

with their orchard-inspection duties, &c. These demonstrations are most useful and highly popular, and the requests for such are increasing rapidly each year.

Apple Grading and Packing Classes.

These classes are now being established on a sound footing and are well patronized, a number of candidates having already qualified for the departmental certificate in grading and packing. This is an excellent means of demonstrating up-to-date methods in the grading and packing of fruit, two of the most important factors to be observed in building up an export trade.

Co-operative Fruit-testing Plots.

An additional six of these plots were planted during the year. This makes a total of sixty-five of these experimental areas (three of which have been abandoned) that have now been established in various localities throughout the Dominion. Besides demonstrating what varieties of fruit are suitable for different districts, these plots are also very useful for carrying out practical demonstrations in up-to-date methods of pruning, spraying, cultivation, &c.

Central Packing-sheds and Cool Stores.

As mentioned in my last report, the establishment of central packing-sheds is a matter of urgent necessity, particularly in those districts where large quantities of fruit are handled and exported.

Facilities for the cool storage of fruit are receiving more attention. A store with a capacity of 24,000 cases is now in course of erection at Motueka Wharf, and another capable of accommodating 10,000 cases has been erected at Nelson Port. Several similar cool stores have also been erected privately. There is no doubt that all the cool stores will be taxed to their utmost this year, owing to the export of fruit being interfered with through the disorganization of shipping arrangements caused by the war.

Testing New Spraying-compounds.

Testing new brands of spraying-compounds that have recently come on to the market in the Dominion has been continued during the past season. These tests are for the purpose of ascertaining the reliability of these specifics in the control of orchard pests and diseases. The Department is thus able to advise fruitgrowers what brands give the best results. It is usual to give any new specific a two-years trial before arriving at a definite conclusion regarding its efficiency or otherwise. Particulars of these tests, when complete, are published in the Department's *Journal* for the information of fruitgrowers and others.

Orchard Pests and Diseases.

As already mentioned, fungus diseases were not so prevalent as usual. This was due to the continued dry weather experienced right through the fruiting season. The weather was, however, favourable to the spread of insect pests such as codlin-moth, leaf roller caterpillar, red-mite, &c., and extra spraying had to be resorted to to keep these pests in check.

An unusual disease appeared in several districts during last season. Investigation showed that two fungus diseases were present on the affected trees. It is considered that the heavy rain which followed a very dry period resulted in impairing the vitality of the trees to such an extent that they were unable to stand much water, either on the surface or incorporated in the soil. Further investigation is being carried out.

A continued improvement is noticeable in the methods adopted for the control of orchard diseases. There are, however, still a number, chiefly small growers, who will not take the trouble to look after their trees, and as a consequence are a source of danger to those who keep their orchards clean. A number of persons who would not comply with the provisions of the Orchard and Garden Diseases Act were prosecuted during the year.

HORTICULTURAL STATIONS.

The control of the horticultural stations at Te Kauwhata, Arataki, and Tauranga was handed over to this Division as from the 1st September, 1915. A full report has been furnished on the general condition of these stations, together with recommendations as to their future development.

Te Kauwhata Horticultural Station.

The main work at this station during the past year has been the continuation of the preparation and planting-out of small fruit-farms for disposal to settlers. The wet and unseasonable spring militated greatly against all outdoor work.

There was no new work undertaken in the shape of experiments, &c., as it was necessary to reduce expenditure to a minimum owing to the war. Tests were carried out to determine the action of artificial manures on new land, and further trials were made with different varieties of potatoes.

During the season approximately 140 tons of wattle-bark were crushed and disposed of, and a further 270 tons stripped and harvested. There is every indication that local bark will be in good demand and prices consequently higher this year.

The wines manufactured at this station are now becoming well known, and the demand is increasing rapidly each year. The quantity sold last year was nearly twice as much as that disposed of in the previous year. A plant for the making of unfermented wine has been installed and a small quantity made.