

Significant Pest and Disease Issues Confronting U. S. Agriculture



The Case of Equine Piroplasmosis



Definitions

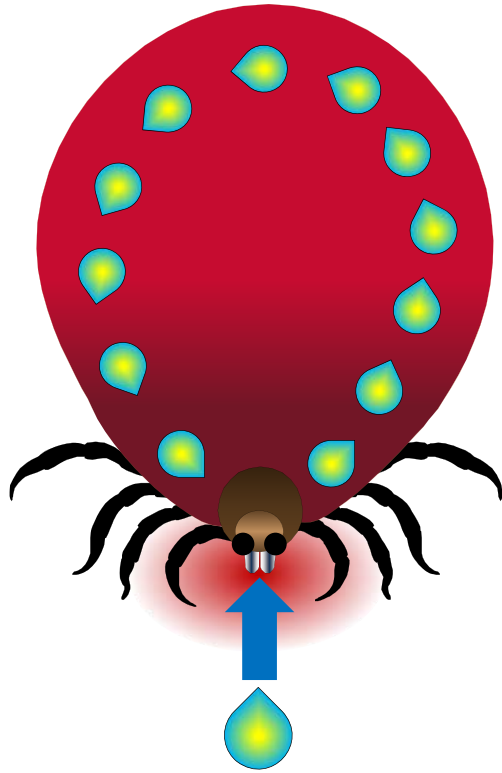
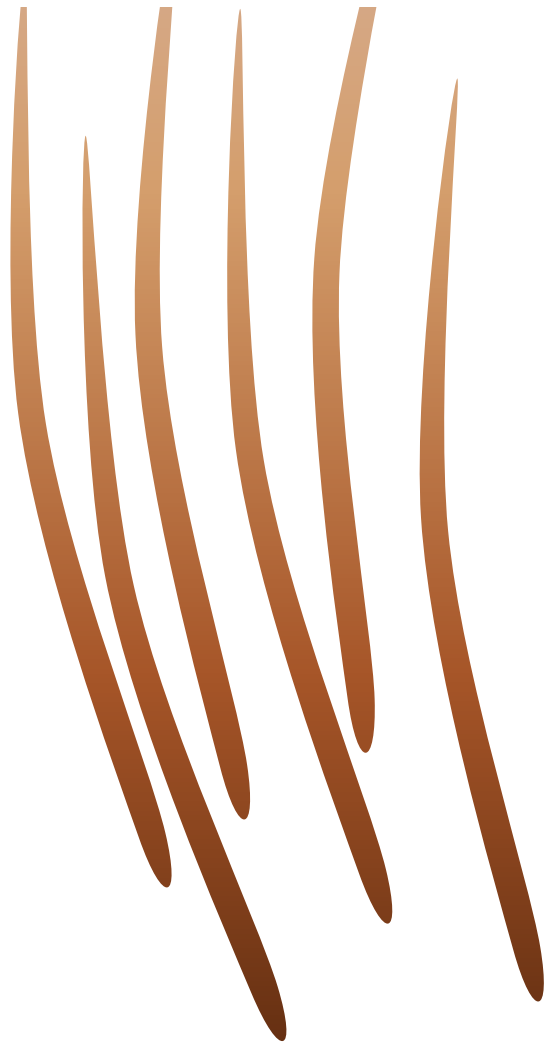
- Endemic – An infection circulating within U.S. animal populations
- Non-Endemic – U. S. animal populations free of infection
- Vector-borne – An infection which requires a tick (for instance) to be transmitted.

Discussion of Problem – Piroplasmosis in horses

- Caused by a parasite that attacks blood cells (similar to malaria in humans)
- U.S. horses free of infection (non-endemic) but ticks capable of transmitting found in U.S.
- Infection can result in severe disease, even death

Discussion of Problem – Piroplasmosis in horses

- Once a horse is infected, it is infected for life and a source for transmission to other horses
- A number of countries (U.S., Canada, & Australia) restrict the entry of horses based on infection with certain infections (pathogens).
- Partnerships in USDA between research and import surveillance (Agricultural Research Service and Animal Plant Health Inspection Service) serve to assure infections such as parasite causing piroplasmosis remain non-endemic

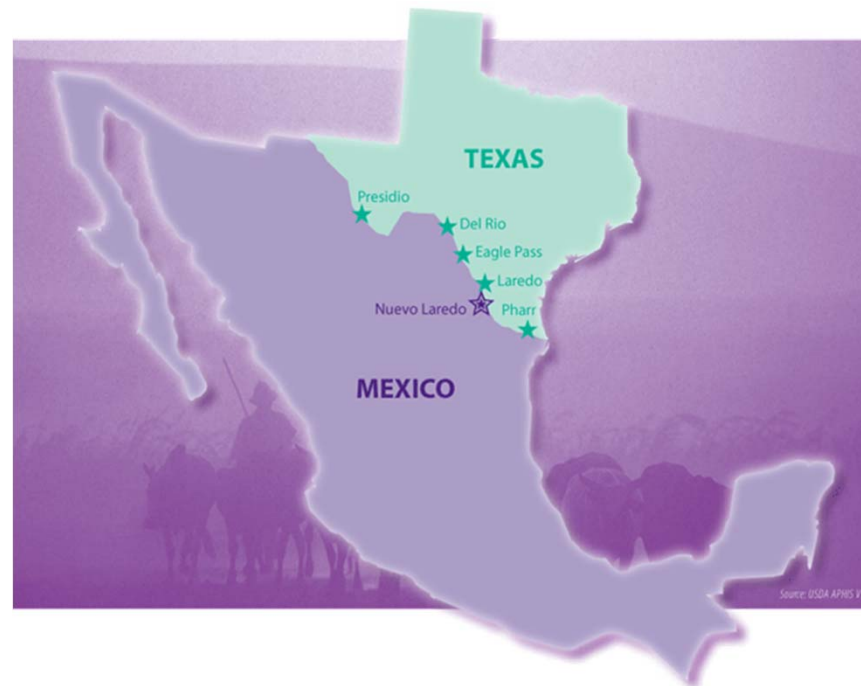




Example in Pathogen Surveillance

Discovery of undetected parasite in the horse

- USDA/APHIS/VS, Port Veterinarian, Eagle Pass, TX worked in partnership with USDA/ARS to detect, define new parasite and develop detection methods



Conclusions

- 1) Research – Regulatory partnership assures U.S. remains free of infections that are non-endemic
- 2) Strong Research – Regulatory partnership required to assure the safe movement of animals and the support of livestock economics

Partnerships

- American Horse Council
- State Veterinarians/Private Ranches
- Washington State University
- University of Idaho
- Kimron Veterinary Institute
- University of Pretoria, South Africa, Equine Research Centre
- USDA APHIS (National Veterinary Service Laboratory, Center for Epidemiology and Animal Health, & Import-Export)

Partners supporting development of diagnostics and vaccines to protect animal agriculture



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