

A stop-bank had been erected along the river by the Wairau River Board which largely prevented flooding from that source, but the problem was to protect the whole area, which was still subject to severe and frequent flooding by the Pukaka Stream. Small tracts of the higher portion were previously cultivated, but the flood risk was always present, and crops had to be put in late and harvested early. The balance of the area was in rough feed, rushes, flax, and dense raupo, and was used only for grazing a few head of cattle and horses.

It was decided to construct three miles of stop-banks about 7 ft. high, containing in all about 60,000 cubic yards of spoil, and, in addition, about three miles of main drain and many miles of smaller subsidiary drains to cope with surface water and seepage.

During the year under review a total of 110 chains of stop-banks and 283 chains of drains were constructed.

In addition, 24 chains of old drains were widened and deepened and six concrete culverts, with flood-gates, were installed.

Owing to the fact that the country is so low-lying, gravitational drainage cannot be relied upon solely, and to deal with internal water during flood times a concrete cylinder-type flood-pump, with an output of 120,000 gallons per hour with a 9 ft. lift, was installed on the eastern area, the power being meantime supplied by a Fordson tractor. It is proposed to replace this with a 15 h.p. electric motor which will necessitate the extension of the Power Board's high-tension line for a distance of 60 chains, and also the provision of 30 chains of service line from the road to the pump. It is estimated that, during a period of four months last year, approximately 100,000,000 gallons of water were pumped over the bank.

The banking and drainage undertaking has freed the lands from all but very exceptional floods, and has converted the area into rich agricultural land. It was first intended that the raupo should be mowed and burned, but experiments have shown that the most satisfactory method of disposal is to crush with a tractor and plough in, the work being followed up by disking and cultivation.

During the past year 80 acres of heavy rushes were grubbed and burned and 60 acres of green raupo were crushed. These areas were then turned over with swamp ploughs and cultivated ready for oats and green peas. In addition to this new country, an area of 30 acres of old cultivation was ploughed and prepared for peas. A total area of 110 acres of peas and 60 acres of oats and barley were sown. The total yield of peas was 3,280 bushels, and proved a payable crop. As an indication of the exceptional crop of peas it is mentioned that yields of up to 60 bushels per acre have been harvested.

With the assistance of the Unemployment Board it has been possible to employ during the summer months twenty-eight men, whose dependants numbered seventy-six. The scheme is being developed under the supervision of officers of the Lands and Survey Department, Blenheim, who report that the Natives take a very live interest in their work, and their advice on many points has been of great assistance. The Department was fortunate in securing the services of Mr. John MacDonald, sen., of Wairau, as foreman of the banking operations, as he has had considerable experience in carrying out similar work under contract for the Wairau River Board.

The outlook for the coming season is promising. The completion of the stop-bank work is assured, and this will mean that the whole area will be protected from normal floods before the winter sets in. When the stop-banks are finished the extra labour will be available for completion of the internal drainage system, and will enable the clearing and grubbing to be finished in good time. This will permit of an early start being made with the ploughing and general cultivation for next season's crops.

Contracts for 285 acres of peas have already been arranged with different firms at satisfactory prices. Based on last year's returns, it is estimated that the crop should net at least 30 bushels per acre after allowing for seed.

ORAKA AND KAWHAKAPUTAPUTA.

The Oraka and Kawhakaputaputa development schemes, known collectively as the Southland scheme, comprise a total area of 2,512 acres, situated near Colac Bay, within easy reach of the Riverton-Tuatapere Railway line. The area under development is as follows:—

	Acres.	Holdings.
Oraka	781	9
Kawhakaputaputa	1,092	9
Isolated sections	366	4
Total	2,239	22

Prior to the end of 1930, when active development commenced, the greater portion of these lands were covered in standing bush or scrub. A few of the owners were occupying sections of open land and were milking on about 350 acres of poor pasture infested with ragwort and overrun with rabbits. The holdings were not fenced, and stock roamed at large through wide areas of forest country. It was necessary to first concentrate upon felling and burning the bush, clearing scrub, grassing, and erection of boundary and subdivisional fences.

During the period from inception until the 31st March, 1934, the sum of £10,448 was expended on development-works—the principal items being bushfelling, clearing, draining, fencing, erection of buildings, purchase of live-stock and farm implements. Receipts during the same period amounted to £1,459, resulting in a net expenditure of £8,989, which, together with interest (£1,329), brought the total up to £10,318.