

ABSTRACT

EFFECTS OF FEEDING A SLOW RUMEN RELEASE ENCAPSULATED UREA ON PERFORMANCE OF EARLY AND MID-LACTATION HOLSTEIN COWS

The objective of this experiment was to determine if use of a slowly rumen released NPN product had the potential to increase the efficiency of capture of dietary N in milk protein when used as a replacement for urea in diets of high-producing lactating dairy cows. Four pens of multiparous lactating cows on a commercial dairy were fed one of two total mixed rations (TMR) formulated to supply 5% of ration crude protein (CP) from urea or Nitroshure. Early lactation cows appeared to gain the most benefit from Nitroshure addition as evidenced by an increase in milk fat (0.068 kg/d, P=0.01) and protein (0.041 kg/d, P=0.01) output as compared to the urea group. Although the slower release rate of the Nitroshure compared to the urea was modest, it likely lowered peak ruminal ammonia levels enough to impact the profile of the VFAs produced in the rumen, thereby positively influencing milk fat synthesis.

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