



News from KSU Animal Sciences

August, 2007

WHAT'S NEW >>>>>>

- ☞ **American Meat Institute Releases Ground Beef Shelf Life Chart** - AMIF announced the availability of a new one page (front and back) chart to assist in explaining fresh retail meat shelf life, both historically and with more recent packaging technologies. Given that low oxygen packaging systems continue to be discussed among regulatory agencies, congress and within the media, AMIF developed this tools to assist in explaining what actually occurs in meat processing and packaging and the science that supports those technologies.
The chart (PDF format) is posted on the AMIF web site at <http://www.meatami.com/Content/PressCenter/factsheets/foodlifechartb.pdf>
<<http://www.magnetmail1.net/lis.cfm?r=28693766&sid=2591053&m=341715&u=meat&s=http://www.meatami.com/Content/PressCenter/factsheets/foodlifechartb.pdf>>
- ☞ **High Fat Prices Limits Usage in Finishing Diets** - Over the years, we have been recommending to producers to evaluate the usage of fat in finishing diets. Typically with fat prices in the range of \$0.14 per lb, margin over feed costs (profitability) will improve with additions of approximately 5% added fat up to about 200 lb body weight. Adding fat improves average daily gain and feed efficiency and the value of the extra weight gain more than offsets the increase in diet costs.
However with the dramatic increase in fat price recently (> \$0.30 per lb), the increase in diet cost is no longer offset by the extra weight gain even in the summer when growth rate typically slows down and it becomes more difficult in farms with limited finishing space to reach their ideal market weight. Because of the volatility of corn and fat prices over the past few weeks, we have a new spreadsheet called the fat economic calculator and it is available at our web site www.asi.ksu.edu/swine. The fat economic calculator is a spreadsheet we use to determine the economic viability of adding fat to finishing diets. For help with calculating the economics of adding fat to swine diets please contact one of your swine extension specialists. (Bob Goodband)
- ☞ **Weather Changes Disease Patterns** - With the unusually wet spring and summer experienced in many parts of Kansas, the conditions for increased intensity or duration of disease transmission has occurred. We know to expect increased foot rot and pinkeye problems during wet years, but we may experience other disease problems because of the abundance (excess?) of rain encountered this year. Water-related problems to watch for include Leptospirosis, internal parasitism (worms), an increase in liver flukes in liver fluke-prone areas, and mosquito-borne diseases such as West Nile Virus infection. Several parts of the country experiencing similar wet conditions have reported increases in all of these diseases, as well as Anthrax where flood waters have receded. Of particular concern is internal parasitism, which often occurs subclinically in Kansas cattle. With conditions resulting in an extension of the worm transmission season this year, worm loads in cattle in some areas have reached the stage where animals are visibly affected by weight loss. In some cases death losses have occurred. It may pay to be extra vigilant in watching livestock for illness throughout the remainder of the summer. For more information, contact Larry C. Hollis at lhollis@ksu.edu, 785-532-1246).
- ☞ **IRM Redbooks for Sale** – For more than twenty years, cattlemen have used the IRM Redbook to keep better records and track the profitability of their cow-calf operations. Some of the 2008 book highlights are calving records, Quality Assurance summary sheet, calf health records and more. The 2008 IRM Redbooks are in and will be sold on a first come first serve basis. The price of the redbooks this year will be: Orders of less than 10 = \$4.50/book; Orders of 10 or more = \$4.25/book. To order your supply of redbooks, please contact Lois (lschrein@ksu.edu; 785-532-1267).

↵ **Effect Of Irradiated Protein Sources, Fed In Meal Or Pelleted Diets, On Nursery Pig Performance -**
A total of 350 pigs were used in a 22-d trial to determine the effects of feeding irradiated protein sources (spray-dried animal plasma, soybean meal, fish meal, or all three), in meal and pelleted diets, on the growth performance of nursery pigs. Pigs were blocked by weight, with 5 pigs/pen and 7 pens/treatment. From d 0 to 11, pigs were fed 1 of 10 experimental treatments, which consisted of the same diet fed in either meal or pelleted form, containing either no irradiated protein sources or containing irradiated spray-dried animal plasma, soybean meal, fish meal, or all three irradiated protein sources; then all pigs were then fed a common diet (meal form) from d 11 to 22. Irradiation of the protein sources, as well as pelleting, reduced total bacterial and coliform counts. There were no irradiation by diet form interactions observed for growth performance. From d 0 to 11, there was no irradiation effect of protein source on ADG, ADFI, or F/G. But pigs fed pelleted diets had improved F/G, compared with pigs fed meal diets, with no difference in ADG and ADFI. From d 11 to 22, pigs previously fed meal diets had a tendency for improved ADFI, compared with that of the pigs fed pelleted diets. Overall, pigs fed diets containing irradiated protein sources had a tendency for improved F/G, compared with that of pigs fed control diets. Pigs fed meal diets had a tendency for improved ADFI, compared with the ADFI of pigs fed pelleted diets. Pigs fed pelleted diets had improved F/G, compared with that of pigs fed meal diets. These data confirm that irradiation of protein ingredients, as well as pelleting, will reduce total bacteria and coliform counts within individual feed ingredients or a complete diet. Although irradiation of protein source did not improve performance in this study, pelleting of diets improved feed efficiency. More information is available on this experiment in the KSU Swine Day Report at www.asi.k-state.edu/swine. (This study conducted by C. N. Groesbeck, M. D. Tokach, J. M. DeRouchey, R. D. Goodband, S. S. Dritz, and J. L. Nelssen.)

↵ **Value of Animal Traceability Systems in Managing a Foot-and-Mouth Disease Outbreak in Southwest Kansas** – With the 2003 discovery of BSE in the U.S. and more recent cases in 2005 and 2006, the need for having the ability to rapidly trace animal movements has become apparent. In the event of a contagious animal disease like foot-and-mouth disease (FMD), tracking animal movement in a timely manner is essential to disease containment. Animal identification would help limit disease spread which will reduce costs and minimize trade losses. To help combat spread of contagious animal disease, the USDA has recently launched the National Animal Identification System with intent to trace movement of any infected animal within 48 hours. An epidemiological disease spread model was used to evaluate the impact of a foot-and-mouth disease outbreak. The information obtained from the disease spread model was then used in conjunction with an economic model to determine the economic impacts on producers and consumers.

*Bottom Line...*Animal identification could be of substantial benefit in minimizing the economic impact of a contagious disease outbreak. For more information, contact Ted Schroeder (785-532-4488; tcs@ksu.edu) or Larry Hollis (785-532-1246; lhollis@ksu.edu).

↵ **Limit-Feeding a High-Concentrate Diet May Alter Nutrient Absorption** – Four steers (avg. starting weight=948 lb) were assigned to either a limit-fed finishing diet (92% concentrate; LIMIT), or a traditional step-up diet with concentrate levels ranging from 60 to 92% (STEP). Limit-fed steers were started at 1.25% of their body weight daily and traditionally fed steers were started at 1.5% of body weight daily. Daily programmed increases were provided when less than 0.5 lbs of feed remained in the bunk. Rumen fluid samples were collected and analyzed for volatile fatty acids and cobalt, and feed samples were analyzed for neutral detergent fiber and crude protein.

*Bottom Line...*Adapting cattle by limit feeding a high concentrate diet may alter nutrient absorption from the rumen epithelium. For more information, contact Brad Johnson (785-532-3476; bjohnson@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

↵ **Supplementation with Undegradable Intake Protein Increases Low-Quality Forage Utilization and Microbial Use of Recycled Urea** – Increasing amounts of supplemental undegradable intake protein were provided to cattle consuming low-quality forage. Four levels of supplement were provided (0, 0.27, 0.54, 0.81 pounds per day). Intake, digestion, and nitrogen balance were measured. Urea metabolism was measured following intravenous infusion of labeled urea and the contribution of urea recycling to meeting microbial nitrogen requirements was determined.

*Bottom Line...*Undegradable intake protein makes substantial contributions to meeting ruminal nitrogen demands in cattle consuming prairie hay. Supplements high in undegradable intake protein are viable alternatives to highly degradable protein supplements. For more information, contact Evan Titegmeier (785-532-1220; etitegme@ksu.edu) or Twig Marston (785-532-5428; twig@ksu.edu).

UPCOMING EVENTS >>>>>>>>>

- ☞ The **2007 State 4-H Livestock and Meats Judging Contests** will take place on Saturday, August 25 on the KSU campus in Manhattan. The day will begin at 7:30 with registration for the Livestock Contest. The Livestock Contest will begin at 8:00 a.m. and conclude with the Livestock Contest Oral Reasons. The Meats Contest will start at 1:00 p.m. and conclude at 4:30 p.m. Lunch will be provided for contestants from both contests. Watch for registration information. For more information, contact Julie Voge (jvoge@ksu.edu; 785-532-1264).
- ☞ A **FAMACHA Workshop** is scheduled for Saturday, August 25 at the Butler County 4-H Community Building in El Dorado, Kansas. Presenters for the workshop include Dr. Dave Sparks, Oklahoma Cooperative Extension Service and Dr. Steve Hart, Extension Specialist, Langston University. Participants at this workshop may purchase a laminated FAMACHA© Guide, which is only available to those who complete this approved training. In addition, fecal counting slides will be available for purchase. This workshop will include lecture, plus hands-on training with fecal egg analysis and FAMACHA©
- Registration for the workshop will begin at 8:30 a.m. The registration fee is \$20/person which includes materials, snacks and lunch. For a register form and more information, visit with Butler County website at www.oznet.ksu.edu/butler/ or contact Dave Kehler (316-321-9660; dkeher@oznet.ksu.edu).
- ☞ A **Feedyard Negotiation Skills Conference** has been scheduled for Tuesday, August 28 at the Southwest Research and Extension Center in Garden City, Kansas. Registration will begin at 8:30 a.m. The morning program will include presentations from Sarah Fogleman on “*Negotiating with New and Existing Employees: Communication First*,” “*The Feedyard and Community Relations*” presented by Kris Boone; and David Lehman presenting “*Negotiations with Customers and Suppliers*”. Presentations will be followed by a Speaker Panel Question and Answer session. Registration is \$30 per person payable at the door. For a complete schedule visit www.ksubeef.com. For more information, contact Chris Reinhardt (cdr3@ksu.edu; 785-532-1672).
- ☞ The **2007 Applied Reproductive Strategies in Beef Cattle Workshop** will be held September 11-12, 2007 in Billings, Montana. For more information and a schedule visit <http://westcentral.unl.edu/beefrepro/> or contact Sandy Johnson (sandyj@ksu.edu; 785-462-6281).
- ☞ The **2007 KSU Beef Stocker Conference** will be held on Thursday, September 27. This year’s event will be held at the Clarion Hotel, Manhattan, Kansas. This conference will offer practical information and management tips to optimize your stocker operation. These tools will give you greater flexibility as market and environmental conditions continue to unfold. The conference will include presentations on the cattle market outlook, health protocols that add value, evaluating the sick calf, selecting your antibiotic, strategies for controlling input costs, and using byproduct feeds for receiving and growing diets. The day will conclude with a tour of the KSU Beef Stocker Unit and evening barbecue.
- Registration for the Beef Stocker Conference is \$20 per participant by September 14 or \$30 per participant at the door. For a registration form and brochure, visit www.ksubeef.com. For more information, contact Dale Blasi (dblasi@ksu.edu; 785-532-5427).
- ☞ **Developing and Implementing Your Company’s HACCP Plan for meat, poultry, and food processors** will be held October 10-12 in Regnier Hall, University of Kansas Edwards Campus, 127th & Quivira Road, Overland Park. Registration for the 2.5 day International HACCP Alliance accredited workshop is online at <http://animalscience.unl.edu/haccp/KansasCity.html>. The workshop fee is \$200, and meets USDA training requirements to become a HACCP trained individual. For more information, contact Alicsa Mayer, HACCP Extension Assistant at amayer@ksu.edu or toll free at 877-205-8345.

↵ The **Employee Management for Production Agriculture Conference** has been scheduled for October 11-12, 2007, at the Airport Marriott in Kansas City. This conference is perhaps the leading agricultural labor management event in the country. The speakers, sessions, and curriculum have been designed with agricultural managers in mind.

Complete details on the conference are available at www.oznet.ksu.edu/employee/. For more information, contact Sarah Fogelman at 620-431-1530 or sfoglema@oznet.ksu.edu.

↵ The **Oklahoma Meat Goat Conference** will be held November 2-3, 2007 at Ada, Oklahoma. If you are looking for information to make your Meat Goat business sound and profitable, make plans to attend this conference. Extension educators and producers are welcome. Detailed information can be accessed at www.oklagoats.com. Advance registration is due by October 26, 2007. For more information, contact Dr. Dave Sparks, DVM, Oklahoma State University at 918-686-7800 or Sandy O'Reilly at sandy.oreilly@okstate.edu.

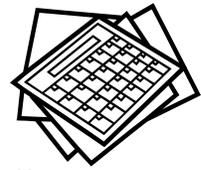
↵ The **2007 KSU Swine Day** will be held at the Alumni Center on the KSU campus on Thursday, November 15. The morning program for Swine Day will include Dr. Lisa Tokach and Dr. Steve Henry, veterinarians from the Abilene Animal Hospital, and Faculty of the KSU College of Veterinary Medicine discussing "*Porcine Circovirus: What Have We Learned in the Last Year??*" The afternoon program will include an Update on Current K-State Swine Research as well as a presentation by Trent Loos, Loos Tales, on *Positioning Animal Agriculture for the Future*. The day will conclude with the K-State Pork Tailgate Party.

Pre-registration is \$15 per participant by November 8 or \$25 at the door. For a copy of the day's program, visit our website at www.asi.k-state.edu/swine. For more information, contact Jim Nelssen at 785-532-1251; jnelssen@ksu.edu.

↵ Mark your calendars for the new **Junior Beef Producer Day** to be held Saturday, December 15, 2007 at Weber Hall. Watch for more details.

| CALENDAR OF UPCOMING EVENTS | | |
|------------------------------------|---|-------------------|
| Date | Event | Location |
| August 21, 2007 | KLA/KSU Ranch Management Field Day | Augusta |
| August 23, 2007 | KLA/KSU Ranch Management Field Day | Oskaloosa |
| August 25, 2007 | State 4-H Livestock and Meats Judging Contests | Manhattan |
| August 25, 2007 | FAMACHA Workshop | El Dorado |
| August 28, 2007 | Feedyard Negotiation Skills Conference | Garden City |
| September 11-12, 2007 | Applied Reproductive Strategies in Beef Cattle | Billings, Montana |
| September 27, 2007 | KSU Beef Stocker Conference | Manhattan |
| October 10-12, 2007 | HACCP Plan for Meat, Poultry and Food Processors | Overland Park |
| October 11-12, 2007 | Employment Management for Production Agriculture Conference | Kansas City |
| November 2-3, 2007 | Oklahoma Meat Goat Conference | Ada, Oklahoma |
| November 15, 2007 | KSU Swine Day | Manhattan |
| December 15, 2007 | Junior Beef Producer Day | Manhattan |

WHAT PRODUCERS SHOULD BE THINKING ABOUT IN OCTOBER.....



BEEF -- Cowherd Tips by *Twig Marston, K-State Beef Extension Specialist, Cow/Calf*

Cowherd Management

- Pregnancy Check.
- Cull cows because of:
 - ◆ Open.
 - ◆ Late vs. Early calving.
 - ◆ Soundness - udder, feet/legs, eyes, teeth, disposition.
 - ◆ Productivity - Most Probable Producing Ability (from herd performance records).
 - ◆ Disposition
- Body Condition Score
 - ◆ Provide thin cows (body condition score 3's and 4's) extra feed now. Take advantage of weather, stage of pregnancy, lower nutrient requirements, and quality feedstuffs.
- In late October you may want start feeding supplement to mature cows using these guidelines:
 - Dry grass 1½ - 2 lb supplement/day of a 40% CP supplement
 - Dry grass 3 - 4 lb supplement/day of a 20% supplement
 - Dry grass + 10 lb good nonlegume hay, no supplement needed
 - (heifers may need more supplement than older cows)
 - ◆ Supplement nutrients that are most deficient.
 - ◆ Compare supplements on a cost per pound of nutrient basis.
 - ◆ KSU research has reported early winter supplementation is not necessary if grazing forage supplies are adequate. Third trimester cows have had the ability to achieve their target calving weights with supplementation.
- Check individual identification of cows. Replace lost tags or redo brands.
- Utilize crop residues. Grazing crop aftermath can reduce daily cow costs by 50¢ or more.
 - ◆ Strip graze or rotate fields to improve grazing efficiency.
 - ◆ Average body condition cows can be grazed at 1 to 2 acres/cow for 30 days assuming normal weather.
- Consider feeding cull cows to increase value, body weight, and utilize cheap feedstuffs. Seasonal price trends have allowed producers to take advantage of maximum profit opportunities with cull cow feeding programs. Healthy cows can gain extremely well on well balanced diets.

Calf Management

- Wean calves:
 - ◆ Reduce stress. Provide a clean, dust-free, comfortable environment.
 - ◆ Provide balanced nutritional program to promote weight gain and health.
 - ◆ Observe feed and water intake. Healthy, problem free calves have large appetites.
 - ◆ Observe calves frequently, early detection of sickness reduces medical costs and lost performance.
 - ◆ Vaccinate calves and control internal/external parasites through veterinary consultation (ideally done prior to weaning).
 - ◆ Vaccinate all replacement heifer candidates for brucellosis if within 4-10 months of age.
 - ◆ Use implants and feed additives to improve efficient animal performance.

Calf Management (continued)

- ☑ Weigh all calves individually. Allows for correct sorting, herd culling, growing programs, replacement heifer selection, and marketing plans.
- ☑ Participate in Whole Herd Rewards, Performance Plus, and(or) other ranch record/performance systems.
- ☑ Finalize plans to merchandise calves or to background through yearling or finishing programs.
 - ◆ Consider feedstuff availability.
 - ◆ Limit feeding high concentrate diets maybe a profitable feeding program.
- ☑ Select replacement heifers which are:
 - ◆ Born early in the calving season. This should increase the number of yearling heifers bred during the early days of the subsequent breeding season.
 - ◆ Daughters of above average producing cows. Performance traits are moderately heritable trait.
 - ◆ Of the proper frame size to compliment desired mature size and weight.
 - ◆ Structurally correct. Avoid breeding udder, feet and leg problems into the herd.
- ☑ Vaccinate replacement heifers with first round of viral vaccines.
- ☑ Plan replacement heifer nutrition program so that heifers will be at their “target weight” (65% of their mature weight) by the start of the breeding season.

Forage/Pasture Management

- ☑ Observe pasture weed problems to aid in planning control methods needed next spring.
- ☑ Monitor grazing conditions and rotate pastures if possible and(or) practical.
- ☑ Plan winter nutritional program through pasture and forage management.
- ☑ For stocker cattle and replacement heifers, supplement maturing grasses with an acceptable degradable intake protein/ionophore(feed additive) type supplement.

General Management

- ☑ Avoid unnecessary stress - Handle cows and calves to reduce shrink, sustain good health, and minimize sickness.
- ☑ Forage analyze for nitrate and nutrient content. Use these to develop winter feeding programs.
- ☑ Repair, replace and improve facilities.
- ☑ Plan your marketing program, including private treaty, consignment sales, test stations, production sales, etc.
- ☑ A penny saved is a penny earned - price byproducts, grains and other feedstuffs on a per nutrient basis.

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