THE EFFECT OF PROTEIN MEAL SUPPLEMENTATION OF COWS ON THEIR INTAKE OF MINERAL BLOCKS WHEN GRAZING LOW QUALITY PASTURES

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The major problem affecting production of cattle grazing pastures on the NSW North Coast is inadequate crude protein intake (Hennessy et al. 1990) but in addition they have low intakes of phosphorus, calcium, sulphur and some of the essential trace elements. The primary aim of this study was to increase the growth rate of suckled calves grazing sub-tropical pastures by supplementing their dam with cottonseed meal (CSM) and giving them access to high energy supplements through a creep. A secondary aim was to minimise dietary mineral inadequacy through provision of mineral blocks.

In this paper we describe the effect of CSM supplementation of cattle on their intakes of a mineral block. In June 1996, 120 Hereford cows were divided into groups of five or six and allocated to replications within treatments. Half the groups were offered cottonseed meal (CSM) in two meals a week (a daily rate of 1.2 kg/cow) and all the groups were given unrestricted access to mineral blocks† for 105 days. Calving occurred between August and September. The blocks were weighed every seven days to determine group intakes which were expressed on a daily per head basis. Cows supplemented with CSM had lower block (P < 0.01) intakes than non-supplemented cows and there was no significant time trend (Figure 1).

The mean (and s.e.d.) daily intake from the blocks for non-supplemented vs supplemented cows was 178 vs 61 ± 8.50 g/cow. For CSM supplemented cows, requirements for the macro minerals (eg P, Ca) were met from the pasture and CSM, but those for many of the microminerals were not and were provided by the blocks. Only 50% of P and 70% of Ca was met from pasture for non-CSM supplemented cows and the blocks proved to be an acceptable strategy for providing these and the microminerals. Cows given free choice were able apparently to match their mineral intake to requirements by selective intakes of the blocks.

†Rumevite Fermafos Block, Ridley AgriProducts Pty Ltd.