



IDOHC Equine Piroplasmosis Subcommittee 2007 Report

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2006 IDOHC EP Subcommittee

- ◆ Peter Timoney, Chairman, IDOHC, Director Gluck Institute, Kentucky
- ◆ Kent Fowler, Chairman EP Subcommittee, State of California
- ◆ Lee Coffman, Private Consultant
- ◆ Tim Cordes, USDA VS
- ◆ Leonard Eldridge, State of WA
- ◆ Steve Hennager, USDA VS
- ◆ Bob Hillman, State of Texas
- ◆ Ralph Knowles, Private Consultant
- ◆ Amy Mann, Industry Expert
- ◆ Richard Mitchell, Private Practice
- ◆ Don Knowles, ARS
- ◆ Mike Short, State of Florida
- ◆ Robert Stout, State of Kentucky
- ◆ Tim Boone, State of California
- ◆ Kerry Thompson, American Horse Council





Brainstorming and Outreach

- ◆ Meetings of experts took place at the USDA Center on August 21, 2003, and again on February 16, 2005
- ◆ Formation of EP Subcommittee and EP presentation at NIAA in April 5, 2006
- ◆ AHC Equine Health Forum in Austin, TX on September 25, 2006
- ◆ IDOHC EP Subcommittee Report at USAHA in Minneapolis, MN in Oct. 2006

Equine Piroplasmosis (EP)

- ◆ EP is a blood-borne protozoal infection that produces a wide range of clinical signs and may be fatal in up to 20% of previously unexposed animals
- ◆ *Babesia caballi* and *Babesia equi* are the causative organisms transmitted by adult and nymphal ticks Contaminated needles / syringes may also spread
- ◆ Incubation times range from 10-30 days
- ◆ Intrauterine transmission to the foal is common
- ◆ EP affects horses, mules, donkeys, and zebras

World Distribution of EP

- ◆ *B. caballi* and *B. equi* are present in 90% of the world inhabited by horses
- ◆ EP occurs in Africa, Europe, Asia, South and Central America
- ◆ Epidemics in Florida occurred in the 1960's followed by a 10 year eradication campaign
- ◆ Currently, in addition to the United States, EP is not endemic in Australia, Canada, England, Ireland, and Japan.



Current EP Status in the U.S is in Question

- ◆ EP is classified as a FAD in the U.S.
- ◆ However, it is assumed that EP may exist at some unknown prevalence level in the U.S.
- ◆ This assumption is based on the fact that prior to February 1, 2004, the “official test” for U.S. importation was the CF test
- ◆ The CF test occasionally yielded “false negative” results
- ◆ Unscrupulous owners compounded the problem with immunosuppressive drug administrations to create “false negative” results



More on the Current EP Status in the U.S

- ◆ The CF test was replaced by the C-ELISA on August 22, 2005 and is highly unlikely to yield “false negative” results on adult horses
- ◆ Potential tick vectors exist in the U.S. (Dermacentor, Hyalomma, Rhipicephalus)
- ◆ However, dynamics for transmission remain unclear
- ◆ EP horses may exist in the U.S. at sufficient disease prevalence level to infect ticks
- ◆ This could result in the establishment of the disease as endemic to the U.S.
- ◆ Treatment is not a **validated** viable option

Questions Raised by EP Subcommittee

- ◆ CFR 71.3(a) – Animals or poultry affected with any of the following diseases, which are **endemic** to the U.S.: Equine Piroplasmosis,**shall not be moved interstate.**
- ◆ Is EP a FAD or endemic?
- ◆ Based on the CFR referenced, should not APHIS be restricting movement of EP positives between States rather than States?

Questions Raised by EP Subcommittee

- ◆ If EP is a viable risk to the U.S. equine population, why are we not seeing more clinical cases?
- ◆ Not reported?
- ◆ Undiagnosed?
- ◆ Successfully treated and not reported?
- ◆ Lack of vectors for transmission?
- ◆ Threshold for transmitting disease not yet reached?



Current Disposition Dilemma in the U.S.

- ◆ **KEY QUESTION:** What do we do with horses that have legally entered the U.S. and are later found to be infected?
- ◆ Euthanasia?
- ◆ Exportation?
- ◆ **Lifetime quarantine?**
- ◆ **Attempt treatment?**
- ◆ State-by-state decisions that lack uniformity
- ◆ These are not new issues with easy answers



Current Consensus of Needs

- ◆ Maintain stringent import restrictions that are sufficient to detect seropositive horses before importation into the U.S.
- ◆ Develop a cohesive policy at both state and federal levels for identifying and dealing with seropositive resident EP horses
- ◆ Request funding from USDA to research effective treatment protocols for EP



Summary of Proposed Resolutions

- ◆ **Implement realistic survey option**
- ◆ Require permanent I.D. and permanent residence to be declared and recorded
- ◆ Maintain “tick-free” environment
- ◆ Regulate and monitor movement
- ◆ **Fund research for an effective treatment**



USAHA Resolution #9

The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) in partnership with USDA, Agricultural Research Services (ARS) to expand the funding for research into finding an effective and safe treatment for elimination of the carrier state for *Babesia caballi* and/or *Babesia equi*. Additionally, USAHA encourages USDA-ARS to work with owners of equine piroplasmiasis (EP) seropositive horses found in the United States to make their EP horses available for participation in this research.



EP Research

- ◆ Pilot study involving potential anti-B. equi effects of ponazuril
- ◆ qPCR developed to measure B. equi levels in peripheral blood
- ◆ Ponazuril does decrease blood levels of B. equi
- ◆ Initiating study evaluating imidocarb treatment of experimentally infected B. caballi horses

USAHA Resolution #10

◆ The United States Animal Health Association (USAHA) urges the United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS) to investigate the prevalence of equine piroplasmosis (EP) infection in the United States utilizing accepted survey methodology. USAHA recommends that the first component of this incentive is to conduct a national survey of slaughter horses. It is further recommended that USAHA establish a working group consisting of representatives from equine industry groups, the National Assembly of State Animal Health Officials, researchers and veterinarians knowledgeable about EP to evaluate the survey results, and if indicated, develop recommendations for control of EP positive horses in the United States and/or elimination of EP from the United States.





Proposed NIAA Equine ID Resolution

◆ The National Institute of Animal Agriculture recommends that the Animal, Plant Health Inspection Agency (APHIS) of the United States Department of Agriculture implement provisions that require all horses imported into, or returning to the United States, be identified with Radio Frequency Identification (RFID) microchips that comply with the International Organization for Standardization ISO 11784 and 11785 standards (134.2 kHz). Universal RFID readers would be present at all import centers and border stations to read **both** 125 and 134.2 kHz microchips.





National Slaughter Horse Sero-survey

- ◆ USAHA Resolution 10
- ◆ EP Subcommittee believes this to be the best methodology available
- ◆ However, recent U.S. District Court rulings could impact the following plan
- ◆ Estimate sample size 14,000 horses
- ◆ Illinois and Texas plants



Sero-survey project

- ◆ NVSL to receive and process samples
- ◆ ARS available for confirmatory testing
- ◆ Estimated cost is ~\$46,000 to be divided equally between APHIS and ARS
- ◆ Testing for both *B. equi* and *B. caballi*
- ◆ Evaluate the significance of findings as it relates to the need for further (or lack of) follow-up on the U.S. resident horse population



Slaughter Horse Plant Sampling

- ◆ Cavel Inter. plant in DeKalb, Illinois—800-1,000 hd./wk
- ◆ Dallas Crown plant in Kaufman, Tx.—non-human consumption 200-250 head/week
- ◆ Beltex plant in Fort Worth, TX—0 hd/wk but samples being taken from 400 hd/wk at Beltex horse feedlot (Morton, TX) before transport to Mexico



Recent Equine Slaughter Plant Court Rulings

- ◆ United States District Court Judge Colleen Kollar-Kotelly held that the slaughter of horses in America violates federal law. (March 28, 2007)
- ◆ This ruling became effective immediately.
- ◆ Currently pending in Congress are H.R. 503 and its Senate companion measure, S. 311, which would ban the slaughter of horses for human consumption **and** prohibit the transport of horses outside of the United States for slaughter.
- ◆ Additional legal action?

Vision Statement

- ◆ To do what it takes to ensure that EP does not become endemic in the resident horse population of the United States



Special Thanks to:

- ◆ **Dr. Tim Boone**, CDFA Veterinarian --Equine Programs Manager
- ◆ **Dr. Tim Cordes**, APHIS/VS/USDA, Senior Staff Equine Veterinarian
- ◆ **Dr. Freeda Isaac**, APHIS/VS/USDA, Import/Export Staff Veterinarian
- ◆ **Dr. Peter Timoney**, Chairman, Department of Veterinary Science, Gluck Equine Research Center
- ◆ **USAHA IDOHC EP Subcommittee**





Thank You!



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