

Although dry conditions between December and February last restricted the growth of the later varieties of fruit, good rains in the latter part of February rectified the position, and present indications are that about nine thousand cases should be produced. This will be an increase of about one thousand cases on the previous season's yield.

The Molesworth-Tarndale Station continues to show definite, although slow, signs of improvement under the Department's policy of restricting grazing to cattle and continuing with the eradication of rabbits.

The following report has been received from the Department of Scientific and Industrial Research in connection with the Molesworth-Tarndale Station:—

"There are two types of soil: the grey-brown loams and the yellow-brown, so named because of the colour of the subsoil. The grey-brown loams are located in the low-rainfall belt and cover the lower slopes of the Awatere Valley from Upeot to near the head of the valley, and extend down the Acheron for about eight miles. The width of the belt is about seven miles. The vegetation is mainly tussock-grassland, with hard tussock dominant.

"The yellow-brown loams, located in a higher-rainfall belt, occur in the high country of the Awatere and Acheron Valleys, and occupy practically all of the Tarndale Run. The tussock-grassland shows a higher proportion of silver tussock and snow-grass. On the yellow-brown loams soil erosion is not serious except at high altitudes, where scree slopes occur. The tussock cover is still good in the main, though on some slopes, especially sunny faces, there is a greater or less amount of depletion. At higher altitudes the scree slopes in places have extended downwards at the expense of the tussock cover. There is evidence of improvement in the vegetative cover between tussocks since the area was shut up.

"Serious depletion and erosion has taken place on the grey-brown loams, and it is on this type of soil especially that there is need to concentrate attention for experimental work to control and prevent erosion and to re-establish a good vegetative cover. On the grey-brown loams three kinds of soil loss may be seen: (1) on scree slopes containing a good deal of soil and subsoil; (2) on scree slopes containing much subsoil; (3) on bare slopes, exposing much hard rock and loose scree without soil and subsoil.

"Type 3 is located on the higher levels of the grey-brown soils, carries little vegetation of moment, and presents a very difficult problem for regeneration of a cover. Observational work is desirable, but for the present may be disregarded as far as major experiments are concerned. Types 1 and 2 are found almost exclusively on sunny slopes, and it is to these that experimental work should be at first confined. No. 1 shows a good growth of sorrel, whereas No. 2 is practically all now carrying little else but scab-weed, with some incoming of tussock on the mats of scab-weed.

"An area was selected embracing types 1 and 2, on a slope 30 chains to 40 chains south-west of Molesworth Homestead, where it is proposed to conduct an experiment in conjunction with the Department of Lands and Survey. A detailed survey of this area will be made, and plots established for the various trials in regeneration. A rabbit-proof fence will be necessary, so that trials with and without rabbit-interference can be made. A full scheme will be prepared if it is found possible to proceed with the suggested experiments.

"The river-flats visited were in very good condition, and could carry more cattle without danger to the depleted areas. On the shadier slopes above the valley bottoms there is evidence of improvement since the Molesworth Run was shut up. Especially noticeable was the increase of blue-grass, which is coming in between the tussocks, and in places already making a fairly close cover where the hard and silver tussocks are dead or decadent."

*Control: Commissioner of Crown Lands, Nelson.*—Maintenance work only is being continued on the two blocks—Pakihi and Organ's—in this district. The blocks together contain 2,292 acres.

Last year it was decided to cease development on the Pakihi Block. The whole area is utilized for raising fat cattle, which can all be absorbed by the local market. Some small areas of grazing-land were made available to the public and were temporarily leased for three years.

*Control: Commissioner of Crown Lands, Canterbury.*—Four blocks, containing 12,447 acres, are being farmed or developed under the Small Farms Act, and six blocks, containing 4,041 acres, under the Land Laws Amendment Act, 1929. A small area of 148 acres was added to one of the latter blocks during the year.

Weather conditions throughout the year have been generally favourable. The winter, though mild, was rather dry, and feed was short on some blocks in the early spring. Since then rainfall has been above normal and growth has been well maintained. Rape has grown well, and turnip crops are promising.

Little development has been undertaken during the year owing to the shortage of labour, and activities have been confined mainly to seasonal operations. All lambs were fattened, and wool revenue shows an upward tendency on most blocks. Ewe replacements bred on the blocks were available this year and purchases were restricted to a minimum. On the lighter plains country Romney rams are this year being replaced with Southdowns.

Wheat yields on the lighter land were disappointing, but were satisfactory on the heavier land. An area of approximately 200 acres is in view for sowing in the coming autumn.

Grass sown last year on the heavier land is well established and stock numbers have increased.

*Control: Commissioner of Crown Lands, Dunedin.*—In the Otago District the Papanui Block, of 1,082 acres, is being developed under the small Farms Act, and the Arelif Block, of 4,804 acres, under the Land Laws Amendment Act, 1929.