

FIELDS DIVISION.

REPORT OF J. W. DEEM, DIRECTOR.

ARABLE CROPS.

On account of the unseasonable weather in the summer the cereal harvest promised to be below the average, but the increased acreage will more than offset any lowering of production compared with last season. Actual figures are not yet available, but it is estimated that 243,000 acres of wheat were sown, as against an actual sowing of 238,653 acres in the previous season. Of this latter acreage, 237,433 acres were actually harvested for threshing, and yielded a total of 7,239,556 bushels, or 30.68 bushels per acre. The estimated Dominion yield per acre for 1930-31 season was 27.08 bushels, but actual threshings to date show that the average yield will be approximately 30 bushels.

So far as the oat crop is concerned, it was estimated for 1930-31 that 322,000 acres were sown, as compared with 257,794 acres actually harvested in 1929-30. Threshings to date for the season average 38.06 bushels per acre. This is approximately 6 bushels per acre less than was obtained the previous season, but on account of the increased acreage in oats in 1930-31 as against 1929-30 the position in respect of oats and oaten chaff is considered quite satisfactory.

Barley threshed for the five seasons ended 1929-30 averaged 97.99 per cent. of the total area under that crop. Assuming that a similar proportion is threshed for the season 1930-31, the total yield of grain should be approximately 795,000 bushels, as against an actual yield of 755,007 for the season 1929-30.

The area in potatoes in 1930-31 was estimated at 24,000 acres as against an actual area in the previous season of 23,214 acres. On the average of the last five seasons—viz., 5.56 tons per acre—the total yield from the estimated area shown for 1930-31 should approximate 133,500 tons, as against 130,107 tons last season. It is fairly definite that the quantity of table potatoes available from the 1930-31 crop will be more than ample for the Dominion's requirements.

ARTIFICIAL FERTILIZERS.

The top-dressing of pastures, except on sheep-country, was well maintained until the present autumn, when a serious decline took place. The top-dressing of pastures calls for improved methods of grassland management, and, provided this is carried out by farmers, any diminution in the use of artificial fertilizers on grassland is to be deplored. Improvement in the proper utilization of the increased herbage produced as a result of top-dressing is as important as top-dressing itself.

The use of artificial fertilizers continues as a recognized part of cultivating routine, and it is interesting to note the extent to which farmers are now utilizing this aid to production. From statistics available it is ascertained that for the 1930-31 season 72.65 per cent. of the area in wheat, 63.97 per cent. of that in oats, 59.18 per cent. of that in barley, and 57.16 per cent. of that in potatoes have been treated with artificial fertilizers. These figures show an increase on the corresponding figures for the previous season. There is no doubt that this progressive movement has come to stay, and its trend will be maintained in the future.

SECOND-GROWTH COUNTRY.

The comprehensive experimental work conducted on hill country, particularly in the Whangamomona County, which has been reverting to secondary growth, has been continued; but, as much of the information required is now available, there will be no need for this work to be conducted in the future on the same extensive scale as has been the case in the past. Arrangements therefore have been made for considerable curtailment.

The demonstration farm conducted by the Lands Department in the Whangamomona County under the provisions of the Deteriorated Lands Act has been carried on, and quite excellent carrying-capacity has been attained with a corresponding result so far as returns are concerned.

INSTRUCTION IN AGRICULTURE.

This is the most important function of the Division, and requests from the farming community for advice show a steady increase from year to year. This increase has been definitely stimulated by the bad conditions existing at the present time. The curtailment of expenditure in travelling-expenses necessary to keep within the amount appropriated means that the instructors are not able to meet this demand by personal visits, and consequently a great deal has to be done by telephone or letter. While this is very helpful to the farmer, it cannot compare with a personal visit to the farm where the instructor is enabled to discuss the farmer's problems with him on the spot.

EXPERIMENTAL FARMS AND AREAS.

Puwerā.—This farm has been conducted during the year as an ordinary dairy-farm, and experimental work has been restricted to investigations regarding the value of nitrogenous fertilizers, observational phosphatic top-dressing plots, and rotational grazing. A separate report will be prepared later for publication in the Department's *Journal*.

Marton.—The majority of the work carried out during the past season on this area has been of an intensive technical nature, and has been conducted by the specialist officers concerned in grassland-research work. The work at Marton has consisted in the main of rye-grass strain trials, manurial trials, and technique connected therewith.