Nocardioform placentitis

From Nocardioform Placentitis. Barry A. Ball, DVM, PhD, DACT. Equine Disease Quarterly, April 2020. *(Adapted by Emma Adam, DVM, PhD, DACVIM, DACVS)*

- Nocardioform placentitis is a disease associated with the Actinomycetales order of bacteria. These bacteria include *Nocardia* spp., *Crossiela* spp. and *Amycolatopsis* spp.
- The disease is characterized by placental insufficiency that can result in late-term abortions, premature foals, increased neonatal mortality, and weak, term foals due to growth retardation *in utero*.
- **It is important to recognize that cases reported as positive for these bacteria by the UK Veterinary Diagnostic Lab include swabs, placentae, and fetuses.**
- The foal itself is not infected by the bacteria.
- Unlike ascending bacterial placentitis, the lesions associated with nocardioform placentitis tend to be located in the cranial, ventral portion of the placenta posing huge challenges in the diagnosis of infection prior to abortion.
- Nocardioform placentitis tends to manifest during the last trimester of pregnancy and abortions occur between November and June, with the highest incidence in January and February.
- The lesions on the placenta are limited to the chorionic surface which is typically, but not exclusively, covered with thick, tan, mucoid material.
- The pathogenesis of infection is poorly understood. The disease has not been able to be produced under experimental conditions in spite of many efforts.
- The disease is likely multifactorial and may involve factors such as host factors and environmental conditions. For example, currently it is believed to be associated with hot, dry periods in late summer (Figure 1).
- The University of Kentucky's Department of Veterinary Sciences is continuing to investigate this challenging disease.

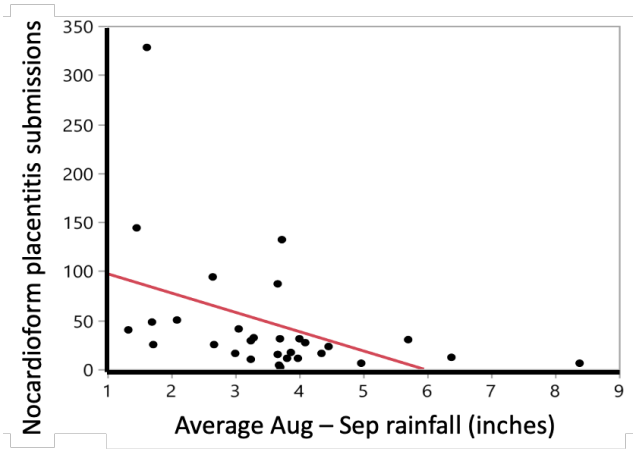

Figure 1. *Graph showing the incidence of nocardioform placentitis/sample submissions (vertical axis) against the average rainfall during the preceding August and September (horizontal axis) 1991 - 2019.*

- The University of Kentucky's Veterinary Diagnostic Laboratory continues to gather information on placentae, fetuses and tissues brought in for necropsy examination. Submitting these samples for necropsy examination is vital to our continued research efforts on this disease and antibiotic sensitivity patterns of the bacteria involved. http://vdl.uky.edu/