

Effectiveness of Treating Subclinical Ketosis in Dairy Cows

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Ketosis is a major metabolic disorder of dairy cattle in the United States, affecting an estimated 40% of all lactations in the industry. There are various viewpoints on whether it is cost effective to treat subclinical cases of ketosis (SCK) with propylene glycol (PPG) and dextrose in comparison to treating animals that become clinically ketotic. Our objective was to determine the effectiveness of treating SCK with both dextrose and PPG in a large Ohio dairy herd. There were two treatment groups and a control. Treatment 1 cows were deemed subclinically ketotic, defined by a blood beta-hydroxybutyrate (BHBA) of 1.2-2.9 mM/L and received intravenously 250 mL 50% dextrose solution and 300 mL PPG orally for 3 d. Treatment 2 cows also were subclinical (same criteria as Trt 1) but did not receive the PPG and dextrose. Control cows had <1.2 mM/L BHBA and did not receive treatment. Cows with >2.9 mM/L BHBA were not enrolled in the trial. To determine treatment, blood was drawn from the tail vein/artery at 4 d in milk (DIM) and tested for BHBA using a Precision Xtra Meter. NEFA and BCS (1= thin, 5=fat) were recorded -14 to -3 d pre-partum. BCS at 11 DIM was similar for Trt 1 and control cows (3.37 vs 3.34) but lower for Trt 2 cows (3.29). Prepartum NEFA were similar between Trt 1 and 2 but lower for control (309, 293, and 243 μ Eq/mL, respectively). BHBA at 4DIM was similar for Trt 1 and 2 but lower for control (1.66, 1.70, and 0.70 mM/L, respectively), with a similar pattern at 11 DIM (1.29, 1.43, and 0.71 mM/L, respectively). Additional data on milk yield and health events being summarized will allow us to assess the cost effectiveness of the treatment protocol used in this study for subclinical ketosis.