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EFFECT OF CONCENTRATE SUPPLEMENTATION
ON HERBAGE CONSUMPTION, MILK PRODUCTION AND COMPOSITION,
AND ON LIVEWEIGHT AND CONDITION SCORE CHANGE
IN EARLY LACTATION

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ABSTRACT

Each of 15 sets of identical twins was allocated to two grazing treatments, the pasture fed treatment (PF) and the concentrate fed treatment (CF). Cows in PF treatment were fed pasture only and those cows in CF treatment were supplemented with concentrates. The swards used were predominantly of perennial ryegrass. The experiment was carried out for 14 weeks (14th September-21st December 1987) of the early grazing season of 1987.

The experiment was carried out in two periods, Period I with an allowance of 20 kgDM/cow/day from 13th to 27th October 1987 and Period II with an allowance of 25 kgDM/cow/day from 21st to 30th November 1987. Milk yield, milk composition, animal liveweight and condition score were measured.

Herbage intake was estimated by sward cutting technique and was 10.0 and 9.0 kgDM/cow/day for supplemented cows, and 11.8 and 12.2 kgDM/cow/day for unsupplemented cows in Periods I and II respectively. Supplemented cows consumed 6.7 kgDM/cow/day concentrates in both periods.

There was a significant increase in milk yield due to concentrate supplementation. The average response was 0.40 kg milk/kg concentrate DM eaten or 0.68 kg milk/kg extra feed DM eaten. Yields of milk constituents were increased except for fat in Period II.

Concentrate feeding had no effect on milk fat and milk lactose concentrations but milk protein concentration was increased. Supplemented cows gained more liveweight and condition score than unsupplemented cows.

Concentrate supplement increased total intakes by 0.65 kgDM/kgDM concentrate eaten and 0.69 MJME/MJME concentrate eaten. Herbage intake was decreased by an average 0.34 kgDM/kgDM concentrate eaten. Residual herbage mass was increased by concentrate supplementation.

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