THE EFFECTS OF SUPPLEMENTAL ANIONIC SALTS & YEAST CULTURE ON THE PRODUCTION DAIRY CATTLE DURING THE PERIPARTURIENT PERIOD

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ABSTRACT

The objective of this thesis was to determine nutritional strategies with the strategic use of feed additives during the periparturient period to reduce the negative energy balance as the dairy cow transitions from late gestation into early lactation. Two independent research trials were conducted to evaluate the effect of a sulfur-based anionic salt fed during late gestation and yeast culture fed during the periparturient period on mineral and energy metabolism, intake, health, and production of Holsteins.

In experiment one, mature Holstein cows received one of two dietary treatments with differing dietary cation anion difference (+20 or -10 mEq/100g DM). The treatment diets were formulated to provide a daily intake of 150 g Ca/cow/d. Intake, milk yield, milk components, urine pH and blood profiles were collected to determine the effects of feeding anionic salts on the health status, mineral balance and energy balance during the periparturient period.

In experiment two, variable concentrations of yeast cultures (0, 14 or 56 g/cow/d) were fed during late gestation through the first 11 weeks of lactation to Holstein animals. Intake, milk yield, milk components, and blood profiles were collected to determine the effects of feeding yeast culture on the production and energy balance during the periparturient period.