



# News from KSU Animal Sciences

## July, 2007

### WHAT'S NEW >>>>>>

↪ **KSVDL Leads the Way for New BVD Testing Technology** - Kansas State Veterinary Diagnostic Laboratory (KSVDL) has recently completed a training course which will allow it to become the first lab in the United States to utilize the most sensitive BVDV test in the world. The technology was designed specifically for the detection of BVDV in both genotype 1 & 2 and all sub-genotype strains, including the difficult to detect HOB1 and H138 strains. AnDiaTec manufactures the reagents used in the KSVDL.

AnDiaTec has developed a unique and proprietary lysis buffer that eliminates the need for the costly, labor-intensive and time-consuming RNA extraction step. When this lysis buffer is coupled with AnDiaTec's proprietary reagents, there is confidence in detecting a single positive ear notch in a pool of samples within a few short hours. The technology is so sensitive that it is even possible to differentiate a Persistently Infected (PI) animal from a transiently infected animal in a pooled sample of blood, which could be particularly beneficial if someone wanted to do a complete herd evaluation. AnDiaTec developed the reagents and a cost effective automated instrumentation testing system in close association with the German, Austrian and Swiss BVDV eradication programs and key opinion leaders around the world. Some labs are expecting to test over 1 million animals per year or 4,000 to 5,000 tests per day. Therefore, high quality results, smooth processes and fast turnaround are a must.

We are extremely pleased to be the first US laboratory to provide the AnDiaTec reagents to our clients. In the past, PCR technology was viewed as too difficult, unreliable or too costly to run in a high throughput environment. However, KSVDL staff are now able to effectively and efficiently use the simplified AnDiaTec reagents and automation to provide superior results and service for our clients. Additional Information:

1. **Samples to be submitted:** ear notches (dry) or blood (unclotted)
2. **Shipping:** on ice within 2 days of collection – overnight recommended, please freeze the ear notches if shipment cannot occur within 2 days
3. **Turn-around time:** 24 hours after receipt of sample at KSVDL
4. **Results reported to veterinarian:** via fax, webAccess, or phone
5. **Pricing:** Contact your veterinarian for pricing. Quantity discounts may apply.

↪ **Feeding Low Test Weight or Scabby Wheat** - Livestock producers are being offered opportunities to feed low test weight or scabby wheat. Low test weight wheat can be successfully fed, but feed efficiency (especially in swine) will be worse. Thus, the value has to be discounted compared to normal weight. Pigs fed wheat with a bushel weight of 51 lb had 7% poorer F/G than pigs fed wheat with normal test weight. More details on feeding value of low test weight wheat can be found at:

<http://www.oznet.ksu.edu/library/lvstk2/MF2659.pdf>.

The relative feed value of scabby wheat is often very good. However, scabby wheat may contain the mycotoxins DON (vomitoxin) and zearalenone (an estrogen analog). Neither of these toxins is considered carcinogenic or highly toxic, but they both can reduce the performance of livestock. Since the mycotoxins are concentrated in the grain, baled wheat straw from affected fields should be safe for most uses. However, it should probably not be used for breeding livestock.

Swine are most sensitive to scabby wheat mycotoxins. As little as 1 ppm of DON reduces daily weight gains in pigs. Higher concentrations result in feed refusal and vomiting. Swine reproduction is also sensitive to disruption by the zearalenone mycotoxin. Non-breeding cattle and poultry seem to tolerate both toxins better than swine. If scabby wheat is used as feed, it should be tested for both DON and zearalenone content. More information on wheat scab can be found at:

<http://www.plantpath.ksu.edu/DesktopDefault.aspx?tabid=533>. For more information, contact Mike Tokach (785-532-2032; [mtokach@ksu.edu](mailto:mtokach@ksu.edu))

↵ The July 6, 2007 issue of MMWR from the CDC carries an excellent resource entitled “**Compendium of Measures to Prevent Disease Associated with Animals in Public Settings, 2007.**” that provides recommendations for public health officials, veterinarians, animal venue staff, animal exhibitors, visitors to animal venues, physicians, and others concerned with minimizing risks associated with animals in public settings. It can be accessed at <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5605a1.htm>

Their summary states: “Certain venues encourage or permit the public to contact animals, resulting in millions of human-animal interactions each year. These settings include county or state fairs, petting zoos, animal swap meets, pet stores, zoologic institutions, circuses, carnivals, farm tours, livestock-birthing exhibits, educational exhibits at schools, and wildlife photo opportunities. Although multiple benefits of human-animal contact exist, infectious diseases, rabies exposures, injuries, and other human health problems associated with these settings are possible.... Such incidents have substantial medical, public health, legal, and economic effects. The recommendation to wash hands is the single most important prevention step for reducing the risk for disease transmission. Other critical recommendations are that venues not allow food in animal areas, venues include transition areas between animal areas and nonanimal areas, visitors be educated about disease risk and prevention procedures, and animals be properly cared for and managed.” (Liz Boyle, lboyle@ksu.edu; 785-532-1247)

↵ **What is FAMACHA** - A clinical on-farm system, called FAMACHA©, was developed in South Africa for classifying animals into categories based upon level of anemia. Since anemia is the primary pathologic effect from infection with *H. contortus*, this system can be an effective tool for identifying those animals that require treatment (but only for *H. contortus*). To use FAMACHA©, the color of ocular mucus membranes are observed and compared to a laminated card which has colored illustrations of eyes from sheep at different levels of anemia. All animals are examined at regular intervals and only animals scored as being anemic are treated. In evaluation trials in South Africa, use of FAMACHA© reduced the number of dewormer treatments given by up to 90% as compared to previous years. This system has been validated in the US by the Southern Consortium for Small Ruminant Parasite Control (SCSRPC).

FAMACHA© is distributed under the auspices of the South African Veterinary Association. Professor GF Bath (project coordinator for FAMACHA© in South Africa) has requested that distribution in the US be made only through the SCSRPC via the laboratory of Dr. Kaplan (University of Georgia) and that FAMACHA© cards are only to be sold directly to veterinarians or other trained animal health professionals. These individuals are expected to provide training in the proper use of the FAMACHA© system prior to re-selling the cards. The exception to this will be when sheep or goat producers attend a formal FAMACHA© training workshop (see upcoming events). This restriction in distribution is required by the agreement with Professor Bath in South Africa. Failure to understand the limitations and potential problems with the system combined with the problem of drug resistance may lead to improper implementation. For more information, contact David Kehler (316-321-9660; dkeehler@oznet.ksu.edu).

↵ **Energy Supply Affects Leucine Utilization by Growing Steers** – Six ruminally cannulated Holstein steers (330 lb) were limit-fed (5.1 lb of dry matter/day) a diet based on soybean hulls. Treatments were three amounts of leucine infused abomasally (0, 4, and 8 grams/day) and supplementation with two amounts of energy (0 and 1.9 Mcal of gross energy/day). The supplemental energy was supplied by ruminal infusion of acetate, propionate, and butyrate and abomasal infusion of glucose to provide energy to the steers without increasing microbial protein synthesis.

*Bottom Line...* The assumption of a constant efficiency of amino acid utilization across different levels of energy supply may not be appropriate for estimating amino acid requirements for growing steers. For more information, contact Even Titgemeyer (785-532-1220; egtitgeme@ksu.edu) or Chris Reinhardt (785-532-1672; cdr3@ksu.edu).

↵ **Electronic Identification Use by Cow-Calf Producers is Increasing** – A national survey was conducted in the spring of 2006 as a joint project between Kansas State University and BEEF® Magazine. Participants were selected from a mailing list of cow-calf producers with more than 100 cows. BEEF® Magazine provided the mailing list and a random sample of 1,000 producers was selected. The survey gathered the thoughts and opinions of 522 cow-calf producers from 41 states. Data were collected by Prism Business Media, Inc. and analyzed by both Prism Business Media, Inc. and Kansas State University.

*Bottom Line...* These data provide a better understanding of how producers are preparing for the implementation of a national animal identification system, suggesting that the use of electronic identification will increase. For more information, contact Dale Blasi (785-532-5427; dblasi@ksu.edu) or Larry Hollis (785-532-1246; lhollis@ksu.edu).

## UPCOMING EVENTS >>>>>>>>>

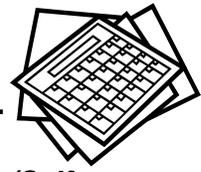
- ☞ The **K-State Beef Conference** will be held on August 9-10, 2007. This conference is designed to provide take-home knowledge that will enhance the ability of cow/calf producers to improve profitability. The conference will be held in Weber Hall on the K-State campus. Registration fee is \$150 per participant and is due by August 3. A registration form and details are available at [www.asi.ksu.edu/beefconference](http://www.asi.ksu.edu/beefconference).  
The focus of the conference is “Adding Value to Calves” which will include presentations from several industry leaders sharing various options for doing just that and producers who participate in these value-added programs. The conference will also include sessions on animal handling and practical cow feeding. For more information, contact Larry Hollis (lhollis@ksu.edu; 785-532-1246) or Twig Marston (twig@ksu.edu; 785-532-5428).
- ☞ **Implementation of Nutrient Management Plans for Livestock Operations Workshop** will be held on August 13, 2007 on the KSU campus. This field day is designed to assist livestock producers, nutrient management plan (NMP) developers, and regulatory and Extension personnel on how to properly implement a NMP. Demonstrations on proper sampling, calibration of manure equipment, and adjusting application rates based on soil and manure analysis will be discussed. In addition, a nationally successful producer program will be presented on providing information to inform neighbors and other community members when concerns arise from livestock operations. Swine producers can receive their KDHE Swine Certification Training for attending. All swine producers attending for Swine Certification Training must also register directly with Robert Gain with KDHE by calling 785-296-5557 or emailing rgavin@kdhe.state.ks.us. Applicable KDHE certification fees apply.  
The workshop will begin at 8:30 a.m. with registration at the KSU Animal Science Farm. Registration is \$20 per participant and is due by August 8. For a registration form and more information, visit [www.asi.ksu.edu](http://www.asi.ksu.edu) and look under Upcoming Events or contact Joel DeRouchey (jderouch@ksu.edu; 785-532-2280).
- ☞ **Ranch Management Field Days** – Three KLA/KSU Ranch Management Field Days are scheduled for August 16, August 21, and August 23. Rafter B Outfitters, near Russell Springs, will host the first event on August 16. Brent Weinland operates this Logan County ranch. Jim and Sally Reeves, of JMR Cattle Co., will host the August 21 Field Day at their ranch headquarters near Augusta. The third event is scheduled for August 23 at the Perry Ranch near Oskaloosa, Kansas. Phil, Rhonda, Nathan & Carrie Perry own and operate this cattle enterprise in eastern Jefferson County. For more information, visit the KLA website at [www.kla.org](http://www.kla.org) under Events/Meetings or contact Twig Marston (twig@ksu.edu, 785-532-5428) for more details.
- ☞ Make plans now to attend the **Flint Hills Beef Fest** which will be held August 17-19, 2007. 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 Cattle Contests, and 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>.
- ☞ 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/](http://www.oznet.ksu.edu/butler/) or contact Dave Kehler (316-321-9660; [dkehler@oznet.ksu.edu](mailto:dkehler@oznet.ksu.edu)).
- ↵ 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](mailto: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, using byproduct feeds for receiving and growing diets and much more. The day will conclude with a tour of the KSU Beef Stocker Unit and evening barbecue. For more information, contact Dale Blasi ([dblasi@ksu.edu](mailto:dblasi@ksu.edu); 785-532-5427).
- ↵ The **2007 KSU Swine Day** will be held Thursday, November 15. Mark the date on your calendar and watch for more details.
- ↵ **2007 Dr. Bob Hines Swine Classic** - Recently over 100 4-H youth representing 33 Kansas counties participated in this year's Dr. Bob Hines Swine Classic at the Cico Park in Manhattan on July 6-7. Educational events for youth and parents were conducted throughout Friday afternoon. As part of the showmanship activities, a class was provided for the young family members less than seven years of age. The class required an adult be in the ring to supervise and educate each young contestant and insure their safety in the show area. A judge interacted with the young showman and provided positive encouragement, but no placing was made. Each contestant received a purple ribbon to make the class a non-competitive, educational event. Camera opportunities were plentiful. Due to the July 4<sup>th</sup> holiday falling on Friday next year, the Dr. Bob Hines Swine Classic is planned for June 27-28, 2008. For further details about the event, contact Joel DeRouchey, 785-532-2280, [jderouch@ksu.edu](mailto:jderouch@ksu.edu).

## CALENDAR OF UPCOMING EVENTS

Date	Event	Location
August 9-10, 2007	K-State Beef Conference	Manhattan
August 13, 2007	Implementation of Nutrient Management Plans for Livestock Operations Workshop	Manhattan
August 16, 2007	KLA/KSU Ranch Management Field Day	Russell Springs
August 17-19, 2007	Flint Hills Beef Fest	Emporia
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
September 11-12, 2007	Applied Reproductive Strategies in Beef Cattle	Billings, Montana
September 27, 2007	KSU Beef Stocker Conference	Manhattan
November 15, 2007	KSU Swine Day	Manhattan

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



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

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 an intramuscular injection of long-acting oxytetracycline when symptoms are first noticed.
- ◆ Shut out irritating sunlight by patching eyes, shade, etc.
- ◆ Control flies.
- ◆ Consult your veterinarian.

- Consider revaccinating for the respiratory diseases 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.
- ☑ Document cost of production by participating in Standardized Performance Analysis (SPA) programs.
- ☑ 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.