



SPRAYING EXPERIMENTS FOR CONTROL

FROM the early days of land settlement the New Zealand grass-grub has been recognised as a most destructive pest of pastures throughout the Dominion. The great development of grassland farming must have favoured the spread of this pest because, though the population may be low, the presence of grass-grub is fairly general throughout the sown grasslands. Of 28 native species, *Odontria zealandica* is the most common and destructive. This article by E. M. Bates, Instructor in Agriculture, Hawera, describes experiments for the control of the pest in south Taranaki.

THE light to medium lands of the Canterbury Plains suffer severely from grass-grub infestations, but outbreaks occur in other parts of New Zealand. As a result of severe attack pastures may be partially or completely destroyed, with consequent lowering of production, causing serious management problems and loss of income to farmers.

Damage to pastures is most severe in the dry autumn period when the grubs are feeding actively. If numerous in the soil, they eat the roots of grasses, especially ryegrass, to such an extent that the turf can be rolled back like a mat. In the South Island, because of cold and dry winter conditions, such pastures usually have to be resown, but in the North Island, where conditions are

warmer and more humid, pastures in the main recover eventually, though in dry weather badly-damaged grass has little chance of rerooting.

Infestation in South Taranaki

Grass-grub is present in pastures throughout south Taranaki, but during the past 10 years an epidemic of the pest has gradually worked south through a block of sandy country from about Lowgarth, through Mangatoki, Matapu, and Te Roti, and then fanned out eastward in the Rotokare-Fraser Road area. The infestation follows sandy types of land away from the heavier, silty loam of the coastal strip below Normanby. A similar soil type to that of the land already damaged by the grub extends through Ararata, Mere Mere, Ohangai, Whakamara, and Matukaroa, and future infestations may occur in this direction.

The centre of infestation has moved about a mile a year, upward of 1000 acres being severely affected each year. Infested farms appear to remain badly affected, according to the severity of attack, for from 3 to 5 years. Experience with the grub on these farms is much the same, except that on the outskirts of the infestation damage is partial.

The droning flight of the beetle in November gives the first intimation of an impending infestation. In the first year of attack patches of damaged