

# Farming Methods on the Danthonia Hills of Hawkes Bay



FOR many years danthonia was the most important pasture plant on much of the hill country of Hawkes Bay. Properties carrying swards consisting chiefly of danthonia were usually large, the labour requirement was relatively low, weeds were not of great importance, and problems of management were different from those of the present. During the past 20 years much of this hill country has been top-dressed, surface sown with clovers, and subjected to entirely different types of management, resulting in very different problems. This article by R. P. Hill, Fields Instructor, Department of Agriculture, Hastings, deals with a danthonia sheep farm and describes the types of pasture and stock carried as well as the management, which in many respects is intermediate between that of heavily-topdressed farms and that of the older type of danthonia runs.

THE soil of the farm is of a type which could reasonably be expected to grow subterranean clover and give a good response to topdressing with phosphates. Situated in the low-rainfall belt and subject to dry conditions but with a mild climate, the property is about 1000 acres in extent and consists of moderately steep to steep hills, practically all unploughable but with small areas of flat land interspersed throughout, estimated at 80 acres. The soil type is Crownthorpe sandy loam topsoil, varying from dark grey to dark brown, formed on pumiceous sandstone, containing beds of stony greywacke conglomerate, with outcrops on the surface in many places. Subsoils are cemented to a hard pan in summer, soften in winter, are fairly fertile, but dry out rapidly. On the flats the sandy loams are heavier and the hard pan makes

drainage difficult in winter. Slipping is rare on the hills, and where it does occur regrassing is very slow.

The hill country is dominantly *Danthonia pilosa* with some *Danthonia semiannularis* on the drier faces. Some browntop, fog, ricegrass, and traces of ratstail are present, but not to a significant extent. Scotch thistles in small numbers are also present, but the country is fairly free from weeds. Suckling clover appears in August-September and is finished by November; otherwise the pasture contains no clover.

The flats, which are used for some cropping, grow perennial ryegrass, white clover, and cocksfoot and are topdressed annually with superphosphate at the rate of 1½ cwt. per acre.

The whole area is subdivided into 18 paddocks, the largest being 100

acres and the smallest 10 acres (on the flats). No attempt has been made to fence the shady from the sunny faces, as the hills are so erratically formed that this is virtually impossible, but the fencing is such that all paddocks have gullies providing protection from cold winds. There are no shelter belts of trees to provide shade from the sun. Drinking water for stock is provided in all paddocks by springs and reticulation from a stream.

The property winters almost 2 ewes to the acre; it carries 700 to 800 hoggets and about 120 head of cattle. Ewe lambs are kept for replacements and no sheep are bought in. Milk wether lambs are sold fat before Christmas, and those not fat are also sold in the yards before Christmas. In view of the facts that the land is light, that it dries out in summer, that there are practically no clovers in the pastures, and that only a fraction of the area is topdressed, it is apparent that only by good stock management could that be accomplished.

## Farming Methods

A system of modified rotational grazing is practised. The ewe flock consists of about 2000 2-, 4-, 6-, and 8-tooth Romney-cross ewes, the 2-tooths being the most numerous and the 8-tooths the least. The flock is approximately as follows:—

Mob No. 1	2-tooths	..	600
Mob No. 2	4-tooths	..	530
Mob No. 3	6-tooths	..	480
Mob No. 4	8-tooths	..	390

2,000