

crops of wheat, oats, and linen flax have been produced in the past, but pastures appear to run out and become browntop dominant unless well limed or fertilised.

Nevertheless browntop is often exploited for seed production, and with prices for seed in the vicinity of 2s. 6d. a pound and a production of 40lb. an acre, without any necessity for labour except at harvest and without need for much capital or working expenditure, there is sometimes little incentive for pasture improvement. But fortunately there is a breed of farmers in South Otago which has the Scottish tradition of good husbandry; pride of the sheep flocks and the necessity for providing adequate winter feed by way of swedes and maintaining good pastures provide the incentive for progress.

There appears to be reasonable scope and ultimate need for greater development on this area by the subdivision of large holdings and the adoption of more intensive farming methods, though the long distances from the railway and high transport costs at present often preclude the large applications of lime essential for improvement.

THE CLUTHA DELTA

The Clutha River, dividing into two branches near its mouth, separates three almost equal areas of rich alluvial land. The northern portion, commonly known as the Matau, is a relatively-undrained region of 7000 acres lying between the Kaitangata Hills and the Clutha River and embracing the large shallow Lake Tuakitoto.

The island of Inch Clutha, lying between the Matau and Kau branches of the river, contains some of the richest soil in the Dominion. Enormous crops of cereals and roots are grown on the island, and farming there has reached a very high degree of efficiency. The Inch Clutha is noted for beef production, many cattle being carried on the large crops of swedes each winter. This region also produces most of the potatoes for the Dunedin market.

Across the river, on the south, is the Otanomomo, where dairying is the chief occupation. This plain was formerly a flax swamp, and the one remaining large flax plantation in Otago is located here.

These three areas are difficult to drain and parts are occasionally subjected to flooding. The drainage is administered by the Lower Clutha River Trust. An adequate drainage scheme on the Matau, which would involve pumping, would bring a good area into production, and probably enable dairying to be carried out on what is now Lake Tuakitoto.

THE CATLINS

To the south of the Clutha Delta and occupying a large area of the south-east coastal belt is the bush country known as the Catlins. This consists of small, fairly fertile valleys surrounded by scrub- and bush-clad hills. Generally, the climate is wet, cool, and dull, the rainfall being high (40 to 45in.) for Otago. The bush is chiefly kamahi and birch. As the result of leaching under this type of forest the soil is inclined to be acid and low in fertility. Where the bush was originally broadleaf and black pine the land is more fertile. Apart from the valleys, where settlement has been stabilised and the plough has been used, there does not seem any advantage in settling the unploughable country.

On the eastern boundary of the Catlins there is a tract which has been farmed since about 1865; the land is easier and large areas were originally ploughed and cropped with cereals, which were shipped north via Port Molyneux when that port was thriving. Today in this block of 17,000 acres there are 26 empty farmhouses, indicating the failure of many of the original settlers to farm this land.

No doubt the intensive cropping of this region in the early days has caused serious depletion of the soil. Probably the cultivated land can be built up by good farming methods, but there does not appear much hope for the unploughable areas which have reverted to scrub. On the foothills in South Otago manuka scrub invasion on unploughable land is a serious menace and cannot be easily overcome.

WEST OTAGO

To the west of the Blue Mountains is the valley of the Upper Pomahaka, a district known locally as West Otago, though geographically that name should be given to the coastal area near Milford Sound. This Upper Pomahaka Valley is one of the best agricultural districts of the south. The farmers there are renowned for the thoroughness of their cultivation, the ample crops they produce, and the quality of their livestock. At the annual ram and ewe fair at Heriot and the show at Kelso are to be seen the biggest-framed Romneys in the south. From the extensive rolling country extending from Tapanui to Roxburgh and away over the border into Southland comes a large number of flock replacements which are eagerly sought by fat lamb farmers of the plains of Otago and Southland.

On the easier land in West Otago fat lamb production, together with the occasional growing of cereal and seed crops, is the main type of farming.

This country is considered ideal for the production of oats, particularly for milling, and heavy crops are frequently grown.

Future of Province

As in other parts of New Zealand, greater agricultural production in Otago is likely to be obtained with closer settlement by the subdivision of large holdings. But many Otago farmers are generally efficient in large-scale management and, especially where mechanisation is involved, the large farm may not necessarily be less productive than several small units on the same area. There are, in fact, several outstanding instances of efficient large-scale farming where modern methods and the use of labour-saving machinery are accompanied by high production. Certain types of soil and farming methods, however, lend themselves to the smaller holding, and the extension of irrigation will call for closer settlement.

Summarising these developments

in Otago: There is a possibility of largely-increased production with the irrigation of about 110,000 additional acres in the Maniototo and Upper Clutha districts. Already a process of closer settlement is discernible in the coastal district of North Otago which is suitable for more intensive farming and the production of early vegetables, poultry, specialised crops, and small seeds. By the greater application of fertilisers and lime on about 200 square miles of the Clutha Downs the present carrying capacity of that area could be increased considerably. The expansion in these regions would still be in sheep products, cereal crops, and small seeds. Additional drainage schemes on the Taieri Plain and the Matau and Otanomomo districts of the Clutha Delta would enable dairying to be carried out on at least 5000 acres which are now used for spasmodic cattle grazing.

Apart from these developments there is scope for greatly-increased returns in other districts of Otago by the greater use of fertilisers and lime and the better utilisation of pasture growth. There is also need for research on problems affecting the large area of second- and third-class land on the coastal belt.

But hand in hand with these developments on the lowlands, the deterioration which has been proceeding on the high country, especially on the low-rainfall area, should receive attention. The post-war position of wool will have an important bearing on this problem as well as on the prosperity of Otago as a whole.