**Nocardioform Placentitis Concerns for Central Kentucky 2017 Foal Crop**

Central Kentucky’s foal crop in 2011 caused concern among practitioners, farm owners, managers, the University of Kentucky Veterinary Diagnostic Laboratory (UKVDL) and the horse industry media. Following that year, nocardioform placentitis cases dropped to typically seen levels in the state. The 2016 foal crop saw a small increase in cases in February of 2016, but then levels dropped quickly.

Currently, the UKVDL has seen an increase in cases of nocardioform placentitis for the 2017 foal crop with 10 abortions in December 2016 as compared to zero abortions in December of 2015. In the first two weeks of January 2017, UKVDL has already had 8 confirmed nocardioform placentitis abortions with more pending.

Nocardioform placentitis was first identified in Central Kentucky in the mid-1980s. The term “nocardioform” was adopted due to similarities of the causative agents to the nocardioform actinomycetes. Through sequence analysis of 16S rRNA genes the most common organisms have been identified as *Crossiella equi* sp. nov, *Amycolatopsis* spp, and *Streptomyces* spp. The pathogenesis of nocardioform placentitis is poorly understood. The clinical ramifications of nocardioform placentitis range from late gestation abortions, stillbirths, prematurity and the birth of live but non-viable foals, to foals that are small and weak but survive. Due to the fact that even mild cases of nocardioform placentitis were submitted in 2011 a number of foals were healthy and vigorous at birth.

Gross and histologic lesions of nocardioform placentitis are distinctive. The cervical star region is spared and lesions most commonly occur in the body of the placenta at the bifurcation of the horns. Lesions may be single or multiple. The affected chorion is covered by a thick, light brown, tenacious exudate, overlying a rough, tan chorion with marked villous loss. Expansion of the allantoic stroma by nodular masses (adenomatous hyperplasia) is frequently observed. The characteristic histologic lesions include necrosis of trophoblasts, marked villous loss, squamous metaplasia, chronic suppurative inflammation, adenomatous hyperplasia, and intra-lesional gram positive branching bacilli. The bacteria do not reach the fetus and fetal lesions are limited to those of placental insufficiency.

The means of transmission is as yet unidentified. Nocardioform organisms do not behave in a manner similar to either the models of ascending bacterial placentitis or septicemic bacterial placentitis. Additionally, nocardioform placentitis cases tend to occur in waves, with some years having very large numbers of cases while other years have very few cases. The role of environmental factors in the incidence of nocardioform placentitis is being investigated; yet it appears to follow hot dry weather.

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Nocardioform placentitis testing is available at UKVDL. Standard tests are:

**Culture:** $17 in-state, $25.50 out of state. 5 day minimum turnaround time.

**PCR:** $35 in-state, $52.50 out of state. 24-48hr turnaround time.
Histopathology, included in mail-in necropsy and necropsies performed at UKVDL.

For more information on nocardioform placentitis see:


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