0.59 lb) were used in a 21-d growth study to evaluate SID Lys:CP ratios for 25- to 55-lb pigs. Pigs were weaned at approximately 21 d of age and pens of pigs were randomly allotted to one of 10 dietary treatments in a randomized complete block design. Pens of pigs were blocked based on sow farm origin, date of entry into the facility, and average pen weight. A total of 160 pens were used with 80 double-sided, 5-hole stainless steel fence-line feeders, with feeder serving as the experimental unit. For each feeder, one pen contained approximately 26 gilts, and one pen contained approximately 26 barrows. There were eight replicates per dietary treatment. A pelleted phase 1 diet was fed to all pigs with 1.25 lb/pig budgeted, followed by a phase 2 diet fed in meal form until beginning of the experiment on d 21 post-weaning. Phase 3 experimental treatments were arranged in a 2 × 5 factorial with main effects of SID Lys (1.15 or 1.30%) and SID Lys:CP ratio (6.00, 6.22, 6.46, 6.72, and 7.00). From d 0 to 7 (period 1), there was a tendency for a SID Lys:CP × SID Lys interaction (quadratic, *P* = 0.077), where feed efficiency improved at 6.22 SID Lys:CP and worsened (quadratic, *P* = 0.001) as the ratio increased in diets formulated to 1.15% SID Lys, while feed efficiency worsened (linear, *P* = 0.010) as SID Lys:CP ratio increased in diets formulated to 1.30% SID Lys. As the SID Lys:CP ratio increased, ADG increased (quadratic, *P* = 0.043) up to 6.46 SID Lys:CP ratio, and then decreased as the ratio increased thereafter. As the SID Lys:CP ratio increased, ADFI increased (linear, *P* = 0.028). From d 7 to 14 (period 2), a SID Lys:CP × SID Lys interaction was observed (linear, *P* = 0.008) for F/G where increasing SID Lys:CP ratio worsened (linear, *P* < 0.0001) F/G in diets formulated to 1.15% SID Lys while no response was observed in diets formulated to 1.30% SID Lys. Additionally, as the SID Lys:CP ratio increased, ADFI increased (linear, *P* = 0.013). From d 0 to 14 (periods 1 and 2), a SID Lys:CP × SID Lys interaction was observed (linear, *P* = 0.0002) where increasing SID Lys:CP ratio worsened feed efficiency in both SID Lys levels, but the magnitude was greater in diets formulated to 1.15% SID Lys (quadratic, *P* = 0.016) compared to 1.30% SID Lys (linear, *P* = 0.0004). Increasing SID Lys:CP ratio increased (linear, *P* = 0.004) ADFI. From d 14 to 21 (period 3), as the SID Lys:CP ratio increased, feed efficiency worsened (linear, *P* = 0.004). From d 0 to 21 (overall), a SID Lys:CP × SID Lys interaction was observed (linear, *P* = 0.012) where increasing the SID Lys:CP ratio reduced (*P* < 0.0001) feed efficiency at both SID Lys levels, but the magnitude was greater in diets formulated to 1.15% SID Lys compared to 1.30% SID Lys. Additionally, ADFI increased (*P* = 0.013) as the SID Lys:CP ratio increased. Increasing SID Lys increased (*P* < 0.001) ADG in phases 1, 2, and overall, but not from d 14 to 21. In conclusion, increasing SID Lys:CP ratio worsened feed efficiency, especially when the ratio increased beyond 6.46. Data suggests that diets for 25- to 55-lb pigs should be formulated to a SID Lys:CP ratio of 6.46 or lower to maintain feed efficiency. More information is available on this study and others like it at KSUSwine.org. *(This study conducted by Jessica L. Smallfield, Jordan T. Gebhardt, Katelyn N. Gaffield, Mike D. Tokach, Jason C. Woodworth, Robert D. Goodband, Joel M. DeRouchey, Dwight J. Shawk, and Noah C. Gainey).*

ASI Faculty Highlight

Sandy Johnson (sandyj@ksu.edu or 785-462-6281)
Professor / Extension Specialist
Northwest Research and Extension Center

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 Ph.D. Her dissertation examined the role of the follicle in the formation of short-lived corpora lutea in postpartum beef cows. Sandy received a Ph.D. 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 Estrous Synchronization Planner and organized the Beef Cattle Reproduction Leadership Team. All 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 increase the likelihood of successful AI breeding. Her research interests include the areas of estrous synchronization, costs of breeding systems and cow/calf management.

Bob Goodband (goodband@ksu.edu or 785-532-1228)
University Distinguished Professor / Extension 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%). He is part of a progressive swine extension/nutrition team with programs focused on developing, evaluating and disseminating the latest information to increase the profitability of pork producers. Bob has played an important role in developing an intensive on-farm research program that has conducted numerous on-farm trials in several states across the U.S. His work has resulted in over 400 refereed journal papers, 10 book chapters, over 1,000 research reports and Extension publications. 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 40 to 50 undergraduate students each year and has helped mentor over 120 M.S. and Ph.D. students.

We need your input! If you have any suggestions or comments on
News from KSU Animal Sciences,
please let us know by email to katiesmith@ksu.edu