Summary only

AN EFFECT OF PASTURE ON THE SECRETION OF SALIVARY PROTEINS BY THE COW

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The possibility that pasture factors could affect the protein composition of saliva was examined by comparing secretions from cows which had been grazing grass-dominant or clover-dominant pasture.

Twelve cows of varying susceptibility to bloat were used and the trial was designed so that all cows were subjected to both treatments over two periods. A week was allowed between treatment changes before the second sampling was made. The trials were repeated over three bloat seasons. Methods were those described by McIntosh and Cockrem (1977).

Proteins migrating to the position of Band 4 were increased when the cows were grazing the clover pasture while Band 6 was increased on clover and grass in the one trial when the highest degree of bloat was observed on both pastures. For Band 4 the average proportion was correlated with the bloat potency of the pasture as measured by the average bloat grade.

These results indicate that the differences in proportions of Band 4 protein between saliva from cows of high and low susceptibility might be more easily detected when animals are grazed on bloat-potent pasture.

The possible use of these protein proportions as a means for selection of animals of low susceptibility to bloat could be limited to measurements made under conditions which stimulate the production of these proteins.

REFERENCE

McIntosh, J. T.; Cockrem, F. R. M., 1977. *N.Z. Jl agric. Res., 20*: 263.