

whereas Day 60 was used to monitor the potential delayed deleterious effect of PPR on fetus viability. The diagnosis of embryo/fetus death was made when there was no embryo/fetus heart beat, signs of embryo/fetus degeneration were observed, or when positive signs of pregnancy were absent in a cow/heifer previously diagnosed as pregnant. The overall embryo/fetus death between Days 30 and 60 was 12.8%. The percentage of pregnancy loss from Days 30 to 60 was 12%, 13.5% and 13% for NPAL, PAL-1 and PAL-2, respectively ($P > 0.05$). It was concluded, that palpation per rectum using one or two fetal membrane slips did not increase the pregnancy loss in dairy cattle.

Keywords: Cattle; Pregnancy diagnosis; Palpation per rectum; Safety

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EFFECTS OF DIETARY FEB-200TM IN LATE-GESTATION MARES GRAZING ENDOPHYTE-INFECTED TALL FESCUE

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Consumption of toxic endophyte-infected tall fescue (E+) causes prolonged gestation, agalactia and dystocia in mares. In cattle, supplementing the diet with FEB-200TM, a yeast cell wall extract (Alltech, Nicholasville, KY, USA), increased the rate of fecal excretion of ergot alkaloids and alleviated symptoms of fescue toxicity. Supplementation of FEB-200TM to early pregnant mares grazing E+ fescue pastures enhanced serum progesterone concentrations. The primary goal of this study was to determine the efficacy of FEB-200TM to alleviate symptoms of ergot alkaloid toxicosis in mares grazing E+ pastures during late-gestation. To this end, light-breed mares ($n = 16$) were matched by stage of gestation (256–304 days) and assigned to E+ (>90% infected) pastures in early February, and then placed on diets (10% crude protein commercial sweet feed) with FEB-200TM supplement (20 g/days; TRT, $n = 8$) or without the supplement (CON, $n = 8$). Mares were maintained on pastures through either Day 342 (first four pairs) or Day 335 (second four pairs) of gestation. Mean gestation age of CON and TRT mares at the onset of the study was 280 days. Blood samples were collected pre-E+ exposure, twice weekly while on pasture and twice

post-exposure for analysis of serum progesterone (P4) and plasma 3-4-dihydroxyphenyl acetic acid (DOPAC) concentrations. Udder development was scored (0 = no development to 4 = running milk) twice weekly and on day of removal from pasture. Urine was collected twice monthly for ergot alkaloid analysis and mares were concurrently examined (transrectal palpation and ultrasonography) to assess fetal well-being. Data were analyzed using ANOVA for repeated measures and expressed as mean $\pm$ S.E.M. One CON and one TRT mare foaled prior to removal from E+ pasture (Days 336 and 329, respectively). The TRT foal survived with moderate intervention; the CON foal was euthanized. All except one TRT mare had a 0 or 1 udder score at the time of removal and all required domperidone (~ 1.25 mg/kg BW; Equi-tox, Inc., Central, SC, USA) once removed from pasture. Mean gestation length for the CON mares was 349.9 days and 349.1 for the TRT mares. Of CON mares foaling after removal, five foals had failure of passive transfer (FPT, IgG < 400 mg/dL) one of which required intervention other than plasma administration. Of TRT mares foaling after removal, one mare had dystocia with loss of mare and foal, one foal died within 24 h of birth (high meconium impaction and *C. perfringens* infection), one foal had colic requiring intensive care, three had FPT requiring plasma only and two foals had partial FPT (IgG 400–800 mg/dL). Plasma DOPAC and serum P4 concentrations were similar for CON and TRT mares (5.8 ± 0.3 ng/mL versus 6.2 ± 0.3 ng/mL and 5.1 ± 0.2 ng/mL versus 5.5 ± 0.2 ng/mL), respectively. Only one TRT and none of the CON mares had the normal pre-partum rise in P4. Urinary ergot alkaloid content was 154.8 ± 9.6 and 130.5 ± 9.5 ng/mg creatinine for CON and TRT mares, respectively. In conclusion, there were no beneficial effects in mares supplemented with FEB-200TM.

Keywords: Equine; Fescue toxicosis; Pregnancy; Yeast extract

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