

A COMPARISON OF THE FEEDING VALUE FOR MILK PRODUCTION OF PASTURE SILAGE
CONSERVED AS ROUND BALES EITHER WRAPPED OR BAGGED IN POLYTHENE

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Conservation of pasture silage in round bales is a new technique increasing in popularity with farmers because it is a more convenient method than silage made with traditional silage harvesters. Aerobic fermentation during ensilage/storage can cause significant losses of dry matter (DM) and protein (CP) (Valentine et al. 1984). This experiment compared nutrient losses resulting from two techniques of storing round bale silage.

Perennial ryegrass/white clover pasture (digestible DM 69.8%; CP 16.2%) was cut with a rotary mower in November, wilted for 24 hours and baled with a GEHL 1460 round baler. Eighteen bales were sealed in individual polythene bags (200 μ m) and 18 bales were tightly wrapped with several layers of polythene film (25 μ m) using a Silawrap* machine. In March, the silages were offered to two groups of grazing cows in late lactation, at a rate of one bale/20 cows/day.

Table 1. Effect of ensiling technique on storage losses and milk production

Item	Bagged bales	Wrapped bales	L.S.D. P=0.05
Bale fresh wt (kg) at ensiling	605	617	58
Bale dry wt (kg) at ensiling	220	224	18
Bale fresh wt (kg) at feeding	466	578	53
Bale dry wt (kg) at feeding	162	205	21
Gaseous loss (kg)	58	19	20
Spoilage loss (kg) (silage not eaten)	18	3	8
Total loss (kg)	76	22	28
Milk (L/cow/day)	8.0	9.5	0.5
Milk fat (g/cow/day)	430	430	24
Milk protein (g/cow/day)	270	330	10

Losses of nutrients from bagged silage were high and similar to those reported by others (Valentine et al. 1984). Wrapping reduced the gaseous loss of DM during storage and spoilage losses were also reduced. Total losses of DM were 34.4% and 9.8% in bagged and wrapped bales respectively. The better preservation of silage in wrapped bales resulted in an additional 35 litres of milk per bale of silage.

VALENTINE, S.C., COCHRANE, M.J. and BARTSCH, B.D. (1984). J. Aust. Inst. Agric. Sci. 50 : 246.

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