

## GRASSING DOWN ORCHARDS IN AUCKLAND DISTRICT

The soil is a mature peat overlying clay, but the water-table is fairly high and the area has had to be drained.

The grass and clover sward has been mown regularly with a rotary grass cutter and is comparatively free of weeds and is now predominantly clover.

General orchard practice has been improved since the land was grassed, and production from the orchard has steadily improved each year. The ages of the trees vary from 1 year to over 40 years, the majority being mature trees. Sward management has been particularly good, and this combined with improved general management of the orchard and the fact that the soil does not dry out seriously in summer has brought excellent results. It seems doubtful if the improvement in crops could have been equalled had the orchard been kept in cultivation. Most of the trees in this orchard are apples and pears, but a smaller number of stone fruit and citrus trees also do quite well under these conditions.

5. In the Bay of Plenty on a free-draining volcanic ash soil type it has been the practice for a considerable number of years to maintain permanent grass in a number of citrus orchards. The practice has been to cultivate squares round the trees, to mow the grass regularly, and to use the clippings as a mulch under the trees. This appears to be a satisfactory procedure in this district, but it is doubtful if there is any need to cultivate under the trees.

6. A few citrus growers are now trying a different technique, sowing the orchards down with the following seed mixture:—

	<b>Per acre lb.</b>
Perennial ryegrass .. .. .	10
Short-rotation ryegrass .. .. .	5
White clover .. .. .	4
Red clover .. .. .	2
Montgomery red clover .. .. .	2
	23

The whole of the area is sown and no cultivation is done around the trees. The grass is mown regularly with a rotary grass cutter.

In one instance a new lemon block in the Te Puke district was sown down in grass 2 years ago, when the trees had been planted 4 years, and a check block was left in cultivation for comparison. The progress of the trees in the grass area has been so satisfactory that the grower intends to sow down the check area next year.

It is the practice in the Bay of Plenty district to mow grass regularly at intervals of about 10 to 14 days during growth flushes and at longer intervals at other times of the year. In most of the older orchards fertilisers

are applied to the cultivated area round the trees, but where there is no cultivation round the trees the fertilisers are broadcast.

### Grassing-down Trial

Horticultural Instructors have been studying the effects of permanent sward on peaches in a trial in a Huapai orchard. This is on gumland, but the land has a better than average clay loam topsoil overlying heavier clay. It is probable that the water-table is fairly high in this block, but the land is not badly drained.

At the time the trial was laid down the total area of about 1 acre was planted in quinces and several varieties of peaches, all 6 years old. The block was divided into four plots, each having some peach and some quince trees. Three different grass mixtures were laid down in separate plots and

the fourth plot was kept under normal cultivation as a check. The grass mixtures used per acre were:—

#### Plot 1—Typical Sheep Mixture (Omitting Cocksfoot)

	<b>lb.</b>
Perennial ryegrass .. .. .	25
Short-rotation ryegrass .. .. .	5
Crested dogstail .. .. .	3
White clover .. .. .	2
Broad red clover .. .. .	2
Subterranean clover .. .. .	3
	40

#### Plot 2—Typical Mixture with High Proportion of Italian Ryegrass

	<b>lb.</b>
Perennial ryegrass .. .. .	15
Italian ryegrass .. .. .	15
White clover .. .. .	3
	33



A popular method of grassing down in the Bay of Plenty. Mulch has been placed under the trees.