Wheat Production in the Wairarapa

THE world's exportable wheat supply may be regarded as a gigantic bank from which countries unable to provide their own needs draw supplies. With the population increasing in New Zealand and in most other countries the demand on the world's supply of wheat is steadily becoming greater, and it appears that if New Zealand is to be insured against a shortage in the future, it will be necessary for a greater proportion of the country's requirements to be grown here. In this article W. B. H. Smith, Fields Instructor, Department of Agriculture, Masterton, discusses wheat growing in the Wairarapa and gives reasons why it is considered the area used for this crop could be considerably increased in that district.

IN the Wairarapa there are approximately 30,000 acres of flat to undulating land with soils of medium to high fertility well suited to wheat growing. The climate of this area, which is situated in Masterton, Wairarapa South, and Featherston Counties, is suited to cropping, rainfall being in the 30 to 40in. range and most summers being hot and dry. Approximately 1200 to 1500 acres is sown to wheat annually, although during the war an effort was made to obtain a greater acreage, resulting in a maximum of 3728 acres in the 1942-43 season. It is considered that the area of wheat in the Wairarapa could readily be increased to 3000 acres without any difficulty and without any appreciable reduction in the production of meat and wool.

In the following table the acreages of wheat grown since 1935 are expressed as 4-year averages:—

AREA OF WHEAT IN THE WAIRARAPA, SHOWING ACREAGES BY COUNTIES

Average 4-year period	Masterton	Wairarapa South	Featherston	Totals
1934-35 to 1937-38	498	96	138	732
1938-39 to 1941-42	1008	66	224	1298
1942-43 to 1945-46	1479	381	549	2409
1946-47 to 1949-50	789	261	252	1302

High production from arable soils can be obtained only by sowing pastures with the improved strains of grasses and clovers. A rotation which involves periodic renewal of pastures is necessary if the highest possible level of production is to be maintained. A wheat crop included in the rotation helps in the receiving of some return from the built-up soil fertility and, at the same time, more than covers the cost of resowing. In this way wheat can be beneficial to the fat lamb producer, and the increase obtained from sowing down in new grass more than compensates for the loss of grazing.

Soil and Climate

Wheat does well on good loams and similar rich soils, but it can be grown on a wide range of soils, its success on some of the lighter types being of course largely dependent on an adequate supply of moisture in the soil during the final stages of growth rather than on the soil fertility. Three distinct types of soils suitable for wheat growing in the Wairarapa valley are:—

A crop of Tainui wheat, one of the varieties which has proved to be a consistent cropper in the Wairarapa.

1. Takapau silt loam, containing 6in. of dark, grey-brown silt loam over stony gravel. This soil structure is typical of the main cropping areas of the plains surrounding Masterton and parts of the Carterton and Greytown districts. It is a high-fertility soil and the presence of shingle in the subsoil allows free drainage.
2. Kairanga silt loam and clay loam, containing 6 to 12in. of grey, heavy silt loam on clay loam. It is a young, fertile soil which is to be found on the flats adjacent to the Ruamahunga River and near Lake Wairarapa.
3. Wanganui loam, a greyish-black loam overlying 6 to 18in. of greyish-buff clay loam. A medium-fertility soil typical of the Taratahi Plains and the rolling country in the Martinborough district.

The climate in these districts is generally favourable for wheat, with plenty of rain for growth, and except in the occasional difficult season conditions are quite satisfactory. In the lower Wairarapa valley the average rainfall is approximately 30in. yearly and in the northern part of the district it is about 40in. yearly. The distribution is somewhat uneven, most of the rain falling in winter; summer is usually dry enough to ensure good harvesting conditions.

Land Preparation

The methods and amount of cultivation required in preparing land are dependent on soil conditions and the previous crop. A well-prepared seedbed is essential for the best results. Most crops are spring sown on lea land which has been ploughed and worked down. With this one-furrow method of handling the lea early ploughing is essential. If the ploughing is done early, weathering agents greatly assist in producing a more mellow soil. Grass paddocks for spring-sown wheat should be ploughed in June to a depth of 6in.

A preliminary skim ploughing is not necessary if the turf is thin, as is often the case with old grass stands. When pastures are of a twitchy nature it is often advisable to roll on the furrow to ensure a firm bottom and hasten the decomposition of the turf. Subsequent cultivation should be designed to secure consolidation without too fine a surface. If the surface is very fine, it is liable to cake, especially on the stiffer soils. During July and August the seed-bed is prepared with the discs and harrows by successively shallow working up to sowing time, when the soil texture is coarse and loose on the surface, but fine and firm underneath.

Sowing and Manuring

Most of the Wairarapa wheat crop is sown during July and August, with a portion of the later sowings extending into September and early October. All wheat sown in spring requires a heavier seeding than if it were autumn sown, because less tillering takes place with spring-sown crops. In higher-rainfall districts, too, thicker seedings can be made, as the necessary moisture is present to bring the