

The stock on all blocks have kept in excellent health and have made very satisfactory live-weight gains. An important event in the history of pakihi reclamation at Westport was the establishment in the spring of the first dairy-farm unit on a portion of the Buller Domain which was sown to pasture in the autumn of 1936.

Pastures.—The very wet spring and early summer on the West Coast adversely affected the growth of both pasture and hay crops. The rainfall for November and December was extraordinarily high, resulting in almost continuous saturation of the soil with water for several weeks. On the advent of drier weather in January and February great improvement in pasture growth resulted.

Despite the wet weather the pastures for the most part have come through wonderfully well. On the older sowing the sward has become denser and growth of rush and umbrella fern has been arrested. Some of the more recent sowings have done particularly well, the growth of clover being outstanding. The spring sowings, 1937, on Mikkelsen's block and the autumn sowings, 1938, on Hateley's and Kelpe's blocks were equal to any result so far obtained in pasture sowings on pakihi land at Westport.

Hay Crops.—In order to make suitable provision for winter feed approximately 100 acres of pasture were shut up for hay. The pastures received a top-dressing of a complete fertilizer towards the end of October or early in November. Owing to the wet weather, growth of the hay crops was slow and the yields were considerably smaller than those of the previous season. Frequent rains during January interfered with harvesting operations, and on this account rather more ensilage and less hay was made than was planned. February and March were more suitable for haymaking.

In all, some 60 acres were cut for hay, averaging about $1\frac{1}{2}$ tons per acre, and 40 acres were cut for ensilage, averaging about $3\frac{1}{2}$ tons per acre. These quantities of hay and ensilage should provide the necessary supplementary feed for the four hundred head of stock which will be grazed during the winter.

Stock.—All classes of stock, comprising heifers, steers, and bullocks, have done extremely well. No ailment has been experienced, and the animals have made satisfactory gains in live-weight. Last winter two hundred head of stock were carried on 650 acres of established pasture. The autumn was favourable to pasture growth, making it unnecessary to feed hay until the beginning of July. During July, August, and September hay was fed out at the rate of approximately 5 lb. per head per day. A line of twenty bullocks in prime condition was disposed of to the local butcher at a satisfactory price.

During the coming winter some 1,100 acres of pasture will be available for grazing, and arrangements have been completed for increasing the number of stock to four hundred.

Use of Licks.—In a previous report mention has been made of the successful use of cobalt drenches for calves on pakihi pastures. Calves affected with typical bush sickness were cured by the use of a weekly cobalt drench. In order to safeguard the health of stock from cobalt deficiency, a lick containing equal quantities of steamed bonemeal, dairy salt, and Nelson soil plus 16 oz. of cobalt chloride per ton of prepared lick was given last winter. The stock ate this lick greedily, consuming an average of 1 lb. per head per week over a recorded period of twenty-six weeks. The consumption of lick was much greater than was anticipated, the cobalt supplement being as high as 50 mg. per week per head. The cobalt supplement could no doubt be greatly reduced, but nevertheless excellent results for all classes of stock were obtained.

First Dairy-farm Unit.—With a view to testing a typical area of pakihi pasture under farm conditions, an area of 100 acres comprising both dry and rather wet fields was allotted as a dairy-farm unit. Arrangements were made for the erection of a cottage, milk-shed, and pig-pens with all the necessary plant to make the farm self-contained. The farm was stocked with thirty-five heifers reared on the "development," and thirty-four of these came into profit during October and November. Records of milk and butterfat production and of all costs in connection with the operation of the farm have been kept. So far the heifers have done reasonably well and have averaged about 20 lb. butterfat per head per month. The cream has been of good quality, being graded 93 choice at the factory. It is anticipated that the herd will average 140 lb. to 150 lb. butterfat per head for the season. Yields should be considerably higher next year. At the present time the pastures on the dairy-farm unit are looking very well, and the shelter-trees are making good growth.

Supplementary Fodder Crops.—Turnips, swedes, chou moulrier, mangels, oats, and maize are being tested as supplementary fodder crops on the sandy flats facing Utopia Road. The soil on this part of the property is a medium sand highly deficient in lime and phosphate. The soil for the most part is well drained and lends itself to root-crops. So far turnips are doing extremely well. Swedes, likewise, made a good start, but weed-growth is now checking the development of the crop.

Maize, chou moulrier, and mangels have not given good results. Wet weather and lack of cultivation were probably the most important factors militating against growth of the crops. It is also doubtful whether soil fertility is sufficiently high to give very good yields.

OTAGO LAND DISTRICT.

Papanui Farm Settlement (1,082 Acres).

This settlement is situated on the Otago Peninsula overlooking Papanui Inlet, about sixteen miles from Dunedin.

The property was purchased in November, 1933, from Mr. W. D. Allan and subdivided into nine sections. Development was started under the control of the Public Works Department, using unemployed labour, but in January, 1935, the camp was disbanded and the work continued by the prospective settlers working as a gang under the supervision of the Department's Field Inspector. In September, 1936, the settlers were allotted their sections, and they continued to work on their own until April, 1937, when it was decided that the block would benefit if additional land was brought in by the men working on wages. One settler who had spent a considerable amount of his own money on his section was allowed to continue on his own, and he is making good progress.

During the year 30 acres of standing bush was felled and approximately 75 acres of fallen bush was logged up. In addition, 40 acres of second growth was cut. A total area of 600 acres was top-dressed with basic slag, and the pasture responded well. Thirty acres was ploughed and sown in new grass, 40 tons of hay was cut, and this, together with 10 acres of turnips, will be used to fatten bullocks during the coming winter.

A small amount of new fencing was erected, and the existing fences were kept in good repair.

Stock carried: 1,103 ewes, 560 lambs, 9 rams, 29 dairy cows, 10 dairy heifers, 70 steers, 32 fat heifers, 11 bullocks, 6 calves, 1 bull, 8 horses, and 69 pigs.

The revenue for the year totals £5,061 4s. 10d., made up as follows:—

	£	s.	d.
Thirty-two bales wool	321	17	10
Cattle sales: 358 head	3,736	18	0
Sheep: 979 head	942	10	0
Pigs: 59 head	59	19	0
	£5,061	4	10

Number of men employed: Eight.