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COMPARATIVE PRODUCTION OF ROMNEY SHEEP
GRAZED WITH AND WITHOUT ACCESS TO
DRINKING WATER

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An investigation lasting four years involving 40 full-mouth Romney ewes, their daughters and granddaughters was designed to measure drinking water intake and to compare the production of wool, meat and reproduction of ewes with, and without, access to drinking water.

Drinking water intake was generally low, but fluctuated from nil to one peak of 6.0 litres per ewe on one hot windy day and another peak of 4.5 litres per ewe on a calm day when the shade temperature rose to 40.2°C. On both occasions the ewes were being fed below maintenance.

Liveweight remained similar for both groups throughout, with the only significant differences occurring during periods of hot weather and below maintenance feeding. During the second summer of the treatment the aged ewes with access to drinking water lost weight three weeks before the non-water ewes showed any decline. Young sheep grew satisfactorily to have two-tooth mating weights of 67 kg.

Differences in wool production were small and only for two months were they significant.

Lamb production was similar for both groups with the exception of the second year of the aged ewes when, following severe summer/autumn food restriction, the non-water group had an abnormally high 20% of barren ewes.

Observation of animal behaviour showed that the non-water ewes rested more on hot days, grazed more at night, and reacted more readily to rainfall when they grazed ahead of and for longer than the water ewes.

Total body water showed no change but distribution showed a high proportion in the extracellular spaces in the dehydrated ewes.

Histological and haematological examinations revealed no significant differences between treatments. There was a reduced NaCl content in the livers of non-water ewes.

Provided sheep are equated to drinking water deprivation during periods of normally low requirement, they can adjust and produce at satisfactory levels.