

To Quote Dr. Osweiler “Everything Old is New Again”

Analytical toxicology is a useful, critical component in diagnosing large animal toxicoses. In a recent case of an economically focused beef producer feeding screenings from a ‘natural mill’, gangrenous ergotism in the hind limbs resulting in culling 15 feeder steers. Ergot sclerotia comprised 6% (by weight) of the feed at a concentration > 34 ppm. In a beef herd fed sorghum-sudan hay over the winter, sudden death occurred in 6 cows (\pm 6 month pregnant) with 4 subsequent abortions; no other clinical signs were observed. The nitrate concentration in the hay was 7.6%, with the nitrate and nitrite concentrations in ocular fluid ranging from 38 – 139 $\mu\text{g/mL}$ and 0.1 – 5.06 $\mu\text{g/mL}$, respectively. Phytoestrogens in forage are associated with infertility in dairy cattle. Coumestrol at > 30 ppm in forage has been associated with failure to ovulate, infertility, and depressed milk production in late lactation. Is 15 to 18 ppm coumestrol in forage a problem in high producing dairy cows with early embryonic death?

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