

## ABSTRACT

### SERUM AND MILK RESPONSE TO LACTATING COWS FED SELENIUM ENRICHED MUSTARD MEAL

Early to mid-lactation Holstein and Jersey cows were fed the same total mixed ration as control diet once a day for an adjustment period of 3 wk. Diets were formulated to supply approximately 25 kg per day consumption on a dry matter basis. The treatment diet was composed of the control diet with 5.2 lbs selenium enriched mustard meal per head per day. The selenium enriched mustard in this study contained  $2.52 \pm 0.11$  ppm of selenium, thus, 5.2 lbs of mustard meal contained 6.86 ppm of selenium. The treatment groups were fed the treatment diet for 5 wk after the adjustment period. After the experimental period, all cows were fed the same control TMR for 3 wk.

There was no significant difference in feed intake for either the Holsteins or the Jerseys fed mustard meal after week 5. Both breeds of cows were accustomed to the mustard meal within 2 wk. Treatment cows, both Holsteins and Jerseys, significantly increased selenium in milk within 1 wk of feeding selenium enriched mustard meal. Both breeds reached their highest level of selenium in milk by week 7. Holsteins and the Jerseys had a similar serum selenium response to selenium enriched mustard meal. Selenium in serum was stable within normal ranges, and Se concentration in serum reached peak levels at week 8 for Holsteins and week 7 for Jerseys.

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