

ABSTRACT

THE ELIMINATION OF ALFALFA HAY FROM THE DIETS OF HIGH-PRODUCING DAIRY COWS: EFFECTS ON MILK PRODUCTION

Lactating cows were offered diets with or without alfalfa hay as the primary source of forage to determine the effects on milk yield and components, dry matter intakes, and digestibility, as measured by the particle size distribution of both the total mixed ration and the manure during hot weather conditions. The control and treatment diets were 42.7% forage (42.3% corn silage, 20.0% wheat silage, 33.2% alfalfa hay, and 4.5% oat hay as percents of total forage dry matter) and 42.2% forage (86.7% corn silage and 13.3% as percents of total forage dry matter), respectively. No differences were found in milk production, milk components, and cow health during the first 60 d of the trial. Nitrogen excretion in treatment cows was less than that of the control cows, 337 and 414 ppm, respectively. Both ADF and NDF levels in the manure were lower for treatment cows vs. the control cows (27.43, 26.71 and 76.47, 74.43%, respectively). Daily DMI fluctuated with changes in ambient temperature. There was more total variation in DMI in the treatment cows; however, treatment cows varied less in DMI than control cows fed the alfalfa diet with increasing ambient temperature. Milk yield and composition declined linearly for the treatment ration with decreasing corn silage quality.

Tyler Colburn
May 2008