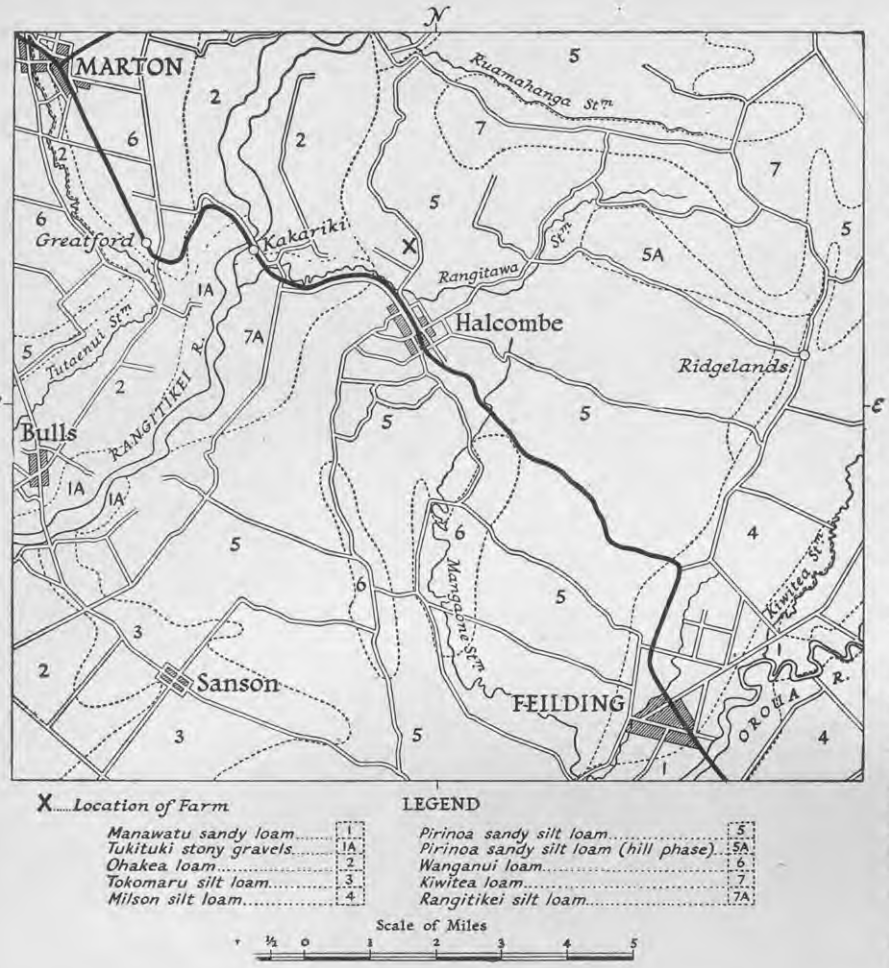

In the bend of the Rangitikei by Tokorangi in the Halcombe district there is a small pocket of a soil type known as Ohakea loam, consisting of 6in. of dark grey loam, 20in. of brownish-yellow clay loam, and 6in. of sandy loam over gravel.

Drainage

All these soils are low in phosphate and have very compact subsoils. Drainage is of the first importance and must be attended to before sowing to good grasses.

Fortunately the subsoil over most of the county is well suited for mole drainage, and the fact that the rolling country provides a natural run-off towards creeks makes this form of drainage comparatively simple. The majority of the mole drains are pulled about 9ft. apart at an angle across the fall of the downs. In the low spots tiles are laid to carry the water away to creeks or main drains, the moles being pulled straight over the top of the tile lines.

Another system, now becoming more general, is the McLeod system of mole draining, the main feature of which is the collecting of several minor moles into major mole drains and allowing two or three majors to run into one outlet, which is tiled. This has the great advantage of reducing the number of outlets and therefore the damage to the land immediately about the outlets. Moreover, the tiling of the outlets reduces the possibility of blocking.

Mole draining is also quite successfully carried out on the flatter areas where the fall is not less than one in 300. These drains tend to silt up at the end of three or four years, but the improvement of pastures coupled with the reduced poaching makes mole draining even at these intervals highly profitable.

Pasture Establishment

In the early days pasture seed was sown after the bush had been felled and burned. At first only limited areas of pastures were sown, most of the cleared land being used for vegetable and grain crops for human consumption. The seeds chiefly sown were cocksfoot, ryegrass, Yorkshire fog, white clover, and trefoil, but under conditions of poor drainage the swards deteriorated fairly quickly and rushes made an appearance, necessitating the breaking up of the pastures, cropping, and resowing.

Today, with improved facilities and methods for draining, pastures will hold the best grasses for 10 years or more, but owing to the common practice of fat lamb raising and the consequent desire for young pastures, most farmers plough their pastures at regular intervals, take out a cash crop, and resow. This is particularly the practice on the rolling country, on which excellent crops of wheat can be grown.

The introduction of long-lived, high-producing strains of grass, however, together with the brisk demand for the seed of these strains, has caused a general tendency towards keeping pastures down for longer periods, and cropping has declined in acreage by about half over the past 10 years.

Manurial Practice

Manurial practice has varied considerably in the past, at least as far as the kind of manure used. Farmers have realised the need for phosphate if pastures are to be kept in maximum production. In the Oroua County generally large quantities of basic slag have been used and ground rock phosphate was also a favourite manure, while blood and bone manure was also applied to pastures in fair quantity.

In later years, however, the practice of using superphosphate in place of the manures mentioned has become general, the value of the quicker, more evenly-balanced returns having made itself plain. Lime also is becoming very much more widely used, and the standard practice for the county is to apply 1 ton of carbonate of lime after ploughing and 5cwt. annually as a topdressing. The superphosphate is generally applied at the rate of 3cwt. with the seed with an annual topdressing of from 2 to 3cwt.

LAND AREAS, CROPS, PASTURES, AND LIVESTOCK, OROUA COUNTY, 1942*

Area in pasture	98,756 acres.
Area under cultivation	3,366 acres.
Sheep population	248,454
Dairy cows in milk	11,424
Other cattle	30,394
Pigs	3,642
No. of holdings	634
Average size of holdings	167 acres.

*A. and P. Statistics, 1942.

Climate

The climate of the Oroua County is mild, the maximum frost recorded being 11 degrees. High winds are common from November to January, and shelter for both stock and homesteads is necessary. The rainfall averages 35.8in. per year, the lowest falls being recorded in December, January, and February. The following table gives the average rainfall for 10 years.