Supplementation of Condensed Tannins to Beef Heifers During Peripartum Period Affects Coccidia Parasite Load in Dam and Offspring.
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Abstract: Our objective was to explore the effects of condensed tannins peripartum supplementation of beef heifers on their offspring incidence of coccidiosis, diarrhea, and growth performance. A total of 30 beef heifers, diagnosed as pregnant were enrolled in the study. At approximately 60 d pre-partum, determined by breeding and expected calving dates, heifers were stratified by body weight (BW), coccidial oocyst counts per gram of feces (OPG) and randomly assigned one of two treatments: supplementation of 450g hd⁻¹ d⁻¹ corn gluten feed (Control; n=14); or supplementation of 450g hd⁻¹ d⁻¹ corn gluten feed and 20g hd⁻¹ d⁻¹ of condensed tannins (n=16; CT). Heifers received treatment using an automated feeding system (SmartFeed PRO, C-Lock Inc., Rapid City, SD) until 30d postpartum for a total of approximately 90d. Dam BW was determined every 30d, and offspring BW was determined at birth and 30d after. Fecal samples for OPG were collected every 30d from dams, and weekly from calves after birth. All animals were managed as a single group during the duration of the experiment. Initial BW (day -60 relative to calving; 446±7.5 kg), day -30 (480±8.1 kg) and day 30 (453±7.1) was similar (P>0.10) between treatments. Supplement individual daily intake was similar between treatments (395±15.8 and 448±18.2 g/d for CT and Control, respectively; P>0.10). Calf birth weight and at 30d were similar (P=0.10) between treatments (30.4±2.2 kg and 60.7±4.1 kg, respectively). Dam fecal OPG for Eimeria spp. was similar (P>0.10) at day -60 (161.5±8.5 OPG), and day 30 (107.5±9.4 OPG), but were greater (P< 0.05) on day -30 for Control than CT (140.9±8.5 and 54.2±16.2 OPG, respectively). Calf OPG was similar on week 2 (0.0±0.0 OPG), and week3 (283.1±25 OPG); however, it was greater (P< 0.05) for Control than CT calves on week4 (2,744.4±168.4 and 1,150.0±64.7 OPG, respectively). Supplementation of condensed tannins reduced coccidia load pre-calving for dams and their offspring postnatal.

Keywords: coccidia, heifers, tannins

Influence of Farrowing Assistance Intervals on Piglet, Sows and Workers.
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Abstract: Farrowing assistance (FA) is a common on-farm intervention, also called sleeving on many farms. Assistance consists of reaching into the vaginal cavity of an actively farrowing sow for examination and removing any piglets or birthing tissues obstructing the birth canal. Motivations for FA focus on better care of the piglets and sows because complications are noticed and addressed faster, but too frequent of intervention could be detrimental to the sow and increase injury risk to workers. There is little published information on FA effects on the pigs or employees. The objective of this study was to systematically determine the impact of different FA intervals on the welfare of piglets, sows, and workers. Sows (330 total) in a commercial breeding farm were randomly assigned to one of three FA intervals commonly used on farms: FA every 20-min since last liveborn piglet; FA every 40-min; and FA every hour with visual evaluation every 40-min. Measurements were gathered at 3 points: during farrowing, 24-h before weaning, and after giving birth to their next litter. Data were analyzed using ANOVA and GLM for normalized data and Kruskal-Wallis for non-parametric data. Results were significant for alpha< 0.05. Overall, there were few observed differences between treatments for piglets, sows, or workers. FA did not affect piglet survival for measures like mortality or weight, and did not influence the need for additional care for sows or future reproductive success. For workers, FA increases strenuous movements (p<0.0001) of bending, kneeling, lying down and finger opposition from pulling piglets putting them at risk for injury. The results of this study did not support a benefit for the most frequent FA for piglet mortality. While there is merit to regularly observing the sows during farrowing, there does not appear to be a significant benefit to FA at every observation.

Keywords: pig, welfare, worker