

The wheat-production surveys which were begun in the 1945-46 season to collect data on wheat-production practices have been continued in the two areas selected, (a) Templeton, Yaldhurst, Prebbleton, and Lincoln districts, and (b) Ashburton district, and an analysis has been made of the results to date. This showed that for the area near Christchurch the most important and consistent factor over the three seasons was the history of the field immediately before the wheat crop, differences of up to 38 bushels per acre being obtained between crops after another cereal crop and crops after a fallow. Autumn-sown crops were never poorer than spring-sown, being from 0 bushels to 23 bushels per acre better according to the seasonal conditions in the autumn. The varieties considered, Cross 7 and Tuscan types, showed a net result of no difference over the three seasons. The soil groups, which really differed only in moisture-retaining capacity, showed differences of zero in a good year and 20 bushels per acre in a dry year. The mean yields of all fields for the three years were 34, 39, and 43 bushels per acre.

In the Ashburton area the results, available for one year only, showed differences of a much smaller order. The largest was between crops in fields of different histories. Crops after cereals gave mean yields of 8 bushels per acre more than crops out of grass, contrary to the Christchurch results. This seems to be associated with the extra amount of cultivation required to eradicate the weeds present in old pastures. No other factors produced a significant effect. The mean yield for all fields in the district was 33.5 bushels per acre.

It is yet too soon to draw any definite conclusions, but after the work has been continued in both areas for a further period it should be possible to provide information of considerable value to farmers growing wheat in the areas.

FARM MANAGEMENT AND ECONOMICS

Because of shortage of staff the Farm Management and Economics Section had to confine its activities to cost-of-production studies and minor investigations.

During the year the Statistical Section analysed the data for five cost-of-production surveys—namely, early potatoes, onions, tomatoes, raspberries, and pig-meat. In addition, the report of the apple and pear cost survey (1947) was finalized and a revision made of the main-crop-potato costing (1947) survey. In addition to the apple and pear cost survey, a comprehensive analysis of apple and pear crop statistics, collected by the Horticulture Division, was completed. A tractor-operating cost survey carried out in Canterbury was analysed and summarized by the Statistical Section. The regular compiling work on butterfat-production, live-stock slaughtering statistics, &c., was carried on, and other statistical work previously carried out by the Fields Division was taken over by the Statistical Section.

NASSELLA TUSOCK

The Nassella Tussock Boards operating in North Canterbury and Marlborough continued their work in controlling nassella tussock. Up to the present these control measures have involved inspection of properties, the contacting of farmers for individual control purposes, the grubbing of nassella by a mobile gang on certain heavily-infested properties, and the provision of subsidies for tree-planting on badly-infested areas.

It is intended that some properties which are very heavily infested with the weed should be wholly planted in trees either by the Boards or by the State Forest Service. An amendment to the Nassella Tussock Act passed during the year enabled the acquisition of such land by the Crown for tree-planting. Two areas, one in each Board's territory, have so far been acquired, and will be planted in the near future.

FARMERS' FIELD COMPETITIONS

The Division assisted in the organization and judging of farmers' field competitions in all Field Superintendents' districts. Pasture competitions are now becoming more important than annual crop competitions, and hay and silage competitions are being revived. Field-days in connection with the judging of the competitions have been well attended.