



Effect of Alfalfa Fluffers on Drying Rate, Baling Loss, and Nutrient Value of Alfalfa During Baling

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In this study, the performance of a fabricated fluffer was evaluated and compared with common field curing methods for alfalfa. The drying rate, baling loss and alfalfa nutrient value (dry matter and crude protein) were the criteria for evaluation. The alfalfa was cut using a mower-conditioner. A randomized complete block experimental design was used with three treatments (fluffing swathed alfalfa with fluffer, raking swathed alfalfa, swathed alfalfa without treatment) and four replications. Moisture content at mowing was 70% (w.b.) and at baling was 20% (w.b.). Moisture content was measured using standard methods at three hour intervals. Data values were fitted to the exponential model and the drying constant was determined under different conditions. Results indicated that the raked alfalfa and alfalfa processed by a fluffer had faster drying rates than the untreated alfalfa and or the alfalfa cured by conventional methods. The drying constant on the first day after raking for alfalfa processed by rake was 0.068, by fluffer was 0.068, and by mower-conditioner 0.043. Corresponding values for the second day were 0.087, 0.064, and 0.06. The analysis of variance showed no significant differences among the treatments for baling loss and alfalfa nutrient value.

Keywords: Alfalfa, Fluffer, Mower-conditioner, Rake