



# News from KSU Animal Sciences

↪ **Developing and Implementing a HACCP Plan for Meat and Poultry Workshop** will be held May 19-20, 2020, via Zoom on-line. This two-day workshop uses curriculum recognized by the International HACCP Alliance for meat and poultry processors. The registration fee is \$450 per person and is available on-line at <http://haccp.unl.edu>. For more information, contact Dr. Liz Boyle ([lboyle@ksu.edu](mailto:lboyle@ksu.edu); 785-532-1247).

↪ **State Livestock Nominations due June 15** – All small livestock and commercial heifer state nominations (non-market beef) are due June 15. This includes commercial heifers, market swine, commercial gilts, market lambs, commercial ewes, and ALL meat goats. Both state shows now have a breeding doe show. However, there is not a separate division for registered breeding does at either state show, so all meat goats must be nominated in order to be eligible to show. The 2020 nomination information has been distributed to county offices and may be found on the KSU Youth Livestock Program website. The 2020 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 as the second page of each specie nomination form, on the KSU Youth Livestock Program website ([www.asi.k-state.edu/research-and-extension/youth-programs](http://www.asi.k-state.edu/research-and-extension/youth-programs)), or through the local county office. 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. There should not be a single signature on forms or DNA, unless there is only one child eligible to exhibit within the family. Please double check that there are not any blank fields or questions on the Declaration and Nomination Forms before placing them in the mail.

Continuing in 2020, all exhibitors are required to be YQCA certified to participate in either state show. 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. Ear notches are also 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 needs to be submitted on scrapie tags (example: 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 KSU 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 its 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](mailto:adhayes@ksu.edu). Questions regarding show rules or entries should be directed to each specific show (KSF Grand Drive 620-669-3623; KJLS 316-706-9750).

## Department of Animal Sciences and Industry

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**Quality Assurance Certification Requirement for State Shows** – All exhibitors 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 4, 2020, to be accepted. Any nominations received without the appropriate YQCA or Youth PQA+ number will be considered incomplete. The Youth PQA Plus program was discontinued on May 31, 2018. So, youth who need quality assurance certification will need to complete YQCA training. The National Pork Board and the two state shows in Kansas will honor Youth PQA Plus numbers until they expire. If youth had not completed an instructor-led YQCA course by the second week of March, the online course is the best viable option available in the foreseeable future. There is now an option for 7-year-olds to obtain certification, but they must attend an instructor-led class. The requirement for 7-year-old exhibitors to be certified does not go into effect until 2021, so they will continue being exempt this year for KJLS. All participants must sign up through the YQCA website prior to training in order to receive their certificate and official number. Visit [www.yqca.org](http://www.yqca.org) to sign up or contact the local extension office for more 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, in order to view and print their YQCA certificate. There are also resources on the program, signing up, and printing certificates on the Quality Assurance tab of the KSU Youth Livestock Program website. For more information, please contact the local extension office or Lexie Hayes at [adhayes@ksu.edu](mailto:adhayes@ksu.edu) or 785-532-1264.



The **2020 Dr. Bob Hines Kansas Swine Classic** scheduled for July 10-11, will be held virtually. Watch for more details coming soon. For more information, contact Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)) or Lexie Hayes (785-532-1264; [adhayes@ksu.edu](mailto:adhayes@ksu.edu)).



Mark your calendars – the **Kansas 4-H Livestock Sweepstakes** will be hosted on the K-State campus August 22-23! Registration must be completed through your local extension office and will be due August 1. The schedule, rules, and information will be available on the youth livestock website at the beginning of June.

CALENDAR OF UPCOMING EVENTS		
Date	Event	Location
May 19-20, 2020	HACCP workshop	
June 15, 2020	State Livestock Nominations due	
July 10-11, 2020	Dr. Bob Hines Kansas Swine Classic	
August 22-23, 2020	Kansas 4-H Livestock Sweepstakes	Manhattan

# What's New.....

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

### ***“Return to Normal”***

The outbreak of Coronavirus (COVID-19) in the United States has affected the workplace in many different ways over the past few weeks. As many states and counties begin to ease restrictions, many employers in KS are now beginning to consider the necessary steps to “return to normal”. The Kansas Department of Health and Environment has several resources for businesses posted on its website (<https://www.coronavirus.kdheks.gov/>). The resources on this page range from details on the current plan to re-open the state to how to properly clean and disinfect your business. As we transition back into the workplace, our “return to normal” will likely not be the normal we once knew and will likely create anxiety for both employers and employees. Experts suggest that one of the most important things employers can do to ease the transition is communication. Employers must communicate social distancing and cleaning protocols, as well as expectations regarding working remotely. Some employees may have safety concerns, especially if they or a family member falls within a high-risk category. Employers will likely have to make reasonable accommodations on an individual basis, which is challenging. However, there have been many challenges associated with this situation and most organizations/employers have demonstrated that they are more resilient than they ever imagined and that we will “return to normal” even if normal looks a little different.

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu).

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

### ***“Protein Sources for Growing Cattle”***

One of the outcomes of the recent Coronavirus (COVID-19) situation that unexpectedly affected many cattle feeding operations throughout Kansas and the Midwest was a sudden reduction in the availability of distiller's grains. As many Americans heeded “stay at home” orders, demand for fuel, oil, and ultimately ethanol fell resulting in price declines that forced many ethanol plants to scale back production. The cattle feeding industry has relied heavily on distiller's grains as the primary source of protein in both growing and finishing rations for many years. Distiller's grains comprise 10-30% of many cattle rations depending upon the nutrient composition and price of other commodities. The reduced supply of distiller's grains forced many cattle producers to look at traditional sources of protein, such as soybean meal, cottonseed meal, alfalfa and urea that many producers had not used for at least a decade. The prices of several common commodity protein sources (central, KS; obtained 4/28/2020) on a per ton and a cost per unit of protein basis are shown below. It is essential that producers evaluate protein sources on a cost per unit of protein prior to making purchasing decision. All of the traditional protein sources in the table were comparably priced on a cost per unit of protein basis (\$0.44-0.49 /lb CP) with the exception of urea. However, urea must be used with caution, should not comprise more than 0.5 to 1.0% of the total diet on a dry matter basis, and it is generally recommended that urea be added into the ration using a premix or liquid to ensure that urea is appropriately mixed in the ration.

<b>Commodity</b>	<b>Cost/ton, \$</b>	<b>% Crude Protein Dry</b>	<b>Cost/lb of Crude Protein Dry, \$</b>
<i>Alfalfa</i>	200	23	0.49
<i>Soybean meal</i>	375	48	0.44
<i>Cottonseed meal</i>	350	41	0.48
<i>Feed Urea</i>	660	281	0.12

For more information, contact Justin Waggoner at [jwaggon@ksu.edu](mailto:jwaggon@ksu.edu).

↪ **Fellow (Post Doc) position open** - The Department of Animal Sciences and Industry is seeking applicants for a full-time, unclassified professional, term contract staff position (Job #508742). The purpose of this position is to provide research support in the form of a post-doc to support research efforts aimed at identifying and characterizing sorghum phenolics and their bioactivity and how food processing impacts phenolic compounds and their activity. Screening of applications will begin immediately and will continue until a suitable candidate is identified. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508742/fellow-post-doc>. For more information, contact Dr. Umut Yucel, Search Committee Chair, at 785-532-1208 or [yucel@k-state.edu](mailto:yucel@k-state.edu).

↪ **Assistant or Associate Professor, Dairy Cattle Nutrition position open** - The Department of Animal Sciences and Industry is the largest department (more than 1,200 undergraduates and approximately 100 graduate students) in Kansas State University's College of Agriculture. We are seeking applicants for a 12-month, tenure-track position (60% Research, 40% Teaching). The position (job #508940) will be at the rank of Assistant or Associate Professor and located in Manhattan, KS. The successful individual will be expected to develop a nationally recognized, externally-funded research program in dairy nutrition and contribute to the core missions of the department involving undergraduate and graduate teaching and research activities. Participation in interdisciplinary efforts to enhance the Department's research in focus areas including nutrition, breeding, genetics, reproductive physiology, and food science is strongly encouraged. Teaching and mentoring responsibilities will be consistent with the successful individual's expertise, interests, and needs of the Department. It is expected that the successful candidate will develop a dynamic graduate training program. Application deadline has been extended to June 1, 2020. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508940/assistant-or-associate-professor-dairy-cattle-nutrition>. For more information, contact Dr. KC Olson, Search Committee Chair, at 785-532-1254 or [kcolson@ksu.edu](mailto:kcolson@ksu.edu)

↪ **Assistant or Associate Professor, Dairy Extension Specialist position open** - The Department of Animal Sciences and Industry is the largest department (more than 1,200 undergraduates and approximately 100 graduate students) in Kansas State University's College of Agriculture. We are seeking applicants for a 12-month, tenure-track position (70% Extension, 30% Research). The position (job #508941) will be at the rank of Assistant or Associate Professor and located in Manhattan, KS. The successful individual is expected to develop an innovative extension and dairy research program addressing issues facing the Kansas and U.S. dairy industry in addition to contributing to the core missions of the Department. Participation in interdisciplinary efforts to enhance the Department's research in focus areas including nutrition, breeding, genetics, reproductive or lactation physiology, and food science is strongly encouraged. Research efforts will be consistent with the successful individual's expertise, interests, and needs of the Department. Application deadline has been extended to June 1, 2020. To apply, go to <https://careers.k-state.edu/cw/en-us/job/508941/assistant-or-associate-professor-dairy-extension-specialist>. For more information, contact Dr. Mike Tokach, Search Committee Chair, at 785-532-2032 or [mtokach@k-state.edu](mailto:mtokach@k-state.edu)

↪ **Effects of Limit Feeding Cold Stressed Growing Calves in the Morning Versus the Evening, as well as Bunk Line Sharing on Performance** - Crossbred steers of Texas, Oklahoma, and Idaho origin were blocked by weight into four size groups and randomly assigned to pens, which were randomly allocated to one of five treatments. All steers received a diet formulated to provide 60 Mcal net energy for gain/100 lb of dry matter and were limit fed with a target of 2.0% of their body weight in dry matter intake. Treatments consisted of being fed in the morning (AM), in the evening (PM), fed half of their feed in the morning and half in the evening (50/50), and two treatments that allowed cattle to be fed in the same pen yet were rotated twice daily utilizing a holding pen, allowing for half of the calves to be fed in the morning (Shuttle AM) and half to be fed in the evening (Shuttle PM), doubling the use of the pen and bunk line. The steers were fed for 77 days and individual animal weights were taken on day -1 (allocation), day 0 (initial processing), day 64/65 (blood sampling), and day 77 (final weights). Plasma glucose was obtained individually on day 64 and 65, and pen weights were collected on days 0, 21, 28, 35, 56, 63, 70, and 77. The objective was to determine the response of cold stressed growing calves to being fed in the evening instead of morning hours, as well as the effect of bunk line sharing.

**Bottom Line...** When limit feeding cold stressed growing calves, neither shifting from morning feed delivery to evening feed delivery, nor bunk line sharing significantly improves the efficiency of feed conversion. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Dale Blasi ([dblasi@ksu.edu](mailto:dblasi@ksu.edu); 785-532-5327).

↩ **Effects of Guanidinoacetic Acid on Lean Growth and Methionine Flux in Cattle** - This study was conducted to evaluate the effect of supplementing guanidinoacetic acid in the presence or absence of L-methionine on nitrogen retention (lean tissue growth) when cattle were purposefully maintained under conditions of a methionine deficiency. Seven ruminally-cannulated Holstein steers (355 lb) were used in an experiment where each steer received each of six treatments. Treatments were abomasal infusion of 0 or 6 g/day methionine, and 0, 7.5, or 15 g/day guanidinoacetic acid, with all combinations represented. Energy was supplied by ruminal infusion of volatile fatty acids and abomasal infusion of glucose. All essential amino acids, except methionine, were infused abomasally to make methionine the most limiting amino acid.

**Bottom Line...** Supplementation with 15 g/day of guanidinoacetic acid tended to increase lean tissue growth when steers received supplemental methionine, probably by increasing creatine synthesis by the steers. View the complete research report at [www.asi.ksu.edu/cattlemensday](http://www.asi.ksu.edu/cattlemensday). For more information, contact Evan Titgemeyer ([etitgeme@ksu.edu](mailto:etitgeme@ksu.edu); 785-532-1220) or A.J. Tarpoff ([tarpoff@ksu.edu](mailto:tarpoff@ksu.edu); 785-532-1220).

↩ **Should Phytase Be Given Release Values for Amino Acids and Energy in Diets for Growing Pigs? -**

A total of 2,268 mixed gender pigs were used from 2 barns in a 55-d growth trial. On d 0 of the trial, pens of pigs were blocked by weight and randomly allotted to 1 of 6 dietary treatments with 27 pigs per pen and 14 pens per treatment (7 pens per barn). Treatments were fed in 2 different phases. Phase 1 diets were fed from d 0 to 29 (62.9 to 112.6 lb) and phase 2 diets were fed from d 29 to 55 (112.6 to 159.7 lb). Treatments consisted of a control with inorganic P from monocalcium P, or 5 diets with 1,500 phytase units (FYT/kg) assuming different supplier-provided nutrient release values (Ca and P; Ca, P, and AA; Ca, P, AA, and half of the suggested net energy (NE); Ca, P, AA, and full NE; or no nutrient release). The assumed release values were 0.146% STTD P, 0.166% available P, 0.102% STTD Ca, 19 kcal/lb of NE; and 0.0217, 0.0003, 0.00886, 0.0224, 0.0056, 0.0122, and 0.0163% digestible Lys, Met, Met + Cys, Thr, Trp, Ile, and Val, respectively. All diets within phase were corn-soybean meal-based and contained a standardized total tract digestibility (STTD) Ca:STTD P ratio of 1.60:1 with all amino acids (AA) set to meet or exceed NRC4 requirement estimates. Overall (d 0 to 55), there was no evidence for difference in average daily gain (ADG) or average daily feed intake (ADFI). However, pigs fed the diet containing 1,500 FYT/kg assuming no nutrient release had improved feed efficiency (F/G) compared to pigs fed diets containing 1,500 FYT/kg assuming either Ca and P or Ca, P, AA, and full NE release, with others intermediate. In the economic analysis, there was no evidence for difference in feed cost per pig or feed cost per lb gain.

**Bottom Line...** In conclusion, based on diet formulation, pigs fed either the control diet with inorganic P from monocalcium P or any of the phytase-containing diets should have had similar performance, with the exception of pigs fed the diet formulated to contain 1,500 FYT/kg assuming no release values. However, pigs fed full matrix release values had the poorest F/G, while pigs fed diets assuming Ca and P in addition to AA and half NE had F/G comparable to the control. This suggests the full matrix release values, especially energy, attributed to the phytase may be too aggressive and resulted in diets contributing fewer nutrients than needed to optimize performance. 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 M.R. Wensley, J.C. Woodworth, J.M. DeRouchey, S.S. Dritz, M.D. Tokach, R.D. Goodband, and H.C. Cartagena)

↩ **Effects of Varying Lipid Sources as Alternatives to Zinc Oxide or Carbadox on Nursery Pig Growth Performance and Fecal Consistency** - A total of 360 weaned pigs were used in a 35-d study evaluating the ability of varying lipid sources to replace ZnO or carbadox in early nursery pig diets. Pigs were weaned at approximately 21 days of age and allotted to pens based on initial weight in a completely randomized design to one of six dietary treatments: 1) Negative control (no added ZnO or carbadox); 2) Control + 3,000 ppm Zn from ZnO in phase 1 and 2,000 ppm Zn in phase 2; 3) Control + 50 g/ton carbadox; 4) Control + 1% C6:C8:C10 medium chain fatty acid (MCFA) blend; 5) Control + 1% Proprietary Oil Blend (Feed Energy Corp., Des Moines, IA); and 6) Control + 1% monolaurate blend (FORMI GML from ADDCON, Bitterfeld-Wolfen, Germany). There were 6 pigs assigned to each of the 10 replicate pens per treatment. All experimental diets were isocaloric, with choice white grease used to balance the energy level. From d 0 to 19, pigs fed the ZnO or carbadox diets had greater average daily gain (ADG) than pigs fed the control or Feed Energy oil blend, with pigs fed the MCFA blend or FORMI GML intermediate. These effects were mostly driven by feed intake, which was greater in pigs fed diets containing ZnO or carbadox than by pigs fed diets containing the 1% MCFA or Feed Energy oil blends. Dietary treatment had a marginally significant effect on feed efficiency (F/G), with the best feed efficiency for pigs fed carbadox and the poorest feed efficiency in pigs fed the control diet. Both ZnO and carbadox improved fecal consistency during the treatment period. In summary, ZnO and carbadox continue to be valuable additives to maximize growth in early nursery pig diets. Some lipid products, such as the monolaurate containing FORMI GML, show greater promise to replace these antimicrobials than others.

**Bottom Line...** These findings suggest that additional research is warranted to identify optimal lipid blends that can replace feed-based antimicrobials in early nursery pig diets without negatively impacting fecal consistency or feed intake. 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 P.L. Dahmer, G.E. Luebcke, A.B. Lerner, and C.K. Jones)



**Effects of Oceanfeed Swine Feed Additive on Performance of Sows and Their Offspring** - The objective of this study was to evaluate the effects of the Oceanfeed Swine™ feed additive on sows and their offspring performance. Oceanfeed Swine is a product created by drying and blending a selected mix of brown, red, and green seaweeds. A total of 28 sows and litters were used from d 30 of gestation until weaning (d 20 of lactation). Treatments consisted of providing a control diet or the Oceanfeed Swine diet added at 0.5% of complete diet in gestation and 0.66% in lactation diets. Then offspring of these sows were used for the nursery and grow-finish portions of the study. In the nursery, a total of 360 weanling pigs were used in a 56-d trial. There were 5 pigs per pen and 18 replications per treatment. Treatments were arranged in a split-plot design with sow treatment (control vs. Oceanfeed Swine diet) as a whole-plot and nursery treatment (control vs. Oceanfeed Swine diet) as the sub-plot. In the nursery phase, the Oceanfeed Swine was added at 0.75% of the diet. During the nursery phase, fecal scoring was used to categorize fecal consistency and fecal samples were collected for microbial analysis. At the end of the nursery portion, pigs from two nursery pens within weight block and treatment were combined and moved to the finishing barn with approximately 10 pigs per pen and 9 replications per treatment. Pigs were weighed weekly (nursery) or every two weeks (finisher) to determine growth performance. At the conclusion of the finishing phase, all pigs were marketed for carcass data collection. The addition of the Oceanfeed Swine in sow diets during gestation and lactation did not influence sow body weight at the end of gestation or at weaning. Also, there were no differences in colostrum yield, colostrum and milk composition, or litter performance between the two treatments during the lactation period. In the nursery, there was no evidence for the effect of sow by nursery treatment, interactions observed. For the overall nursery period (weaning to day 56), no sow or nursery effects were observed for growth performance. For fecal scores, there was a sow × nursery treatment interaction observed. In general, pigs weaned from control sows then fed the control diet, or pigs weaned from Oceanfeed Swine sows and fed Oceanfeed Swine had firmer fecal scores than the other two combinations. There was also a sow treatment by day interaction observed with pigs weaned from control sows initially (day 7) having firmer feces than those weaned from sows fed Oceanfeed Swine in the nursery. However, by day 21, there appeared to be no differences in fecal consistency among pigs weaned from either sow treatment group. For microbial analysis, there was a marginally significant increase in the proportion of pigs with the families Peptostreptococcaceae and Veillonellaceae detected in the pigs from sows fed Oceanfeed Swine diets and fed Oceanfeed Swine compared with the control group. Moreover, pigs from sows that were fed Oceanfeed Swine diet and then fed Oceanfeed Swine had an increased mean number of species detected within the family Ruminococcaceae and had a marginally significant increased mean number of species detected within the family Lachnospiraceae, two families that are generally considered beneficial. Finally, pigs from sows that were fed Oceanfeed Swine diets, then fed Oceanfeed Swine had marginally significant lower mean number of species detected within the family Fusobacteriaceae, a family that is generally considered pathogenic. In the finishing period, a sow by finishing treatment interaction was observed for F/G from d 0 to 55 after weaning. Pigs weaned from sows fed control diets and switched to Oceanfeed Swine in the nursery or pigs weaned from sows fed Oceanfeed Swine then fed control diets in the finishing phase had improved F/G compared with the two other treatment combinations. No evidence for any main effect differences was observed on overall growth performance. However, sow by finishing treatment interaction was observed for backfat depth. This interaction was similar to the day 0 to 55 F/G response. Pigs weaned from sows fed control diets and then fed control diets in the nursery/finishing period had greater backfat depth and decreased percentage lean compared with other treatment combinations (sow treatment × nursery/finishing treatment interaction).

**Bottom Line...** In summary, the addition of Oceanfeed Swine in gestation, lactation, and the nursery/finishing phases had no consistent effect on sow or litter performance. However, a shift in the microbiota was observed in the pigs from sows fed Oceanfeed Swine diet, then fed Oceanfeed Swine with higher number of species detected within Ruminococcaceae and Lachnospiraceae families that are generally considered beneficial and lower number of species within the family Fusobacteriaceae that is normally considered pathogenic. 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 L. Del Tuffo, F. Laskoski, C.M. Vier, M.D. Tokach, S.S. Dritz, J.C. Woodworth, J.M. DeRouchey, R.D. Goodband, L.A. Constance, M.C. Niederwerder, and E. Arkfeld)

# ASI Faculty Spotlight



**Abbey Nutsch ([anutsch@k-state.edu](mailto:anutsch@k-state.edu); 785-532-4549)**  
**Teaching Associate Professor/Food Microbiology**

Dr. Abbey Nutsch received B.S. (1994) and Ph.D. (1998) degrees in Food Science from Kansas State University. A food microbiologist by training, her area of expertise is the microbiological safety of meat products, with particular emphasis on the application of antimicrobial interventions for both fresh and processed meat products. After spending five years as the Director of Technical Services for a commercial food testing and research laboratory, Dr. Nutsch returned to K-State in 2002 to serve within the Food Science Institute as a coordinator for a multi-institutional working group. In 2004, she joined the Department of Animal Sciences & Industry as an assistant professor of food safety and security. Originally from WaKeeney, Kansas, she and her husband, Todd, currently live in Wamego, Kansas, with their two children, Gracyn and Hayden.

Dr. Nutsch teaches graduate-level courses addressing food safety and food protection & defense, as well as graduate- and undergraduate-level courses addressing professional and research skills for food scientists. Dr. Nutsch advises undergraduate students in Food Science and in 2016 was appointed to serve as the Assessment Lead for the IFT-approved Food Science Undergraduate Program. For the past 10 years, Dr. Nutsch has advised students in the online Food Science MS program. In 2017, she received the Kansas State University Global Campus Outstanding Advisor Award.

In addition to her work with Food Science students, Dr. Nutsch also advises students in the Master of Public Health program and the Food Safety and Defense Graduate Certificate program (an inter-institutional graduate program administered through the AG\*IDEA Academic Alliance).



**Jim Nelssen ([jnelssen@k-state.edu](mailto:jnelssen@k-state.edu); 785-532-1251)**  
**Professor/Extension Specialist, Swine Nutrition**

Dr. Jim Nelssen is an extension specialist and swine nutritionist at Kansas State University. His current position is 41% Extension and 41% Research.

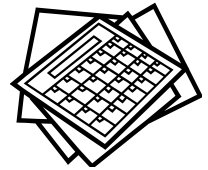
Dr. Nelssen grew up in Smith Center, Kansas, where he was active in 4-H and FFA. Jim received his B.S. in Animal Science (1978) and his M.S. in swine reproductive physiology (1980) from Kansas State University. He received his Ph.D. in Swine Nutrition from the University of Nebraska in 1983. Later that year, Jim started his career at Kansas State University as an Assistant Professor and Extension Swine Specialist. He was promoted to associate professor in 1989 and a full professor in 1995.

Jim's focus is transferring information to swine producers and conducting practical nutrition research. Jim has presented invited seminars at over 190 animal and veterinary science meetings around the world in addition to numerous presentations to local producer groups. Jim has authored or co-authored 123 refereed journal papers, 320 abstracts, 492 extension publications, and 4 book chapters. In 2005, Jim was named one of the 50 people that have made the greatest impact on the swine industry in the last 50 years by the National Hog Farmer Magazine.

Jim has three children.

# What Producers Should Be Thinking About.....

## WHAT PRODUCERS SHOULD BE THINKING ABOUT IN JULY.....



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

#### Cow Herd Nutrition

- Provide plenty of clean, fresh water.
- Provide free-choice mineral to correct any mineral deficiencies or imbalances.
  - ✓ Monitor intake to insure levels are consistent with label specifications.
- Monitor grazing conditions and rotate pastures if possible and/or practical.
- If ammoniated wheat straw is planned for winter needs, follow these rules:
  - ✓ Best time is immediately after harvest, prior to weather deterioration.
  - ✓ Ammoniation process is temperature sensitive, fastest during hot days.
  - ✓ Apply 3% Anhydrous Ammonia (60 pounds/ton of straw).
  - ✓ Do **not** ammoniate wheat hay or any other intermediate or high-quality forage; production of imidazole can cause cattle hyperactivity and death.
  - ✓ Will double crude protein content, enhances intake, and be cost effective.
- Consider early weaning if drought conditions develop and persist.
- Consider creep feeding only if cost effective.

#### Herd Health

- Monitor and treat pink eye cases.
- Provide fly control. Consider all options, price and efficiency will dictate the best option(s) to use.
- Monitor and treat foot rot cases.
- Avoid handling and transporting cattle during the hottest part of the day-reduce heat stress.
- Vaccinate replacement heifers for Brucellosis if within proper age range (4 - 10 months).
- Continue anaplasmosis control program (consult local veterinarian).

#### Forage/Pasture Management

- Check and maintain summer water supplies.
- Place mineral feeders strategically to enhance grazing distribution.
- Check water gaps after possible washouts.
- Harvest hay in a timely manner, think quality and quantity.
- Harvest sudan and sudan hybrids for hay in the boot stage (normally three to four feet in height). It is a good idea to run a routine nitrate test on a field before harvesting hay.
- Plan hay storage placement wisely. Putting hay conveniently near feeding sites reduces labor, time demands, and equipment repair cost.

#### General Management

- Good fences and good brands make good neighbors.
- Check equipment (sprayers, dust bags, oilers, haying equipment) and repair or replace as needed. Have spare parts on hand, down time can make a big difference in hay quality.

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](mailto:lschrein@ksu.edu) or phone 785-532-1267.