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### Updates on Equine Disease Outbreaks

Recent outbreaks of communicable equine diseases reinforce the importance of a good vaccination and health care program for horses. Information on the most common diseases and prevention methods is available online at <http://animalscience.tamu.edu/academics/equine/publications/index>.

Because of several recent outbreaks of **EEE** (Eastern Equine Encephalomyelitis) in the East and Southeast, horse owners and managers should be sure all horses are up-to-date on vaccination for this serious equine disease. This is a viral disease transmitted by mosquitoes to both horses and humans. The mortality rate for untreated horses is high (>90%). The disease can be transmitted to humans as well. Prevention is simple. Vaccinate all horses for all three strains of EE, and practice good insect control on the farm. Consult your local veterinarian for specific recommendations.

**Equine Piroplasmiasis** is the most recent equine disease which has received national attention. Equine Piroplasmiasis (EP) is a tick-borne disease resulting from infection of horses, mules, donkeys and zebras by the protozoal blood parasites *Babesia caballi* or *Theileria equi*. Infections with either of these organisms can cause numerous nonspecific clinical signs including weakness, incoordination, fever, loss of appetite, colic, poor exercise tolerance, anemia, jaundice (yellowing) of mucous membranes, swollen abdomen, labored breathing, dark red or dark yellow-colored urine, tearing and swelling of the eye lids, and maybe death.

The incubation period of the disease is 7-21 days. Clinical signs last 8-12 days, and horses may die within 24-48 hours after the first signs of disease. Mild cases are sometimes difficult to diagnose, and horses may remain carriers of the disease for as long as 4 years or for life, in the case of *T. Equi*. Transmission of the disease is primarily by ticks. Unsanitary practices such as use of dirty needles, surgical equipment, and blood transfusion also can transmit the disease between horses. The disease can be transmitted across the placenta from mare to unborn foal.

There are no vaccinations available to protect horses against EP. The primary protection against this disease is to prevent horses from exposure to disease-carrying ticks and the testing of at-risk horses and confining test-positive horses away from other horses. Some states have imposed restrictive import regulations and testing before allowing horses into the state. More complete information on EP and interstate travel or export regulations and testing is available on the TAMU Animal Science website listed above. Look for the factsheet entitled "What Texas Horse Owners Need to Know About Equine Piroplasmiasis."

### 48th Annual State 4-H Horse Show a Huge Success

Thanks to all the volunteer leaders and county agents who helped manage the Texas State 4-H Horse Show held in Abilene July 25 - 31. The show was a big success. Young people from 144 counties across Texas competed for buckles, prizes and six High-Point saddles. A total of **688** youngsters and **900** horses combined for a total of over **2000** entries for the week-long show. This year's show was dedicated to Mac Gilliat, retired County Extension Agent, who until 2010, had not missed a show since 1968 and for 42 years, was an important member of the horse show management team. Mac will be missed, but not forgotten, by all those associated with Texas 4-H Horse Programs. Major sponsors for the show are Cargill Animal Nutrition, Wrangler, Tony Lama Boot Company, XTO Energy, Abilene Convention and Visitors Bureau and the Taylor County Expo Center. Numerous other sponsors help assure success of this large show, and we appreciate all those who donate time, money and services to make this a meaningful experience for all the young people and families who attend.

### Texas A&M Animal Science Interns Gain Valuable Real-World Horse Experience

Several undergraduate and graduate student interns have recently completed or are still doing internships for several well-known horse farms. These are a few of the recent student interns from the Animal Science Horse Program.

- **Clay Beardon** (M.Ag.) Royal Vista Farm, Purcell, OK. Now employed full-time at Royal Vista.
- **Vanessa Sutton** (M.Ag.) Conducted a mare foaling study on a Friesian Farm in Nevada
- **Viviana Cordero** (M.Ag.) Shadwell Farm, Kentucky, Now employed by the farm.
- **Laura Caldwell** (M.Ag.) Babcock Ranch, Breeding Division, Valley View, TX.
- **Jordan Hatfield** (B.S.) 6666 Ranch, Breeding Division, Guthrie, TX.
- **Leah Ward** (B.S.) Accepted into the Kentucky Equine Management Internship Program, interning at Juddmonte Farm, Lexington
- **Stephanie Standridge** (M.Ag.) Accepted for internship at 6666 Ranch, Spring 2011.

All the farms and individuals who make these opportunities possible are truly appreciated!

### Dworaczyk Presents Research at International Symposium on Equine Reproduction (ISER)

Ph.D. candidate, Coral Dworaczyk, and Dr. Martha Vogelsang attended the ISER Meetings in Lexington, Kentucky in July, where Coral presented part of her Ph.D. research results on "The Effect of Exercise-Induced Heat Stress on Ovarian Dynamics in the Mare." Co-authors on the paper were M. Vogelsang, B. Scott, D. Sigler, S. Vogelsang and T. Welsh. This project is a continuation of several years of research in the Animal Science Department on the effect of temperature variations and exercise on ovulation dynamics and embryo survival in the mare. Thus far, results indicate that exercise and heat do elicit changes in ovarian dynamics and indicate the need for continued studies to provide the horse industry with additional tools and information on optimum management of mares involved in high-level performance activities.

## Research Team Investigates Effect of Exercise Stress and Temperature on Reproductive Function in Stallions

Researchers in the Animal Science Department, in collaboration with several scientists in the College of Veterinary Medicine, are conducting innovative research to try to assess why stallions which come out of extensive training programs, such as race training, often have lowered fertility when they enter a breeding program. One theory is that the elevated body and testicular temperatures these stallions are exposed to during the training, especially in high temperature environments, may have an effect on spermatogenesis. Researchers Clay Cavinder, Dennis Sigler, Martha Vogelsang and Animal Science graduate students Jeanette Mawyer and Russell Gordon, along with Charlie Love, Steve Brinsko, Dickson Varner and Terry Blanchard from CVM are currently involved in this study. Stallions have been implanted with temperature sensing devices so that body temperature and lower scrotal temperatures can be monitored during exercise. Semen was collected from exercised and non-exercised stallions periodically during an extended conditioning program and evaluations conducted to investigate the effect of elevated scrotal temperatures on sperm output and semen quality. Endocrine profiles also will be studied to determine effect of temperature stress on reproduction-related hormones. This study appears to be the first time such implanted devices have been used in horses to evaluate the effect of variation in scrotal temperatures on semen quality. Data collection for this study will conclude in October, 2010.

## Broodmare Nutrition Important During the Mid to Late Gestation Period

Horse owners and farm managers should be mindful of the nutrient needs of the pregnant broodmare, especially toward the last 3 to 4 months of gestation. Managers must carefully evaluate body condition of mares and adjust energy intake accordingly, to try to attain a condition score of 6 to 6.5, prior to the foaling period next spring. This will assure optimum reproductive efficiency at the breeding farm. If a mare's ribs can be observed, she is too thin. For optimum skeletal development of the unborn foal, mineral balance and total mineral intake also must be considered. A pregnant broodmare needs a minimum of 28 g of calcium and 20 g of phosphorus per day in the total diet. A good quality free-choice, loose, 12:12 mineral with 12-15% salt and a good balance of trace minerals should meet the requirements. Mineral mixes for broodmares should contain at least 1500 ppm Cu and 4000 to 5000 ppm Zn. Mares should be consuming 3 to 4 ounces of this mineral per day, in addition to other feed and hay, especially if a high percentage of their diet is hay or pasture. Careful nutritional evaluation and planning in the early fall will help assure success in the foaling and breeding barn next spring.

## October = Time to Think About Artificial Lighting to Maintain Good Hair Coats

Artificial lighting is used frequently by horsemen to get broodmares cycling earlier in the spring. Lighting also can be used to keep show horses, or horses which are consigned to winter sales, from growing long hair or to get them to shed earlier, after winter hair has already grown. Since the shortest day of the year is December 21, horse owners need to start well in advance of this date in order to "fool mother nature" and keep a slick summer hair coat on the horse all winter. Research shows that 16 hours of daylight, followed by 8 hours of darkness will keep horses from growing hair during the winter months. The hours of darkness are just as important as the light. Keeping horses under 24 hours of light will not work, as a period of darkness is required. If horses already have their winter hair coat, it will take about 45 days to start the shedding process and about 60 days to get complete slipping of the hair. To keep horses from growing hair, it is recommended to put them under lights by at least October 1. Of course, if horses are kept under lights, they must be protected from the cold by keeping them indoors and blanketed during inclement weather. Also, remember that if a horse which has been under lights all winter is turned out in natural light in early spring, they will begin to grow a thick winter hair coat and will carry winter hair into the early part of the summer. If the horse is not going to be maintained under artificial lights until well into the summer months, it may be best to consider not using artificial lighting at all. More information about use of artificial lighting is available in the publication, "Controlling Hair Length in Horses Using Extended Day Length Regimes" by Householder and Gibbs, which is available on the TAMU Animal Science website.

Previous issues of Horse Bits can be found at:  
<http://animalscience.tamu.edu/academics/equine/horse-bits/archives-horse-bits/index.htm>

## Texas A&M to Host Intercollegiate Stock Horse Show

Texas A&M Horseman's Association will host an Intercollegiate Stock Horse Show on October 2nd at Freeman Arena. This will be the first show of this type held on the TAMU campus. The show is sanctioned by the American Stock Horse Association, a national organization dedicated to "helping people ride a better horse." A Stock Horse Clinic will be held at the Champion Ranch, Centerville, Texas, a Founding Sponsor of ASHA on Friday, October 1st. Texas A&M has fielded a Stock Horse Team for several years, coached by Dr. Dennis Sigler. The team is a continuation of the educational opportunity provided by the Stock Horse Advanced Training Class, taught each semester by Dr. Clay Cavinder. The team is self-supported by private donations. Any individual or group who would like to help support this valuable educational activity for students should contact Dr. Dennis Sigler.

## Upcoming Texas A&M Equine Workshops and Conferences:

- Horse Judging Team and Judging Team Coaches Workshop**  
**When:** November 12, 2010 (The day before the Aggiefest Horse Judging Contest)  
**About:** Separate concurrent sessions will be offered for in-depth horse judging team coaches training and judging and reasons training for youth.  
**Contact:** Refer to Animal Science Department website or contact Dr. Clay Cavinder (979-845-7731).
- Equine Reproductive Management Workshops**  
**When:** November 30, December 1-2, 2010 or January 11-13, 2011  
**About:** 3-day breeding management schools designed for farm owners, breeding managers or anyone who needs more in-depth knowledge of modern breeding management practices.  
**Contact:** Refer to website or contact Dr. Martha Vogelsang (979-845-7731) for information.
- Equine Hoof Care and Shoeing Short Course**  
**When:** January 3-6, 2011  
**About:** Comprehensive hoof care and introductory shoeing course designed for horse owners, ranchers, ranch cowboys, farm managers or anyone needing additional skills and knowledge about proper care of horse's feet. Limited enrollment is available for full participation in the hands-on course or the course can be audited at a reduced fee. January 6th is reserved for those who wish to take the AFA Certification tests which will be offered at an additional cost.  
**Contact:** Refer to website or contact Dr. Dennis Sigler (979-845-7731) for more information.
- Mare/Foal Workshop**  
**When:** February 24, 2011  
**About:** The Mare/Foal Workshop is a one-day workshop held each spring on the Texas A&M University campus. Designed for mare owners, information available includes broodmare and foal nutrition, the estrous cycle, foaling management, basic equine genetics, health care programs for mares and foals, and early handling of foals.
- "Back To Basics" Horse Short Course**  
**When:** February 24-25, 2011  
**About:** This will be a basic, "how to care for and enjoy your horse" seminar. Practical horse owner information, training demonstrations, lots of hands-on horse care and management information will be covered. Ground training techniques for starting young horses and advanced training of older horses.  
**Contact:** Refer to website or contact Dr. Dennis Sigler (979-845-7731) for information.

For more information contact:  
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