

The Prevalence of *Tritrichomonas foetus* in Cull Cows at a Southeastern Abattoir

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Trichomoniasis is a sexually transmitted disease in cattle caused by the protozoa, *Tritrichomonas foetus*. This single-celled, flagellated parasite colonizes the preputial folds of bulls who serve as asymptomatic carriers of the organism. It is a significant cause of infertility and pregnancy wastage in beef herds. Cows are infected during breeding by an infected bull, frequently resulting in infertility due to embryonic or early fetal death, abortion, and occasionally pyometra, and fetal maceration. The disease can be masked by other factors such as poor nutrition, bull subfertility, drought or other diseases like Leptospirosis and campylobacteriosis. Management practices that perpetuate this disease include introducing and/or keeping infected bulls or brood cows in the herd. In some cases pregnant cows may carry the organism and be a source of infection after calving. Real progress in controlling or eradicating the disease is hampered by the lack of knowledge of the true prevalence of the disease throughout the United States. A 2004 report of beef herds in Florida found a herd prevalence of 11.1% (herds with a least one positive bull). No reports documenting the prevalence of *T. foetus* in beef cows were found. Infertility due to infection with *T. foetus* may be a significant cause of culling in beef cows. However, due to the self-limiting nature of the disease and low sensitivity of culture in cows, testing cows for *T. foetus* is not routinely performed on the farm. The objective of this study was to determine the prevalence of *T. foetus* in the reproductive tracts of cull cows obtained from a slaughter plant in Georgia

Samples of cervical and uterine mucous were taken from the reproductive tracts of non-pregnant and short term pregnant (less than 60 days by direct palpation and visual estimation) cows following slaughter (n=500). A sterile pipette was inserted into the cervix and uterine body and fluids were aspirated into the pipette using a 12 cc syringe coupled to the pipette. An adequate sample consisted of 1-2 cm of mucous in the lumen of the pipette. The sample was inoculated into a commercial In Pouch Trich culture pouch. Inoculated media was kept at ambient temperature until transported to the Tifton Veterinary Diagnostic Investigation Laboratory (TVDIL), Tifton, GA. The samples were tested for the presence of *T. foetus* by culture and Real time PCR.

Out of 503 samples tested 1 sample (0.2%) was positive by culture. Seven samples (1.39%) resulted positive by RT-PCR. Considering the occurrence of *T. foetus* infection in random samples tested in this study, larger herd level studies to evaluate the actual prevalence and economic impact of this problematic disease in beef herds is urgently warranted. Also this study indicates that the practice of buying and breeding cull cows with unknown *T. foetus* status as potential herd replacements represents a potential source for *T. foetus* infection.