### FIELDS DIVISION.

#### REPORT OF R. B. TENNENT, DIRECTOR.

The work of the Fields Division is aimed in general at improving the farming of the Dominion. Broadly speaking, it consists of advising and instructing farmers and others with respect to all improved methods in grassland management, top-dressing, silage-making, the growing and improvement of all farm crops, and such matters. Research work with a view to finding improved methods of farming practices, improved strains of grasses and clovers, &c., is undertaken, and any desirable improvement is rapidly brought to the notice of the farming community, mainly per medium of the extension staff of the Division and the columns of the Department's Journal. Undoubtedly the Fields Division has a real place in the rural life of the Dominion.

The major operations of the Division are reported on below under specific headings and following a few comments respecting the weather conditions generally during the year, and the outcome of the season's cereal crops.

## WEATHER CONDITIONS.

These varied widely in different parts of the Dominion, and the outstanding points in the several main districts were an exceptional rainfall in North Auckland with consequent phenomenal pasture growth, while in the remainder of the Auckland Province hot and dry summer conditions burnt up pastures badly. In the southern half of the North Island a boisterous and rough winter with a rainfall below average was followed by hot and dry weather which, as the summer progressed, amounted almost to serious drought conditions. About mid-February welcome rains relieved the position. In the South Island an extremely wet winter was followed by a wet early spring which greatly retarded cultural operations. When the weather did take up extremely dry conditions set in, and this state of affairs persisted in the majority of districts right throughout the summer and early autumn, and it was not until March that ample rains relieved the position.

#### ARABLE CROPS.

The vagaries of the weather, taken as a whole over the year, were not conducive to exceptional yields in the arable crops. Nevertheless, although below the previous year's figures, the yields obtained have been quite good.

As regards the wheat crop, that portion of the crop threshed during the period January–March, 1935, amounting to 4,347,750 bushels, gave an average yield per acre of 26.98 bushels, as against an actual yield for the 1933–34 season of 31.56 bushels per acre. The whole area in wheat for 1934–35 is estimated to be only 77 per cent. of that for the previous season, and the total yield of wheat for the current season is expected to be approximately 6,500,000 bushels only, as against an ascertained yield of 9,036,017 bushels for the 1933–34 season. The total yield of wheat will hardly be sufficient unless the actual yield over the season is greater than is estimated for Dominion requirements, and in these circumstances the importation of some milling-wheat would undoubtedly have to take place.

The yield per acre of oats has also dropped appreciably when compared with that obtained in 1933–34. The estimated area sown to oats for 1934–35 was 312,000 acres, as against an actual area harvested the previous season of 296,498 acres. Actual threshings for the January–March, 1935, period disclose a per-acre yield of 38·17 bushels, as against an actual yield over the whole Dominion for the 1933–34 season of 41·39 bushels. The area from which oats were threshed for the five seasons ended 30th March, 1934, averaged 23 per cent. of the total area under that crop. Assuming that a similar proportion is threshed this year, the total yield of grain should be approximately 2,670,000 bushels, as against 3,242,500 bushels for the season 1933–34.

It is estimated that 22,600 acres were sown in barley for the 1934–35 season, as against an actual area harvested the previous season of 21,801 acres. As in the case of both wheat and oats, the yield per acre of the barley crop for 1934–35 is estimated to be lower than for the season 1933–34. The actual yield per acre for the latter season was 34.77 bushels, while the estimated yield for the 1934–35 season is 28 bushels per acre. Assuming that the same percentage of the barley crop as was threshed last year will be similarly dealt with this year, the total yield of grain should be approximately 450,000 bushels, as against 730,963 bushels actually obtained for the season 1933–34.

The area in potatocs in 1934–35 was estimated at 20,300 acres, as against an actual area for the Dominion for the previous season of 25,028 acres. It is impossible at the present date to forecast the yields of the main crop of potatoes. In most districts, however, it is anticipated yields generally are likely to be considerably lower than the previous season, as most crops suffered severely from the hot dry weather experienced over such a long period during the summer and early autumn.

# AGRICULTURAL INSTRUCTION.

The agricultural advisory service is a principal activity, and undoubtedly is highly valued by the farming community, this being indicated by the ever-increasing demand for visits and revisits of a personal nature. Farmers' methods are examined, their farms studied, and expert advice as to how best to utilize the land is given. Higher and more economical production can in no small measure be credited to this activity.

One of the essentials necessary in conducting a sound advisory service for farmers is the need for advisory officers keeping abreast with the advance of research and translating the findings of research workers in such a manner that they can be used in the every-day practices of the farmers. The