

Performance of lactating dairy cows fed macerated forage conserved as silage and hay

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The effect of forage maceration at harvest on silage characteristics and its effects on lactation performance of Holstein cows were determined. Either a roller conditioner or a prototype forage macerator manufactured by PAMI were used to cut a 25-ha field of alfalfa (*Medicago sativa*) forage. The harvested forage was wilted and preserved as silage or hay. Maceration of alfalfa forage resulted in a lower crude protein concentration and hay and silage nutrient profiles were not affected by harvest methods. Thirty-four Holstein cows (602.9 ± 3.5 kg) in early lactation were used in a 14-wk lactation study. The cows were fed two dietary treatments in the form of a total mixed ration (TMR); one contained roller conditioner-harvested alfalfa silage and hay. Feed, weighbacks and milk were sampled daily. Daily dry matter intake (21.6 ± 0.5 kg) was not affected by harvest method. Daily milk yield (38.7 ± 0.3 kg) and milk composition were not affected by dietary treatment during the 14-wk lactation trial; however, cows fed the macerated forage as part of a TMR had a 0.23 kg greater daily body weight gain ($P < 0.05$). Dietary energy input and energy output (total energy in milk, maintenance and body weight change) were not affected by dietary treatment; however, energy contained in body weight change was greater ($P < 0.05$) in cows fed a TMR containing the macerated forage.