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Equine Herpes Virus Update

Although EHV-1 is not an epidemic, horse owners and farm managers should stay informed about this potentially deadly virus which can rear its ugly head at any time.

Texas Animal Health Commission (TAHC)

Officials have released all previously quarantined premises for Equine Herpes Virus (EHV-1) in Galveston County (upper Gulf Coast). The first case of EHV-1 in Galveston county was confirmed on January 24 in one horse. Following the first diagnosis, two additional horses were confirmed positive for EHV-1 in Galveston county. The TAHC reminds equine owners to keep their horses healthy by practicing simple and good biosecurity measures.

The TAHC, recommends following these simple guidelines to minimize risk:

- Consult your veterinarian to establish an appropriate vaccination program for your horses.
- When hauling to an event, tie your horse to your trailer. If using a stall, clean and disinfect it, if possible, before stalling your horse. Always use clean, fresh bedding.
- Minimize your horse having direct contact with unknown horses, especially nose to nose contact.
- Use your own water and feed buckets. Avoid letting your horse drink from a communal water trough. Fill water buckets from a faucet.
- Do not share grooming equipment or tack. If you must, then wash and disinfect it before returning to your own horse.
- Avoid petting and touching other horses in order to minimize the risk of transferring a disease back to your horse. If you must handle other horses then wash your hands or use hand sanitizer.
- Avoid letting strangers pet your horse especially if they have horses of their own.
- Before returning home from an event clean up your equipment (boots, tack, grooming supplies, buckets, etc.) to help reduce the risk of transporting an infectious agent back home. Consider washing and disinfecting your trailer when you return home.
- If possible, isolate your returning horses for 2 weeks or at least prevent nose to nose contact with your other horses. Source: <http://www.tahc.state.tx.us>

Other recent incidences of EHV-1 have been reported in Oklahoma and more recently in Michigan and now in Maryland. The Michigan Department of Agriculture and Rural Development (MDARD) reported on April 7 that a fourth horse in that state has tested positive for equine herpesvirus-1 (EHV-1). The Saginaw County horse is the second to be found positive on a single quarantined farm. On March 21, veterinarians euthanized an 8-year-old Quarter Horse gelding from Livingston County that tested positive for EHV-1 after attending a barrel racing event in Barry County in early March. A second horse from Livingston County and another from Saginaw County subsequently tested positive for the virus. MDARD is urging horse owners to vaccinate their horses and check their temperatures at least twice a day. Those with a fever of 101.5 or more should contact their veterinarian.

On April 15, the Maryland Department of Agriculture reported that a horse stabled in Montgomery County, Maryland, has tested positive for the neurologic form of equine herpesvirus-1 (EHV-1) and is being treated by a private veterinarian.

National Champion Texas A&M Stock Horse Team to defend national title on April 24-25

The defending National Champion Texas A&M Stock Horse Team will try to extend their undefeated roll for the Spring of 2015 by competing at the American Stock Horse Association National Collegiate Championship Show to be held in Ardmore, Okla., on April 24 and 25. The Stock Horse Team is now coached by Ph.D. graduate student and graduate assistant Raul Valdez, who is a past team member. The Stock Horse Team was started in 2007 and was previously coached by Dr. Dennis Sigler, Extension Horse Specialist. The Texas A&M Team was National Champion Team in 2014 and has won two National Championships and two Reserve National Championships over the past 4 years.

The six-member Stock Horse Team competes in four events - reining, cow horse, stock horse pleasure and trail, in three different divisions which are based on rider's previous riding and showing experience. In 2014, not only was the team crowned National Champion, but all three divisions were won by A&M team members. Students can compete on their own horses or ride horses owned by the Department of Animal Science. Many of the horses ridden in the competition were bred by Texas A&M and are trained by students who were enrolled in horse training classes in the Department of Animal Science. The team's travel expenses and entry fees are fully supported by outside donations and fund raisers hosted by the team. Please contact us if you are interested in supporting the team.



TAMU research on effect of heat stress on stallion semen characteristics

Horsemen have long held the belief that intensive work by performance or racing stallions in a hot environment could be detrimental to semen quality and might influence breeding performance of these stallions. Graduate students mentored by faculty researchers in Animal Science, Dr. Sigler, Cavinder and Vogelsang, along with collaborators in the College of Veterinary Medicine, Dr. Varner, Love and Blanchard have recently completed several research projects investigating this subject.

Initially, researchers needed to develop a method to accurately determine internal scrotal temperatures which could be compared to surface, rectal and environmental temperatures. Using Miniature Horse stallions, subdermal thermosensory devices which could be read by portable scanning units, were implanted into the ventral portion of the scrotum. Scrotal temperatures during and after exercise during hot, humid environmental conditions were then compared to rectal and subcutaneous neck temperatures.

One of the interesting early results was the documentation of the stallion's inherent ability to maintain a lower scrotal temperature, compared to rectal temperature, during exercise-related heat stress. In horses which were exercised for a total of 90 minutes, there was a 7.9° Fahrenheit difference between rectal (102.7) and scrotal (94.8) temperatures at the end of exercise. However, after conducting three different trials in which exercising horse were compared to non-exercised controls, there appears to be very little effect of elevated rectal temperatures, due to exercise, even in the presence of hot, humid conditions, on semen volume, sperm concentration, total sperm numbers, percentage of total and progressively motile sperm, sperm morphology or sperm DNA quality. In conclusion, we can infer that stallions may be moderately exercised for short periods of time in hot, humid environments without fear of inducing testicular temperatures capable of inflicting damage on reproductive variables.

Horseback riding is good exercise which can have significant human health benefits

Studies completed by graduate student Colleen O'Reilly and Dr. Dennis Sigler compared riding horses at the walk, trot, or canter (WTC) to riding a reining pattern or a simulated cutting competition (working a programmed mechanical flag). With the aid of new portable technology, the Cosmed K4b2 system, just acquired by the equine research group in Animal Science, researchers are able to continually monitor the rider's physiological parameters such as heart rate, respiration, oxygen consumption, breath by breath ventilation rate, so that actual caloric expenditures can be calculated at any point in time during a riding bout.

In college-aged individuals who ride on a fairly regular basis, riding a reining pattern expends comparable number of calories per minute, to riding at a long-trot or canter at about 6.9 kcal/min, while the average calories burned/min were slightly less for the simulated cutting at 4.9 kcal/min. The WTC ride was for a total of 45 min, while the reining and cutting rides lasted only 4.9 and 2.5 min, respectively. Rider heart rates averaged 163 bpm for the reining ride, 147 bpm for the cutting ride and 132 bpm for the entire WTC ride. The total energy expenditure observed in the WTC ride (195 kcal) provides information about possible health benefits a 45 min ride could provide. Collaborators on the project were Dr. Vogelsang, Cavinder and Dr. Fluckey from the Department of Kinesiology.

Animal Science research underway to provide additional information on energy requirements of lactating mares in thin or moderate body condition

Ph.D. student Raul Valdez and M.S. student Michelle Glover, under the supervision of Dr. Sigler, are currently working on a research project which should provide more insight into the dietary energy requirements of mares that are either thin or in moderate body condition and are either increasing, decreasing or staying constant in body condition. The effect of mares' body condition on reproductive performance and subsequent growth of foals also is being evaluated. Results of this research, along with two previous studies conducted in the Animal Science Department, will be used to further refine a prediction

model which will be used to calculate precise energy requirements for horses of different uses and different body conditions. This information will eventually be available to horsemen and farm managers to more effectively and efficiently determine dietary energy needs for different classification of horses which are either increasing or decreasing in body condition. Collaborating on this project are Dr. Luis Tedeschi and Dr. Tom Welsh, Animal Science, and Dr. Clay Cavinder, Mississippi State University.

TAMU Horses for Sale

The Texas A&M University Animal Science Department Horse Center is offering several horses for sale through private treaty. These are started young



riding horses, aged 2-4 yrs of age, as well as a few 4-7 yr old mares and geldings. Horses being sold are the product of selective breeding for athletic performance and feature some of the most prominent and popular performance bloodlines in the Quarter Horse Industry. There will be a special showing of all sale horses by the students on May 1 at 5 pm at Freeman Arena. Please

contact the Krissy Schroeder, TAMU Horse Center Manager at (979) 845-4320, for further information.

A Big Thank You

Thank you to stallion owners across the state for donations of the following 2014 stallion services to TAMU Horse Center mares for foals to be born in 2015:

- Circle Y Ranch - **Im Countin Checks**
- 6666 Ranch/Wagonhound Land & Livestock Co., LLC - **WR This Cats Smart**
- 6666 Ranch / Burnett Ranches, LLC & Kit & C.B. Moncrief - **Royal Fletch**
- 6666 Ranch /Perry Johns - **Four Roan Fly**
- 6666 Ranch / Rockin W Ranch - **Rockin W**
- 6666 Ranch / Bet Hesa Cat Syndicate - **Bet Hesa Cat**
- Invitation Equine Investments, LLC (Shorty Parks, Jeff & Heidi Palmer) - **The Invitation**
- TAMU Veterinary Medicine Teaching Hospital - **Christys Acre (3)**
- Mark Hollar - **Kid Mecom Blue**
- Mark Hollar - **Rey Jays A Hick**
- Stephen Vogelsang - **A New Player (3)**
- Michael Krueger - **Sonitanovemberlena**

Upcoming educational events for Horsemen - Permian Basin Horse Short Course, Midland, Texas, May 16, 2015

Will include presentations by numerous horse experts and veterinarians on a variety of topics, hands-on sessions and training demonstrations. For more information contact Midland County Extension Office, County Extension Agent - Courtney Munson, 432-686-4700.

For more information contact, Equine Extension, Department of Animal Science
2471 TAMU College Station, TX 77843-2471 : (979) 845-1562 : <http://animalscience.tamu.edu>

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