

EFFECT OF DEGREE OF WILTING ON STORAGE LOSSES OF SILAGE STORED  
IN BUNKERS AND NUTRITIVE VALUE FOR MILK PRODUCTION

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Wilting pasture prior to ensiling improves the nutritive value of silage for milk production (G. Rogers, Unpublished data). This practice is widely adopted and crops are often heavily wilted. The effect of the degree of wilting on nutritive value and storage losses is not well understood. This is important because heavily wilted crops require more drying time and/or additional turning of the swath.

Perennial ryegrass/white clover pasture was cut with a rotary mower in mid November and alternate windrows were either left in place or immediately tedded to speed drying. After wilting for 24 hours both treatments were harvested with a New Holland 718 precision chop forage harvester and ensiled in bunkers sealed with polythene.

The composition (g/kg DM) of the pasture at cutting and of the moderately and heavily wilted pasture at ensiling were : digestible dry matter (DDM) 680, 670, 680; crude protein (CP) 163, 156, 156 and water soluble carbohydrate (WSC) 100, 45, 69.

In March, two groups of twenty cows grazing restricted pasture were offered one of each of the silages at a level of 10 kg/DM/cow/day. The compositions (g/kg) of the moderately and heavily wilted silages were : DDM 664, 664; CP 156, 175; WSC 15,20 and  $\text{NH}_3\text{N}$  0.7, 0.5. Pasture ensiled and silage fed were weighed and sampled for composition. Storage losses and milk composition are shown in Table 1.

Table 1 Effect of degree of wilting on storage loss and milk production of pasture silage stored in bunkers

	Moderate wilt	Heavy wilt
DM (%)	28	44
Pasture ensiled (kg) Fresh	21,196	13,491
DM	5,935	5,936
Silage fed (kg) DM	5,004	4,593
Storage loss (%)	15.6	22.6
Intake (kg/day)	9.8	10.0
Days fed	17	15
Milk (l/cow/day)	10.6	11.3
Total milk (l)	5,396	5,122

There was no apparent spoilage in either stack but fermentation losses of DM were substantial. The highest losses occurred with the heavily wilted silage. Although, on a daily basis, cows produced more milk ( $P < 0.05$ ) when fed the heavily wilted silage, the greater storage losses reduced the total silage fed and total milk production. Heavy wilting resulted in a silage of superior nutritive value for milk production, but this benefit was negated by the greater storage losses encountered when pasture was ensiled in pits.

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