

# News from KSU Animal Sciences

## July, 2009



**Newsletter from the Department of Animal Sciences and Industry**  
**213 Weber Hall, Kansas State University, Manhattan, KS 66506**  
**785-532-6131 - [www.asi.ksu.edu](http://www.asi.ksu.edu)**

## WHAT'S NEW....

- ↳ **Management Minute** – Chris Reinhardt, Ph.D., Extension Feedlot Specialist  
“Employee Training – Upgrading Your Assets”

“People are our best and most valuable assets.” How many times have you heard and/or said that? It is most likely true; however, we are often too busy just putting out fires to truly invest in that precious resource.

It has been said that organizations invest in what they value, and organizations ultimately only have two resources to invest: time and money. If you truly value your good people, you will invest in them. That will take time, and that may cost money. But that is the price of not only keeping good people around, but in fact making them even MORE valuable.

The selfish motivation for providing ongoing training and career development on the part of management is that you will have more productive employees. This is definitely true, but in addition they will be of greater value to your competitors too, and it may cost you to keep them due to their elevated market value. The good news is, as discussed in a previous Management Minute, organizations who demonstrate their commitment to their employees will most certainly have loyal employees who are very difficult to hire away.

But in addition to getting more productive, loyal employees, you get a higher output, higher efficiency, and higher profile organization. Teams with highly productive people get noticed---both your customers and your competitors will be paying attention. For more information, contact Chris at 785-532-1672 or [cdr3@ksu.edu](mailto:cdr3@ksu.edu).

- ↳ **Feedlot Facts** by Chris Reinhardt, Ph.D., Extension Feedlot Specialist  
“*Feedlot Nutrition Made Easy – Use of Distiller's Grains in Growing and Finishing Diets*”

Because of the modern “Bio-economy”, distiller's grains (DG) are here for the foreseeable future and, depending on their price relative to corn and soybean meal, can be efficiently utilized in beef cattle diets. Distiller's grains provide energy, protein, and minerals to the beef cattle diet, and are highly palatable. However, there are just a few guidelines to keep in mind when formulating diets with DG.

In forage-based diets for growing cattle, the fiber in DG can be an excellent source of energy. If the forage is of good quality, there are few limitations on the use of an energy source like DG. However, if you are trying to utilize very poor quality forage such as winter range, corn stalks, or wheat straw, addition of more than 4-5 lb per day (dry matter basis) may depress digestion of the forage.

In grain-based finishing diets, optimum inclusion level is based on fat and sulfur content. If your water is high in sulfur, you may not wish to exceed 20% of the dry matter as DG; if your water is extremely high in sulfur, you may not wish to use any DG. However, if sulfur is not an issue, feed conversion has been demonstrated to be maximized with inclusion of 25-35% (dry matter basis) wet DG in dry rolled corn-based finishing diets. If DG are priced well below corn, you may wish to exceed this level to improve cost of gain, although feed conversion may increase slightly.

Wet DG makes an excellent “conditioner” for a dry diet, holding ingredients together and reducing sifting out of denser ingredients. Conversely, dry DG is best used if there is a wet ingredient included, such as silage.

The value of DG is driven by its intended purpose. If we are feeding very low quality forage, we will determine price on an equal lb of crude protein basis in comparison to soybean meal, as protein is the first limiting nutrient we need to supplement. If we are feeding high quality forage such as corn silage, spring pasture, or alfalfa hay, the first limiting nutrient is energy, so we should price DG against corn. For more information, contact Chris Reinhardt at [cdr3@ksu.edu](mailto:cdr3@ksu.edu) or 785-532-1672.

↳ **Volatility in Fat and Soybean meal prices** - Ingredient prices have been changing dramatically the past few months, and with such volatility producers need to keep track of what ingredients to use. For example the price of fat has risen making it too expensive to add to finishing diets even though it improves growth rate and feed efficiency. Currently fat is averaging 25 to 27 cents per lb thus pricing out of many diets. However if it gets down to the 20 cent range or below, depending on corn price, it may become economically feasible to add back to finishing diets.

Soybean meal price has also been up and down lately, ranging from \$360 to \$460 per ton. One option to reduce the amount of soybean meal in the diet when it's expensive, is to add crystalline, or synthetic, amino acids in place of soybean meal. For many years, we limited synthetic lysine use to 3 lb per ton in grain-soybean meal diets. Now with other amino acids available we can also add more synthetic lysine (generally up to 4 to 6 lb per ton) if we also add synthetic methionine and threonine back to the diets. Formulation becomes very important so you need to consult your nutritionist before making any of these changes. For more information contact your state swine nutrition team for details. Bob Goodband (785-532-1228; [goodband@ksu.edu](mailto:goodband@ksu.edu)).

↳ **U.S. Pork Center of Excellence Announces Updates to the Pork Information Gateway** - The U.S. Pork Center of Excellence has updated the Pork Information Gateway (PIG) to create a more user-friendly Web site. The updates feature a new site design and a home page featuring up-to-date pork headlines that can be seen at <http://www.porkgateway.org>.

New features on the site include a home page featuring pork headlines and commentaries; links to news, markets and weather information; and drop-down menus to organize content. Other changes include the addition of a "Niche Production" domain and updates to PIG Opportunities. The Web site updates greatly enhance the scope of information available for U.S. Pork Producers by providing a more usable and intuitive information gateway.

PIG was launched in 2006 and is an online resource tool that is free to the U.S. Pork Industry. To see the upgrades—or to see the site for the first time—visit [www.porkgateway.org](http://www.porkgateway.org). You must be registered to see much of the content but registration is free and your information is secure in this confidential database.

The U.S. Pork Center of Excellence was established in 2005 as a public/private partnership to bring together academic expertise in research, teaching and extension related to pork production. The center is housed at the National Swine Research and Information Center on the Iowa State University campus. There are two governmental agencies, both national pork industry associations, 17 state pork producer associations and 28 land-grant universities involved in the coalition. For more information on the Pork Information Gateway, contact Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)).

↳ Whether or not **feeding wet distillers grains on the ground** was a good idea has been a point of discussion for some producers learning how to utilize this feedstuff. Two University of Nebraska experiments compared feeding wet distillers grains in a bunk or on the ground to cattle grazing native Sandhills winter range. In the first experiment, dry, pregnant, March-calving cows were supplemented on winter range the daily equivalent of 1 lb of dry matter of wet distillers grains (roughly 3 lbs as fed) from Dec. 1 to Mar. 1. Supplement was provided either in bunks or on the ground at a frequency of every three or six days per week for a total of four treatments. During that time period, cows feed in bunks lost 20 lbs compared to a loss of 64 lbs for cows fed on the ground. Cows fed in bunks increased body condition by 0.4 compared to no change for cows fed on the ground. Frequency of supplementation did not change cow body weight or body condition.

In Experiment 2, March-born steer calves (443 lbs) were supplemented with wet distillers grains for 60 days beginning in mid-October either in bunks or on the ground. Steers received the daily equivalent of 2.2 lbs dry matter per steer and supplement was delivered five days per week. Average daily gain of calves fed on the ground was greater by 0.2 lbs per day for bunk fed calves. Using the 1996 NRC model for gain, the researchers calculated that the calves fed on the ground effectively consumed 0.3 lbs per day less on a dry basis than calves fed in bunks. This is the equivalent of 13% waste.

Summary of a paper by J.A. Musgrave, L.A. Stalker, M.C. Stockton and T.J. Klopfenstein, University of Nebraska presented at Western Section, American Society of Animal Science meeting, June 2009. Summary by Sandy Johnson, [sandyj@ksu.edu](mailto:sandyj@ksu.edu).

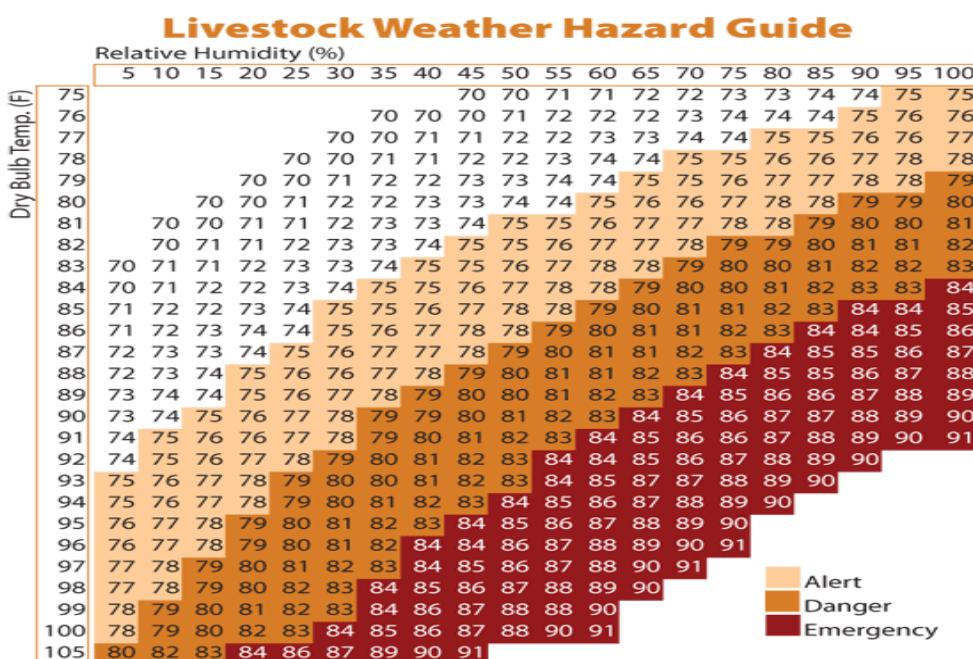


**Heat Stress in Cattle** - Cattle lack the ability to sweat, so it is critical that steps be taken to reduce heat stress before conditions become dangerous. High daytime temperature by itself rarely causes problems – it is the combination of humidity with heat that creates the maximum heat load on cattle. These primary factors are compounded by secondary environmental factors, including multi-day duration of high temperatures, lack of night time cooling, lack of shade, lack of cloud cover, lack of wind, lack of air movement within pens, or grazing endophyte-infested fescue pastures. Combined with animal-related factors such as dark hides, heavy body weights, or advanced pregnancy, the situation can rapidly become deadly.

Producers should watch for signs of heat-related distress during hot humid weather, including off feed, standing with their head over the water source, panting, excessive salivation, or open-mouth breathing. Postponing any gathering or handling procedures until after the critical heat period passes, or working cattle so that all handling is completed by mid-morning, are critical management strategies. Ready access to abundant cold water is essential. Access to shade and the ability to move away from structures that reduce air flow are also tools to consider. Sprinklers that provide enough cold water can also be used, but will only add to the humidity side of the heat stress problem if they do not provide enough large drops of water to wet the cattle's skin thoroughly.

Researchers at the University of Nebraska have developed a Temperature-Humidity Index that will help producers anticipate when heat stress will become a problem (see Livestock Weather Hazard Guide). When there is no day time wind and/or night time temperatures do not drop below 75°, and conditions reach an index score of 75, producers should be on the alert for heat stress problems. When the index reaches 79, the danger point has been reached. When the index reaches 84, emergency conditions exist. If the index stays above 84 for 3 days in a row, death losses usually start to occur, especially if the wind suddenly stops blowing.

Panting scores probably give the best visual method to estimate the severity of heat stress on cattle: 80-120 breaths/minute = moderate; 120-160 = danger; and over 160 = emergency. If signs of moderate heat stress are seen, producers may have a very short time to provide a mechanism for cooling the cattle before the situation becomes life threatening. For more information, contact Larry C. Hollis, D.V.M. (785-532-1246; [lhollis@ksu.edu](mailto:lhollis@ksu.edu)), Joel DeRouchey (785-532-2280; [jderouch@ksu.edu](mailto:jderouch@ksu.edu)) or Karl Harborth (620-431-1530; [harborth@ksu.edu](mailto:harborth@ksu.edu)).



Coupled with showing during hottest time of the year, most of the livestock exhibited are at their market endpoint so they will be carrying the greatest amount of condition they ever will have, and older, heavier animals are more susceptible to heat stress. In addition, we desire some species, such as cattle, to have as much hair as possible to make them appear better and hide their imperfections. This excess hair can increase their body temperature and lower their comfort zone. Factors such as animal size, diet, and wool and hair amounts can increase or decrease the temperature at which livestock will experience heat stress.

Indicators of heat stress include panting, excessive slobbering, lack of coordination and trembling.

**Tips to help alleviate or prevent heat stress:**

- *Provide cool, clean drinking water as often as possible*
  - o Water prevents dehydration, and is the fastest way to lower body temperature.
  - o The following are approximate amounts of water that are needed by livestock during hot weather.
    - 1250 pound steer will need 25 gallons.
    - 280 pound hog will need approximately 2.5 to 3 gallons a day
    - Market goat or market lamb will need around 1.5 to 2.5 gallons
    - All of these may vary depending on size of the animal, effective temperature, type of diet, and wool or hair amounts.
- *Rinse livestock down to lower body temperatures*
  - o During down time on the days that your project is not showing, rinsing them down for a 10 to 15 minutes will help make them feel more comfortable
- *Reduce Stress*
  - o Minimize the amount of time needed to clip and prep livestock at the show.
    - Clip and prep in shorter intervals.
  - o Do not get them ready too early – try to gauge the amount of time needed to prepare
- *Do not overcrowd livestock in pens or stalls*
  - o Overcrowding reduces airflow and does not allow livestock to naturally dissipate their body heat
- *Use fans and misters*
  - o Airflow helps cool the area
  - o Fans and misters work well to increase evaporative cooling which aids in making livestock more comfortable; but be careful, as adding moisture can increase humidity and defeat the purpose.
- *Use as little bedding as possible*
  - o Bedding will retain heat and reduce the animals surface area

If you have a question about an animal that may be experiencing heat stress, contact your project leader, county agent, or a veterinarian. A lot time and money have been committed to these livestock projects and the last thing you want is your animal to not perform at the best of its ability – or even worse, die. For more information, contact Karl Harborth (620-431-1530; [harborth@ksu.edu](mailto:harborth@ksu.edu)).



#### **Management Practices Affect Tenderness of Strip Loin but Not Knuckle Steaks from Fed Mature Cows**

**Mature Cows** - Sixty cull cows were assigned to one of five treatments: (1) grass fed on pasture (G), (2) concentrate fed (C) a grain sorghum-sorghum silage diet, (3) concentrate fed and implanted (CI) with Revalor-200 (trenbolone acetate-estradiol), (4) concentrate fed and fed Zilmax (zilpaterol hydrochloride) for 30 days followed a 3-day withdrawal (CZ), and (5) concentrate-fed, implanted, and fed Zilmax (CIZ). Strip loin and knuckle subprimals were aged for 14 days and cut into steaks for sensory determination.

**Bottom Line....**Feeding Zilmax would be expected to decrease tenderness of strip loin but not knuckle steaks. Because all treatments resulted in steaks that were marginal in tenderness, postmortem tenderization protocols may be needed to assure acceptable tenderness. View the complete research report at [www.asi.ksu.edu/cattlemen'sday](http://www.asi.ksu.edu/cattlemen'sday). For more information, contact John Unruh (785-532-1245; [junruh@ksu.edu](mailto:junruh@ksu.edu)) or Liz Boyle (785-532-1247; [lboyle@ksu.edu](mailto:lboyle@ksu.edu)).

#### **Effects of Porcine Circovirus Type 2 and *Mycoplasma hyopneumoniae* Vaccination Timing and Starter Diet Source on Growth Performance of Nursery Pigs**

- A total of 400 nursery pigs (initially 12.5 lb) were used in a 20-d study to evaluate the effects of varying porcine circovirus type 2 (PCV2) and *Mycoplasma hyopneumoniae* vaccination timing on growth performance of pigs fed commercial segregated early weaning (SEW) and transition diets from 4 different sources. At weaning (d 0), pigs were blocked by weight and randomly allotted to 1 of 8 treatments. Treatments were arranged in a 2 × 4 factorial on the basis of vaccination timing (0 or 8 d after weaning) and diet source (A, B, C, or D). There were 5 pigs per pen and 10 pens per treatment. Initially, SEW and transition diets were budgeted at 1 and 5 lb/pig, respectively. The SEW and transition diets were formulated to similar Kansas State University specifications but made by different manufacturers. Feeders were emptied on d 8, and a common phase 2 diet was fed for the remainder of the trial. On d 0, 4, 8, and 20, pigs were weighed and feed disappearance was measured to determine ADG, ADFI, and F/G. Diet source influenced ( $P < 0.001$ ) ADG during the first 4 d of the trial. Pigs fed diet B had increased ( $P < 0.001$ ) BW (d 4) and ADG (d 0 to 4) compared with pigs fed all other diets, and diet D pigs exhibited increased ADG compared with pigs fed diet C. On d 8, diet source effects remained significant ( $P \leq 0.02$ ) for pig weights (d 8) as well as ADG and ADFI (d 4 to 8 and 0 to 8). Pigs fed diet A had increased ( $P < 0.01$ ) ADG (d 4 to 8) compared with pigs fed the other 3 diet sources. Pigs fed diets A and B had similar ADFI, but their ADFI (d 4 to 8) was greater ( $P \leq 0.02$ ) than that of pigs fed diets C and D. There were no effects of diet source from d 8 to 20. Pigs vaccinated on d 0 had lower ( $P < 0.01$ ) BW (d 8) and ADG and ADFI (d 4 to 8 and d 0 to 8) than pigs vaccinated on d 8. From d 8 to 20, pigs vaccinated on d 8 had lower ( $P = 0.05$ ) ADG. Overall (d 0 to 20), diet source and vaccine timing did not influence growth performance, although pigs fed diet C had a numeric decrease ( $P = 0.06$ ) in ADFI. Nursery pigs in this trial were initially affected by both SEW/transition diet source and vaccination timing, but the influence of these factors lessened with time. Despite the transient nature of these effects, however, data obtained during this trial indicate that nursery pig growth performance is affected by diet source and vaccine timing immediately postweaning, and these factors should be taken into consideration when managing weaning groups. 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 E.M. Kane, M.L. Potter, J.R. Bergstrom, S.S. Dritz, M.D. Tokach, J.M. DeRouche, R.D. Goodband, and J.L. Nelssen.)

#### **Influence of Organoleptic Properties of the Feed and Nursery Diet Complexity on Preweaning and Nursery Performance**

- Two experiments were performed to determine the effects of adding an enhanced feed flavor to the creep feed on the proportion of piglets consuming creep feed within litters and preweaning performance (Exp. 1) and the interactive effects of preweaning exposure to the flavor, nursery diet complexity, and flavor addition to nursery diets on postweaning performance (Exp. 2).

In Exp. 1, 50 sows (PIC 1050) were blocked according to parity and date of farrowing and allotted to 2 experimental treatments in a randomized complete block design. Treatment 1 was a creep diet with no flavor (negative control), and treatment 2 was the negative control diet with the enhanced milky flavor (Luctarom) included at 1,500 ppm (3 lb/ton). Both creep diets contained 1.0% chromic oxide and were offered ad libitum from d 18 until weaning on d 21. In Exp. 2, 480 weanling pigs (PIC, 14.5 lb and  $20 \pm 2$  d) from Exp. 1 were blocked by initial weight and allotted to 1 of 8 treatments in a randomized complete block design with preweaning exposure to the flavor (exposed vs. unexposed), nursery diet complexity (complex vs. simple), and flavor addition to the nursery diets (with vs. without flavor) as treatment factors.

In Exp. 1, no differences in weaning weight ( $P > 0.53$ ), total gain ( $P > 0.77$ ), and ADG ( $P > 0.77$ ) were observed between litters or pigs fed creep with and without the flavor. Flavor added to the creep feed did not influence total ( $P > 0.66$ ) or daily ( $P > 0.66$ ) creep feed intake of litters or the proportion of creep feed eaters ( $P > 0.41$ ) in whole litters. In Exp. 2, a tendency for a 3-way interaction for ADG from d 5 to 10 ( $P < 0.11$ ), d 10 to 28 ( $P < 0.09$ ), and d 0 to 28 ( $P < 0.06$ ) was observed. Postweaning ADG of pigs exposed to the flavor in creep feed and pigs fed flavored complex diets was greater than that of pigs in any other treatment combination. Increasing diet complexity improved ( $P < 0.01$ ) ADG and ADFI during both phases. Adding flavor in the creep feed had no effect on F/G ( $P > 0.34$ ) and pig BW ( $P > 0.45$ ) in both periods postweaning. Adding Luctarom to starter diets tended to improve ADFI ( $P < 0.06$ ) during d 0 to 5.

In conclusion, adding Luctarom to the creep feed did not affect litter creep feed intake, proportion of piglets consuming creep feed, and preweaning performance when creep was provided for 3 d before weaning. Preweaning exposure to Luctarom improved postweaning daily gain of pigs fed complex diets supplemented with the same flavor but did not influence performance of pigs fed simple diets. 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 R.C. Sulabo, M.D. Tokach, J.M. DeRouche, C.D. Risley, J.L. Nelssen, S.S. Dritz, and R.D. Goodband.)

# UPCOMING EVENTS...

- ↳ The **K-State Beef Conference** will be held on August 13, 2009, in Frick Auditorium, College of Veterinary Medicine on the KSU Campus. This one-day conference is especially geared for cow-calf producers and designed to provide take-home knowledge that will enhance the ability of cow/calf producers to improve profitability. The theme for this year's conference will be "Making Money in Hard Times." Beef producer and BEEF magazine contributing editor Troy Marshall will be the featured speaker. His presentations, "Issues Facing the Beef Industry" and "Opportunities Facing the Cow-Calf Producer," will open and close the conference. Marshall has been a market analyst for Cattle-Fax, director of commercial marketing for two breed associations, editor of The Seedstock Digest and recipient of the 2003 Beef Improvement Federation Ambassador Award.



Other conference presentation topics and presenters will include:

- *Replacements: Raise them or buy them?* - Sandy Johnson, K-State animal scientist
- *Animal welfare: It's your business!* – Dan Thomson, K-State Beef Cattle Institute
- *Management strategies affecting calf marketability* - Karl Harborth, K-State animal scientist; Lee Schulz, K-State agricultural economist; and Kevin Dhuyvetter, K-State agricultural economist
- *Options to extend the grazing season: Cool season annuals* - Stacy Gunther, University of Arkansas animal scientist
- *Options to extend the grazing season: Crop residues* - Rick Funston, University of Nebraska animal scientist
- *Mineral needs to complement ethanol byproduct feeding* - Justin Waggoner, K-State animal scientist

The conference will begin at 8:00 a.m. with registration and conclude at 5:00 p.m. The registration fee is \$60.00 which includes proceeding material, lunch and breaks. Early registration ends on July 31. For a complete schedule and registration form, visit [www.KSUbef.org](http://www.KSUbef.org) and follow the K-State Beef Conference link. For more information, contact Larry Hollis (785-532-1246; [lhollis@ksu.edu](mailto:lhollis@ksu.edu)) or Linda Siebold (785-532-1281; [lsiebold@ksu.edu](mailto:lsiebold@ksu.edu)).

- ↳ **K-State Beef 505 Short Course** will be held August 14-15 and is designed to provide participants with information and experiences in increasing and capturing optimum value of beef beginning with production and evaluation and ending with methods of optimizing the value of beef carcasses and beef cuts. Participants will learn about selecting breeding cattle for carcass and meat traits; USDA Yield and Quality Grades; evaluating market cattle for carcass merit and value; fabricating carcasses to optimize value; new value cuts and opportunities; and assessment of palatability of cooked beef. Beef 505 will integrate "hands-on" experiences and demonstrations in beef carcass grading, carcass fabrication, beef cutting, and sensory evaluation. For more information contact your local extension office, Michael Dikeman ([mdikeman@ksu.edu](mailto:mdikeman@ksu.edu), 785-532-1225), or John Unruh ([junruh@ksu.edu](mailto:junruh@ksu.edu), 785-532-1245).

- ↳ Make plans now to attend the **Flint Hills Beef Fest** which will be held August 14-16, 2009. Cattle Division Events include a Grass Futurity Contest, Stocker Cattle Show, Best of Grass and Show, Feedlot Contest and Carcass Show. Events will take place on the Lyon County Fairground in Emporia, Kansas. Other Beef Fest Activities include Arena Events such as Ranch Rodeo, Team Roping, Ranch Horse Competition and more. For more details and a complete schedule of events, please visit <http://www.beeffest.com>.

↳ **KLA/K-STATE Field Days set for August** - Three Kansas ranches will host field days presented by KLA and Kansas State University in August. Dry Creek Ranch in Pottawatomie County, Stroberg Land & Cattle in Reno County and a ranch owned by Ken and Barb Grecian in Rooks County will be sites for the 2009 ranch management field day series, sponsored by Bayer Animal Health and the Farm Credit Associations of Kansas.

The first field day will be held August 20 at Dry Creek Ranch, owned by the Bill Edwards family of Olsburg. Dry Creek revolves around a commercial cow-calf operation. Stroberg Land & Cattle near Hutchinson will host the second field day August 25. The David Stroberg family operates a cow-calf and farming business. Ken and Barb Grecian will host the final field day August 27. The Grecians own a commercial cow-calf and farming business near Palco. For complete details, visit [www.KLA.org](http://www.KLA.org).

↳ New in 2009: **4-H Livestock Sweepstakes** - Make plans to attend the new 4-H Livestock Sweepstakes August 22-23! This all-around event will feature contests in Livestock Judging, Meats Judging, Livestock Skillathon, and Livestock Quiz Bowl. Belt Buckles will be awarded to the county that does the best in all four contests.

**Registration is due by August 1, 2009.** A county or district may choose to use the same four 4-Hers for all contests or use any combination of students for each contest. Teams may also come from only a portion of the contests. The Livestock Judging Contest will be held on Saturday with rounds 1-3 of the Quiz Bowl. A dance and social activity will be available to 4-Hers on Saturday evening, as well as workshops throughout the weekend. On Sunday, participants will compete in the Livestock Skillathon and Meats Judging Contest. We will hold Round 4 of the quiz bowl just prior to the award ceremony for all events. Each participating team will be required to provide a minimum of one volunteer for the event. Please look for complete rules and information at [www.youthlivestock.ksu.edu](http://www.youthlivestock.ksu.edu).

Please Note: The event will be held during K-State Move-in Weekend. Reserve your rooms as soon as possible. No activities will take place at the hotel so stay wherever you like. For your convenience two sets of room blocks have been made for August 21-23: Clarion Hotel (\$90 - "KSU Department of Animal Science and Industry" Block; 785-539-5311) or Super 8 Motel (\$65 - "K-State 4-H" Block; 785-537-8468).

For questions contact, Sharon Breiner, K-State Youth Livestock Coordinator at [sbreiner@ksu.edu](mailto:sbreiner@ksu.edu).

↳ Come help celebrate the 10<sup>th</sup> anniversary of the **KSU Beef Stocker Field Day** which will be held on Thursday, September 24, 2009 at the KSU Beef Stocker Unit in Manhattan. Registration will begin at 9:30 a.m. and the day will conclude with a good old-fashioned Prairie Oyster Fry, Pitchfork Fondue and Dutch Oven Desserts.

Pre-registration fee is \$30.00 by September 15 or \$40.00 at the door. Watch for complete details on [www.KSUbef.org](http://www.KSUbef.org). For more information, contact Dale Blasi ([dblasi@ksu.edu](mailto:dblasi@ksu.edu); 785-532-5427).



↳ The **2009 KSU Swine Day** will be held Thursday, November 19, at the KSU Alumni Center. Mark the date on your calendar and watch for more details.

#### CALENDAR OF UPCOMING EVENTS

Date	Event	Location
August 13, 2009	K-State Beef Conference	Manhattan
August 14-15, 2009	K-State Beef 505 Short Course	Manhattan
August 14-16, 2009	Flint Hills Beef Fest	Emporia, KS
August 20, 2009	KLA/K-STATE Ranch Management Field Day	Olsburg, KS
August 22-23, 2009	4-H Livestock Sweepstakes	Manhattan
August 25, 2009	KLA/K-STATE Ranch Management Field Day	Hutchinson, KS
August 27, 2009	KLA/K-STATE Ranch Management Field Day	Palco, KS
September 24, 2009	KSU Beef Stocker Field Day	Manhattan
November 19, 2009	KSU Swine Day	Manhattan

# AS&I FACULTY SPOTLIGHT



**Karen Schmidt ([kschmidt@k-state.edu](mailto:kschmidt@k-state.edu); 785-532-1216)**  
**Professor/Dairy Foods**

Dr. Karen Schmidt earned a B.S. degree in Food Science from the Pennsylvania State University. After graduating from Penn State, Karen joined Tony's Pizza Service in Salina, KS as a quality assurance supervisor. After working in quality assurance and research and development with Schwan Sales Enterprises, Karen entered graduate school at the University of Minnesota and completed her M.S. and Ph.D. degrees in Food Science.

In January of 1990, Karen joined the University of Georgia in the Departments of Food Science and Technology and Animal Science as an Assistant Professor with research and teaching responsibilities. In 1994, she joined the Department of Animal Sciences and Industry at Kansas State

University as an Associate Professor, where she currently holds a 50% teaching and 50% research appointment. In addition, she is a member of Kansas State University's Food Science Institute. Her teaching responsibilities include Fundamentals of Milk Processing, Food Product Evaluation, Dairy Foods Processing and Technology, and Quality Assurance of Food Products and her research program focuses on the processing and quality of dairy and non-dairy foods.



**Daniel Y.C. Fung ([dfung@k-state.edu](mailto:dfung@k-state.edu); 785-532-1208)**  
**Professor/Microbiology of Food Processing**

Dr. Daniel Y. C. Fung is an internationally known microbiologist in the field of Rapid Methods and Automation in Microbiology. He has published extensively in Food Microbiology, Applied Microbiology and Rapid Methods with more than 800 Journal articles, meeting abstracts, proceeding papers, book chapters and books in his career. Currently he holds a 40% teaching and 60% research appointment in the department.

He has taught more than 17,000 students in classroom teaching and has completed more than 78 M.S. and 33 Ph.D. graduate students as the major professor.

The Kansas State University Rapid Methods and Automation in Microbiology Workshop, directed by Dr. Fung, has attracted more than 4,000 participants from 60 countries and 46 states.

Dr. Fung teaches Food Microbiology, Food Fermentation, Food Toxicology, and the Rapid Methods courses regularly since 1978. He truly enjoys working with students and professionals to advance food safety and security for the benefit of citizens of the world.

Dr. Fung is a Fellow of the American Academy of Microbiology, Institute of Food Technologists (IFT), International Academy of Food Science and Technology and Institute for Food Science and Technology (UK). He has won more than 30 professional awards which included the International Award from IFT (1997), Waksman Outstanding Educator Award from The Society or Industrial Microbiology (2001), KSU College of Agriculture Excellence in Graduate Teaching Award (2005), the Exceptional Achievement and Founder of the KSU International Workshop on Rapid Methods and Automation in Microbiology (1980-2005), University Distinguished Professor, Autonomous University of Barcelona, Spain (2006), KSU Professorial Performance Award (2007), and Distinguished Service Award as Past President, Secretary and Treasurer, 2000-2009 by the Chinese American Microbiology Society (2009).

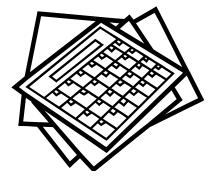
Dr. Fung received the B.A. degree from International Christian University, Tokyo, Japan in 1965, M. S. P. H. at University of North Carolina-Chapel Hill in 1967 and the Ph.D. in Food Technology from Iowa State University in 1969.

He was the chair of the KSU Food Science Graduate Program from 1979-1987 and currently is a Professor of Food Science, Professor of Animal Sciences and Industry and Ancillary Professor of Biology at KSU.

# WHAT PRODUCERS SHOULD BE THINKING ABOUT...

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

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



September is when forages are maturing rapidly, weaning time can be appropriate, and weather dictates several key management decisions.

#### **Breeding Season**

Remove bulls after 60 days with cows, 45 days with heifers (Never run bulls for more than a 90-day breeding season).

#### **Cowherd Nutrition**

- Provide ample amounts of clean, fresh drinking water.
- Consider limited-intake creep feeding if:
  - ◆ Drought conditions develop and persist.
  - ◆ Range conditions limit milk production.
  - ◆ Creep feed/grain prices are relatively low.
  - ◆ Value of gain allows for economic benefits.
- Tips for successful limited-intake creep feeding:
  - ◆ Limit duration to last 30 to 75 days before weaning.
  - ◆ Limit intake to less than 2 pounds/head/day.
  - ◆ Use an ionophore or other feed additive to maximize efficiency.
  - ◆ Protein level should be equal to or greater than 16%.
  - ◆ High salt levels may help limit intake, but can be tough on feeders.
- Prepurchase bulk rate winter supplementation needs prior to 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 mineral in their diet.
- ◆ Consider using a medicated trace mineral package.
- ◆ Consider vaccination for pinkeye and IBR.
- ◆ Control face flies.
- ◆ Clip pastures with tall, coarse grasses that may irritate eyes.
- ◆ Provide ample shade.

##### **Therapy:**

- ◆ Administer a long-acting antibiotic subcutaneously when symptoms are first noticed.
  - ◆ Shut out irritating sunlight by patching eyes, shade, etc.
  - ◆ Control flies.
  - ◆ Consult your veterinarian.
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- Consider revaccinating for the respiratory diseases any animals that will be taken to livestock shows.
  - Vaccinate suckling calves for IBR, BVD, PI3, BRSV, and possibly pasteurella at least 3 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 winter nutritional program through pasture and forage management.
- For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

### **Reproductive Management**

- Remove bulls to consolidate calving season.
- Pregnancy check and age pregnancies 60 days after the end of the breeding season. Consider culling cows that are short-bred.

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

### **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 early weaning if:
  - ◆ Drought conditions develop and persist.
  - ◆ Range conditions limit milk production.
  - ◆ Cows are losing body condition.
  - ◆ Calf and cull cow prices indicate maximum profit.
  - ◆ Facilities and management is available to handle lightweight calves.
    - ✓ *First calf heifers have the most to gain.*
    - ✓ *Resist the temptation to feed the cows without weaning; feeding early-weaned calves is more efficient.*
- Look for unsound cows that need to be culled from the herd.
- Prepare to have your calf crop weighed and analyzed through your state, regional, or breed performance-testing program.
- Plan your marketing program, including private treaty, consignment sales, test stations, production sales, etc.

We need your input! If you have any suggestions or comments on **News from KSU Animal Sciences**, please let us know by e-mail to [lschrein@ksu.edu](mailto:lschrein@ksu.edu), or phone 785-532-1267.