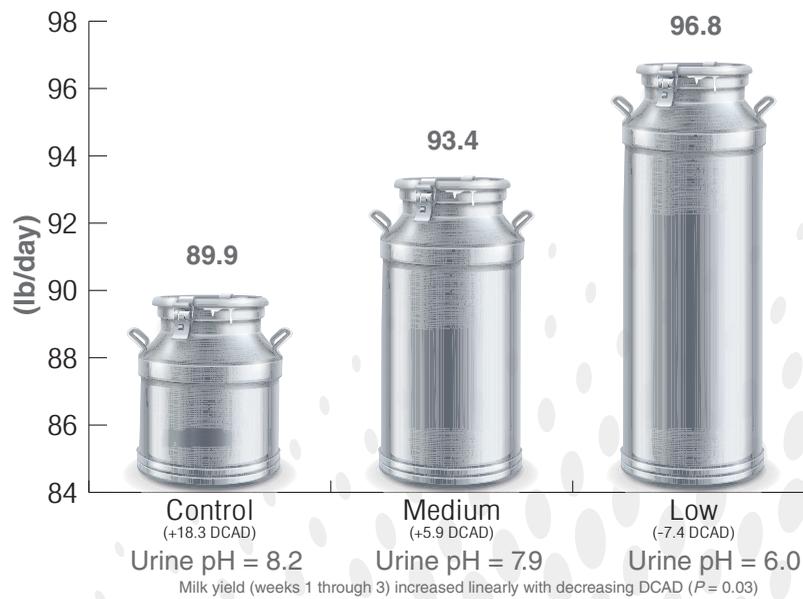




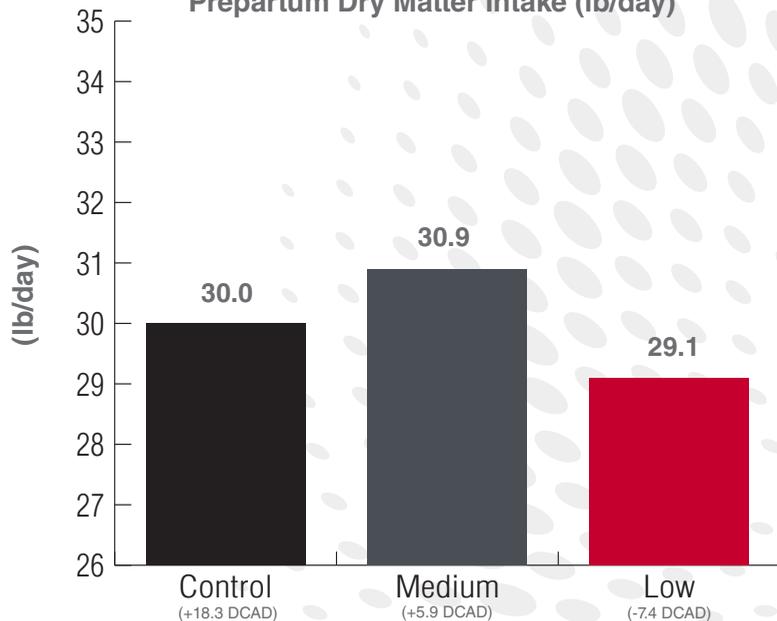
Anionic Mineral for Non-Lactating Dairy Cows

Are you getting the most out of your Transition Cow Program?

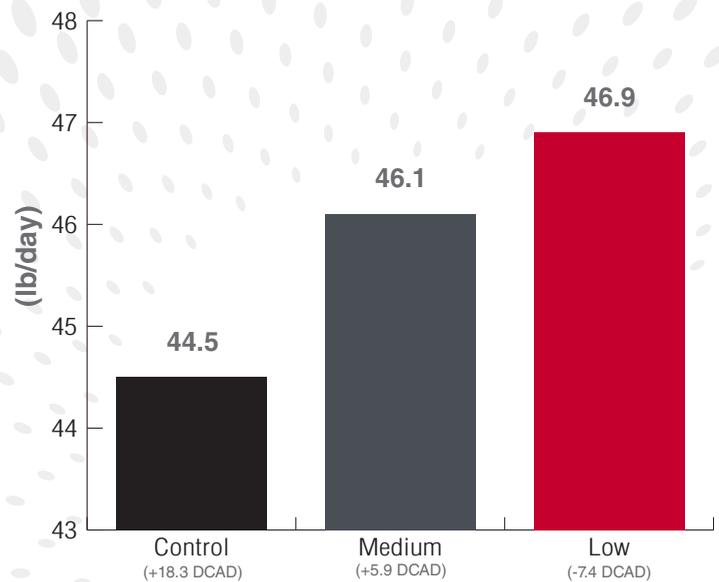
Milk Yield (lb/day)



Prepartum Dry Matter Intake (lb/day)



Postpartum Dry Matter Intake (lb/day)



Animate® Anionic Mineral for Non-Lactating Dairy Cows

Trial Objectives

The objectives of this study* were to determine the effects of decreasing DCAD in the prepartum diet on peripartum dry matter intake (DMI) and milk production. We hypothesized that cows fed the lowest DCAD ration would have higher postpartum DMI and milk production.

Experimental Design and Treatments

Eighty-nine multiparous Holstein cows from the Cornell University Ruminant Center dairy farm were randomly assigned at 24 days prior to expected calving to one of three prepartum diets formulated with decreasing DCAD: CON (no added anions), MED (partial supplementation of anions), and LOW (full supplementation of anions), using *Animate* as the sole source of added chloride and sulfur. Analyzed DCAD content of the treatment diets were: CON = 18.3 mEq/100 g DM; MED = 5.9 mEq/100 g DM; LOW = -7.4 mEq/100 g DM. Other important diet macromineral concentrations (averaged across all 3 treatments) were: Calcium, 1.56%; Phosphorus, 0.43%; Magnesium, 0.48% and Potassium, 1.26%. Chloride and Sulfur increased with decreasing DCAD.

Ration adjustments were made throughout the trial to maintain average urine pH of cows fed LOW between 5.5 and 6.0. Urine pH values for cows fed CON, MED and LOW diets were 8.2, 7.9, and 6.0, respectively.

From parturition through 63 days in milk (DIM) cows were fed a common postpartum diet.

*Leno et al. 2017. J. Dairy Sci. 100:4604.

Results

Cows fed MED had the highest prepartum DMI (30.9 lb/day) while cows fed LOW had the lowest prepartum DMI (29.1 lb/day). Prepartum DMI of cows fed CON was intermediate (30.0 lb/day).

Postpartum DMI (lb/day) tended to be increased linearly with decreasing prepartum DCAD (CON = 44.5, MED = 46.1, LOW = 46.9, $P = 0.09$). Postpartum DMI, expressed as a percent of bodyweight, increased linearly with decreasing prepartum DCAD through nine weeks of lactation ($P = 0.06$).

During weeks one to three, milk yield (lb/day) increased linearly with decreasing prepartum DCAD (CON = 89.9, MED = 93.4, LOW = 96.8, $P = 0.03$). When compared to CON group milk yield remained higher for cows fed MED and LOW through nine weeks, but differences were not statistically significant through this period.

Summary

This trial demonstrated the beneficial effects of feeding a fully acidogenic diet prepartum with *Animate* (resulting in urine pH at or below 6.0) on DMI and milk production. Results showed:

1. Feeding a fully acidogenic diet prepartum with *Animate* as the sole source of anions did not significantly impact prepartum DMI compared to a non-acidogenic prepartum diet.
2. Postpartum DMI was greatest for cows fed a fully acidogenic prepartum diet.
3. Milk yield through three weeks of lactation was greatest for cows fed the fully acidogenic diet prepartum.

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