

sowings in the second year effected approximately a quarter of the cover of the 2 lb. seedings, and in the third year there has been a marked increase. During the first year, however, the turfs formed by the $\frac{1}{4}$ lb. sowings were very weak, and even 9 points in the second year cannot be regarded as a satisfactory cover for this grass. Little gain seems to accrue from the heavier seedings on the average, although individual plots did show to an advantage over the 2 lb. seedings. For general purposes for all secondary burns 2 lb. per acre of brown-top should be included in the mixture.

LOTUS MAJOR.

Lotus major, in contradistinction to white clover, is very slow to establish, and the cover formed for the first two years is very expensive. For the first year practically no feed at all is given by this plant. In the second year it is contributing some 3 points per 100 examined, and in the third year the cover averages out in the neighbourhood of 20 points per 100. In some cases individual plots have averaged over 50 points, while several other plots come within the 30 to 40 points per 100 group (Fig. 3). In these latter plots the cost of the cover works out extremely cheaply in the third year per 100-point cover. In the first year certain plots cost approximately £25 per 100-point cover, but after the third year this cover is in the neighbourhood of a few shillings.

Lotus major seems very amenable to treatment, and hence is very susceptible to variation under the different conditions ruling. Close and continuous grazing, as against intermittent grazing and spelling, has a big influence on the development of the plant. On one area under close and continuous grazing for nearly three years *Lotus major* now covers 7 points, and this series has been top-dressed twice with basic slag, 3 cwt. per acre at each dressing. On the other hand, areas that have not been so closely grazed record an average of 40 points per 100. Certain plots of this series were top-dressed once, and other plots twice. Where no top-dressing has been carried out, but intermittent grazing and spelling practised, *Lotus major* there shows in its third year 14 points per 100.

Lotus major certainly does look like one of the most promising species for the class of hill country we are dealing with in Taranaki (Fig. 4). Its rapid increase during the third year speaks well for its future, and with reasonable handling of the country once this clover is well established it bids fair to remain there and do good work for all time. As far as the quantities per acre are concerned, the $\frac{1}{2}$ lb. sowing per acre would seem to be sufficient. *Lotus major* is one of those species that, owing to the slowness of their establishment, must come on later from small quantities of seed sown, spreading out either vegetatively or by reseeding. Unless a slow-establishing plant can do this it must be eliminated from the mixture sown. An amount of $\frac{1}{2}$ lb. of *Lotus major* per acre should be included in all secondary-growth mixtures where the annual rainfall is over 60 in.

DANTHONIA PILOSA.

Danthonia pilosa is extremely slow to establish, and the cover that this species gives for the first three years is most expensive. To cover the whole ground-surface in the first year, theoretically, would take