

PUBLICATIONS.

The following papers were published during the year :—

- (1) "Effect of Perspiration on Leather." *N.Z. Jour. Sci. & Tech.* (1935), 17, 412. (Also printed in *J.A.L.C.A.* (1936), 31, 357, and *Jour. Fed. Curriers* (1937).)
- (2) "Colour in Sole-leather." *N.Z. Jour. Sci. & Tech.* (1936), 18, 1. (Also printed in *J.I.S.L.T.C.* (1936), 20, 307.)
- (3) "Estimation of Water-solubles in Sole Leather." *J.I.S.L.T.C.* (1936), 20, 409.
- (4) "The Storage of Pickled Pelts." *N.Z. Jour. Sci. & Tech.* (1936), 18, 488. (Also printed in *J.A.L.C.A.* (1936), 31, 314.)
- (5) "Research on Processing N.Z. Pelts." *Jour. Fed. Curriers* (1935), 16, 234.
- (6) "Water-absorption of Sole Leather." *N.Z. Jour. Sci. & Tech.* (1937), 18, 824. (Also printed in *J.I.S.L.T.C.* (1937), 21, 12.)
- (7) "Seasonal Variations in Lamb-skins, with Special Reference to the Sudoriferous Glands." *N.Z. Jour. Sci. & Tech.* (1936), 18, 466. (Also printed in *J.I.S.L.T.C.* (1937), 21, 64.)

FRUIT RESEARCH.

Advisory Committee.—Mr. A. H. Cockayne (Chairman), Messrs. T. Rigg, J. Corder, H. E. Stephens, A. M. Robertson, W. Benzie, T. C. Brash, R. Paynter, A. Osborne, J. A. Campbell, F. S. Pope, F. R. Callaghan, Dr. G. H. Cunningham, W. M. Hamilton (Secretary).

INTRODUCTION.

Owing to its extensive nature, fruit research is carried out by a group of institutions working in co-ordination. These comprise the Plant Research Bureau, Cawthron Institute, the Horticulture Division of the Department of Agriculture, and the Department of Scientific and Industrial Research.

In certain phases of the investigations the Dominion Laboratory, the Soil Survey Division, and the Meteorological Office also participate.

Full use is made of the Imperial Bureau of Fruit Production, East Malling Fruit Research Station, and the Low Temperature Research Station, Cambridge, particularly in connection with cold storage and transport problems, but also in relation to other problems relating to fruit varieties, propagation, nutrition, and general management.

In view of the importance of storage and transport problems, these have continued to be dealt with by the Fruit Cold Storage Research Committee, on which also a combination of interests are represented.

The field work involved in the fruit research programme is carried out at—(1) the Research Orchard of 72 acres at Appleby, Nelson, 20 acres of which are planted in full-bearing trees; (2) the Cawthron Institute Orchards, Nelson; (3) the Tiritea area, Palmerston North; (4) the Hawke's Bay Fruitgrowers' Association Orchard, Havelock North; (5) in a series of selected orchards distributed through the various fruitgrowing districts of the Dominion where investigations are conducted in co-operation with orchardists.

With the establishment of the Plant Diseases Division in Auckland a new trial area will be formed at Mount Albert, and for a number of years use will be made of an orchard which has recently been leased at Huapai.

The whole of the investigations have been greatly facilitated by the helpful co-operation received from the New Zealand Fruit-export Control Board, the New Zealand Fruitgrowers' Federation, and the shipping companies operating in New Zealand waters.

During the year the presence of Mr. L. W. Tiller, Assistant Manager of the Appleby Research Orchard, on extended leave in England has enabled a close contact to be effected between research work proceeding in Great Britain and that in New Zealand.

RESEARCH ORCHARD, APPLEBY.

The whole of the planted area of the orchard is in full utilization for the conduct of manurial, spray, and cultural trials, and is available for the field studies arranged by any of the workers engaged on various researches. Very detailed records of tree growth, yield, leafage, blossoms, &c., are regularly made so that the closest watch may be maintained upon any changes which appear. All the trial areas have been arranged in accordance with the best methods of experimental layout, and are designed to reduce experimental error to a minimum.

Following the heavy crop of the 1935-36 season, when 10,205 cases were harvested, 6,826 of which were packed for export, a light crop was expected for 1936-37, but it is satisfactory to report that the crop will be better than anticipated, and it is expected that exports will total 5,000 cases for the season. Up to the 31st March, 1937, 3,125 cases were packed for export.

Weather conditions have been very variable during the growing season, though the rainfall (40.40 in.) for the year ending December, 1936, was not nearly as high as in the previous year, when 54.13 in. were recorded.

In so far as insect pests are concerned, the season was not a difficult one. The most remarkable feature was the comparatively small amount of leaf-roller infection, in contrast to the previous season when the prevalence of this pest caused very considerable losses. Conditions on the local markets were much improved. Fruit was disposed of to much better advantage and rejects were inconsiderable. This is accounted for to some extent by the lighter crop in the district generally and the losses sustained by growers in the Hastings district through a heavy frost.