Public Abstract

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Title:Improvement in stored forage utilization during feeding

Three experiments investigated methods to reduce forage waste during stored forage feeding using large round bale feeders (LRBF). In the first experiment, cone and sheeted LRBF reduced ($P < 0.05$) fescue hay waste 54 and 29% respectively compared to standard open bottom LRBF but alfalfa haylage waste was not different ($P > 0.10$) for feeders. Corn stover waste tended ($P = 0.12$) to be less for cone (13.0%) LRBF compared to sheeted (31.7%) and open (38.5%) bottom LRBF in Experiment 2. In the third experiment, ammoniated corn stover waste was reduced ($P < 0.05$) 64 and 46% for cone and sheeted LRBF compared to standard open bottom LRBF. Selective plant part consumption occurred with alfalfa haylage and corn stover but not with fescue hay. On average, waste was 6.1% for alfalfa haylage, 13.9% for fescue hay and 27.7% for corn stover suggesting forage quality, bale size, and forage moisture effect forage waste during feeding. Two additional studies investigated limiting access time (LAT) to eight hours per day as a method to reduce stored forage feeding waste. LAT reduced ($P < 0.05$) forage disappearance 10% compared to ad libitum standard open bottom LRBF access in both experiments. Predicted forage waste was reduced 50.6 and 40.4% for ad libitum cone LRBF access and LAT respectively compared to ad libitum standard open bottom LRBF access. Cone and sheeted LRBF and LAT reduce stored forage waste during feeding.