

have been carried out for the control of black-spot on pears, particulars of which it is intended to publish in the *Journal*.

The preparation and planting-out of four new orchard blocks was commenced, but the work has been greatly delayed by inclement weather. This is being pushed on as the conditions improve. A power tractor has been procured for the station, and is proving a great success in working this heavy class of land.

Trials carried out with some early varieties of potatoes were not a success, owing chiefly to the excessive wet rotting the seed.

Owing to a break in the machinery and not being able to procure duplicates no wattle-bark was stripped last spring. Repairs have now been effected, and if labour is available the usual quantity can be stripped next season.

The grape crop has been the best recorded at the station, a good spell of fine weather allowing the fruit to set, with the result that there was an excellent vintage. The new concrete fermenting-vats have been a complete success for the quick handling of the grapes. Apart from the extra capacity afforded the wine seemed to ferment quicker, the temperature being more even than in the wooden vats. There has been an excellent demand for the wines made at the station, the quantity sold being greatly in excess of previous years' business.

Tauranga.

Considerable improvements and extensions have been carried out at this station during the year. The year was the wettest on record in Tauranga, 74·68 in. of rain falling. This, of course, interfered to a large extent with the work, the extraordinary weed-growth requiring constant attention.

An area has been prepared for the raising of nursery stock; the land has been ploughed, limed, and sown down in white lupin, which will be turned under next spring; other cover-crops will be grown during the summer, so that the land will be in good heart for planting next autumn.

A number of varieties of apples which had proved unsuitable for the district were reworked with better commercial sorts. Seedlings of lemons, oranges, and limes were raised for stocks on which to work lemons, which do exceedingly well in the Tauranga district.

Considerable attention has been given to the cultivation of the sweet potato or kumara, twenty varieties being under test. A report cannot be made until the tubers are lifted. Some of the sorts imported from the United States are very promising, and sets should be available for distribution next planting season. Tests have also been continued with different varieties of maize, but as the season was such an unfavourable one there were indications that the cobs would not be well filled.

The lucerne has again proved to be a valuable crop, four cuttings having been made. The plot requires careful attention in keeping it clear of weed-growth in the spring, especially if the season is a wet one. A grass-garden has been commenced, containing sixty-three plots of grasses and clovers, all plots being clearly labelled. This should provide valuable information to interested persons in the district.

Some five thousand plants of *Pinus radiata* have been planted on the rough slopes, and a further quantity will be put in during the coming winter.

The apiary at the station is now well established, thirty colonies of bees having been worked up.

During the season demonstrations in pruning, grafting, and budding were given by the Manager to the teachers and scholars of the local high school.

Arataki.

The usual work of ploughing, cultivating, pruning, spraying, &c., has been carried out. Some reorganization in the apple-orchard was taken in hand during the year. The purpose in view was to convert the trees to four of each variety instead of two. This involved heading down and reworking a large number of trees. The number of varieties grown was thus materially reduced by eliminating those that had been proved unsuitable to the locality. An additional 3 acres has been planted with apple-trees for demonstration purposes.

During the winter months demonstrations of ploughing, pruning, and power spraying were held. Each demonstration was of a competitive nature, and excited a large amount of interest.

On account of the unfavourable season experienced the fruit crop, with the exception of peaches, was a very light one. Grapes, however, were a good crop throughout. Mildew gave some trouble owing to wet and changeable weather, but was subdued with very little loss of fruit.

A series of spraying tests on a large and comprehensive scale were conducted during the year in co-operation with the Hawke's Bay Fruitgrowers' Association, the members of which lent every assistance and showed great interest in the operations. Reports on these trials have been published in the *Journal*.

Hops.

According to figures supplied by the Customs Department, 4,449 cwt. of hops, valued at £17,708, were exported during the year. The following figures show the quantity and value of hops exported from the Dominion during the last five years ending 31st March: 1913, 2,340 cwt., value £20,698; 1914, 5,152 cwt., value £26,430; 1915, 3,216 cwt., value £20,786; 1916, 4,425 cwt., value £17,742; 1917, 4,449 cwt., value £17,708.