Round Bale Silage Quality of Alfalfa, Perennial ryegrass and Alfalfa-Perennial ryegrass Mixtures. (C06-collins155941-Oral)

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Abstract:

Preservation as round bale or chopped silage avoids most of the negative weather effects of hay curing on alfalfa forage quality. However, the composition of alfalfa forage is not ideal for silage fermentation due to a high buffering capacity and relatively low levels of fermentable carbohydrates. Pure alfalfa silage was compared with a mixture of alfalfa and perennial ryegrass (5 to 20% grass on a dry matter basis) and with pure perennial ryegrass silage. Each silage type was prepared at target moistures of 350 and 500 g/kg using both first and second crop forage. Storage temperatures were greater for low- than for high-moisture silage but did not differ among silage types. At the lower moisture level, the perennial ryegrass and mixed alfalfa/grass silages had lower concentrations of butyric acid than pure alfalfa silage. Wilting to the lower moisture level increased silage NDF by 94 to 180 g/kg DM compared with the wetter silage. These results suggest that the introduction of even a small percentage of grass to alfalfa monocultures may improve the preservation characteristics of round bale silage.

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