

# EFFECT OF COMMERCIAL FEED ADDITIVES ON PRODUCTION VARIABLES AND METABOLIC MARKERS OF THE PERIPARTURIENT DAIRY COW

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## ABSTRACT

Three experiments were conducted to investigate the effects of commercially available feed additives on production variables and metabolic markers when supplemented during the periparturient period. The hypothesis was that the supplementation of feed additives throughout the periparturient period would improve production variables and metabolic markers. Feed additives investigated included a mixture of B-vitamins and active dried yeast, organically complexed trace minerals, and a yeast culture. For all experiments, the variables of interest included daily dry matter intake, milk yield, and feed efficiency as well as weekly body condition score, body weight, milk composition, 3.5% fat-corrected milk, energy-corrected milk (ECM), and colostrum immunoglobulin concentrations as measures of production performance. Plasma glucose, nonesterified fatty acids, and  $\beta$ -hydroxybutyrate were examined in all experiments as markers of metabolic health.

Data to support feeding the B-vitamin and active dried yeast mixture or the organically complexed trace minerals during the periparturient period were limited. Increased milk fat and protein yield as well as ECM efficiency results led to the conclusion that supplementation of yeast culture at the suggested rate of 56 g/d would be beneficial to producers, however; it did not improve the periparturient cow's metabolic health markers that were examined in the current study.