THE EFFECTS OF FEEDING FREQUENCY ON THE INTAKE AND PERFORMANCE OF COWS GRAZING MIXED PASTURE

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ABSTRACT

A grazing trial was carried out to compare herbage intake and milk production by dairy cows and observe their grazing behaviour when given all pasture in one break or in four breaks per day.

The experiment was carried out in two periods using a total of 24 animals. Period I with a common herbage allowance of 30 kg DM/cow/day from week 7 to week 9 of lactation and Period II with a common herbage allowance of 40 kg DM/cow/day from week 10 to week 11 of lactation.

The 24 cows which were selected from the high and low breeding index herd were allocated at random to either one break (1B) or four breaks (4B) and used for period I. Sixteen cows were drawn from the 24 cows and used for period II; they were also randomly allocated to the treatments.

Grazing behaviour of cows was observed during Period II of the trial on two separate occasions.

Herbage allowance and herbage intake were estimated by the sward cutting technique. The control group consumed 12.3 and 15.6 kg DM/cow/day while the four breaks (the treatment group) consumed 11.8 and 15.3 kg DM/cow/day for Period I and Period II respectively. Treatment did not have a significant effect.

Milk production, liveweight and body condition score were measured. Treatment had no significant effect on any of these measurements (except for lactose % in Period II).

There was a slight increase in milk production for the treatment group in Period II but the difference was not statistically significant (23.4 versus 22.8 kg milk yield and 1.0 versus 0.9 kg milk fat yield per day).

Grazing time was similar for both groups and there were no significant changes in

liveweight and body condition score.

It was concluded that for the condition and herbage allowances used in this experiment, the frequency of herbage allocation had no significant effect on the performance of cows.

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Common Abbreviations used in this thesis

MY	Milk yield
MF	Milk fat
MP	Milk protein yield
ML	Lactose yield
PF	Milk fat concentration (%)
PP	Milk protein concentration (%)
PL	Lactose concentration (%)
LW	Liveweight
CS	Body condition score
HBI	High breeding index
LBI	Low breeding index
1B	One break (B stands for break as a treatment)
4B	Four breaks
HM	Pregrazed herbage mass
RHM	Residual herbage mass
HA	Herbage allowance
DM	Dry matter
DMI	Dry matter intake
DMD	Dry matter digestibility
DOMD	Digestible organic matter in the dry matter
GE	Gross energy
DE	Digestible energy
ME	Metabolisable energy
MEI	Metabolisable energy intake
SEM	Standard error of means
GB	Grazing behaviour
GT	Grazing time
RT	Ruminating time