

THE EFFECT OF BLOAT ON THE MILK PRODUCTION AND GRAZING  
BEHAVIOUR OF DAIRY COWS

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Control of bloat in beef cattle has given large increases in liveweight gain. A similar effect of bloat on milk production has not been found experimentally with dairy cows (Flynn et al. 1970). The aim of this experiment was to study the effect of bloat on the milk production and grazing time of dairy cows.

Twenty bloat-susceptible dairy cows in mid-lactation were divided into two groups in a cross-over experiment of 22 days duration. They were paired on milk yield and bloat occurrence. The two treatments were - (1) treated with a bloat prophylactic so that no bloat occurred, and (2) untreated, allowing for bloat to occur. They were grazed on irrigated *Trifolium pratense* (red clover). Daily milk yields (MY) and the presence of mild and severe bloat were recorded. Also, on four occasions, the grazing behaviour of each cow was recorded at five minute intervals for a 24-hour period. The method of analysis was by step-wise regression relating MY and grazing time (GT) to time spent bloated (TB).

During the experiment there were 100 cases of mild bloat recorded, and 16 cases of severe bloat, necessitating drenching.. The effects of bloat on MY and GT are shown in Table 1.

TABLE 1: Regression equations describing the effect of TB (min/d) on MY (kg/cow/d) and GT (min/d).

	Regression equations	Level of significance	Residual standard deviation
Mild bloat:	MY = 13.1 - 0.002 (+0.0008)TB	P < 0.01	1.3
Severe bloat:	MY = 13.8 - 0.005 (+0.0023)TB	P < 0.01	1.3
	GT = 651 - 0.338 (+0.073)TB	P < 0.01	65

There was a reduction of 6.9% in MY after 7.5 hours of mild bloat, and a reduction of 16.3% under severe bloat conditions. There was also a reduction of 23.4% in GT after 7.5 hours of mild bloat. The effect on GT was mainly due to a significant (P < 0.01) lowering of GT during the first three hours after the morning milking when bloat was most prevalent.

Although there was a reduction in MY with mild bloat, this was very small in magnitude. The loss in MY was due to a reduction in GT. Even severe bloat did not result in the MY loss which may have been, expected from animals under acute stress. Once cured, they returned immediately to grazing, consequently overcoming any large loss of MY which could have occurred. Therefore, on the basis of milk production, it would not be economical to prevent bloat. The criterion for bloat prevention in dairy cattle should be to prevent deaths only.

FLYNN, K.E., GRAY, R.M., MARTIN, F.M. and LABY, R.H. (1970) Proc. XVIII Int. Dairy Congr. 1E : 576.

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