

Summary only

GERMINATION AND SEEDLING ESTABLISHMENT STUDIES OF OVERSOWN LUCERNE ON UNCULTIVATED COUNTRY

C. G. JANSON

Winchmore Irrigation Research Station, Ashburton

The talk delivered at the Grassland Conference was a summary of the following two papers which were published recently in the New Zealand *Journal of Agricultural Research*: Lucerne Establishment Studies on Uncultivated Country. I. Germination and seeding establishment. II. A nodulation problem, by C. G. Janson and J. G. White. *N.Z. Jl agric. Res.*, **14**: 572-96. 1971.

For full details of the experiment, this journal should be consulted. A summary of the paper is given below.

Two field trials on contrasting sites in Canterbury were designed to study the effect of two sowing methods and four turf treatments for the introduction of lucerne into uncultivated country. The germination and early seedling survival of the lucerne under these treatments is reported.

The increasing superiority of overdrilling to broadcasting as rainfall decreases is emphasized. Ways to improve the establishment from broadcasting in drier areas are suggested. The results are discussed in relation to the oversowing of lucerne in different climatic and vegetational areas.

DISCUSSION

To a question from Douglas (Ruakura) on the amount of lime used in the trials, Janson replied that no lime had been applied, but that he had used lime-coated seed. Clements (Massey) asked if there were any figures on survival in the following summer, but Janson stated that there were none available as the seedlings were dug up to evaluate nodulation. To simulate overdrilling he had used a hand-pulled hoe making furrows 2 in. wide and 2 in. deep. He did not think the methods of sowing would have had any effect on nodulation. O'Connor (Lincoln College) commented that drilling would be likely to give better nodulation when the bacterial population of culture was low. Bennett (Christchurch) suggested that the percentage of hard seed was important as too much could lead to failure because of slow germination. Janson said he did not know the percentage of hard seed but, of 16 seeds sown/sq. ft, six germinated, three reached the unifoliate stage, and one nodulated. He agreed that anything which would increase establishment rate would be most important.