

*Dreadnought Wheat.*—This variety is grown in the main in the Waimate-Studholme-Morven area of South Canterbury and on the tarry and limestone soils south of Oamaru. Both areas are distinguished by their high fertility (and consequent high crop yields). In both Dreadnought as a rule gives substantially higher yields than Cross Seven. In both wheat fits in well in the crop rotation, and is, on the whole, a highly important crop. Unfortunately, in recent years, Dreadnought has given a good deal of cause for worry. Firstly, it is not a header wheat, and if a header harvester is to be used at all, the crop has to be wind-rowed—a somewhat risky harvesting method that is in fact resorted to in about a third of the crops. Secondly, Dreadnought tends to lodge, and this has become much more widespread in recent years, no doubt owing to the reduced wheat area and to improve pastures. It has been the Institute's aim for some years to produce for these districts a wheat with the general characteristics of Dreadnought but with the tight chaff and short, stiff straw characteristic of a good header wheat. For this purpose an experimental area with a soil type similar to that prevailing in South Canterbury, was selected at Tai Tapu, and last season an area in Springston was chosen. Unfortunately the desired effect was not achieved; the combination of the factors which so frequently produce lodging of Dreadnought crops in its own area was not present in those areas selected for their vicinity to the main station at Lincoln. On these areas Dreadnought has shown no signs of lodging. In the coming season an attempt will be made to induce lodging by the application of nitrogenous fertilizer, and should this fail, the only remedy would be a substation in the Dreadnought area.

*Hilgendorf Wheat.*—This new wheat, first released for the sowing of 1948, had been grown in the preceding year on about 220 acres. In the past year for the first time there was an appreciable area, estimated at between 3,000 and 3,500 acres. To pool the experience of the first large-scale cultivation, the Wheat Research Institute approached grain-merchants with the request to distribute a questionnaire to their clients who had been Hilgendorf growers. By the end of March, eighty-three replies had been received, covering 1,200 acres (or more than one-third of the area sown): 45 per cent. of growers were satisfied, 26 per cent. were uncertain, 11 per cent. had lost their crops in one of the most destructive and widespread frosts for many years, and 12 per cent. were dissatisfied. Many growers considered the season, which was characterized by an extensive spring drought following an unusually dry winter, as one especially unfavourable for an early developing and maturing wheat. In these circumstances the experience gained makes this wheat appear fairly promising, especially in the Darfield-Sheffield-Hororata district, the Christchurch-Dunsandel district, in Rakaia, and in parts of Marlborough. The northern part of North Canterbury was less favourable; there the late frost damaged many Hilgendorf crops. In South Canterbury, with its many trees, and now with its relatively low acreage of cereals, bird damage is usually extensive, especially on an early wheat. On the whole, however, bird damage was not nearly so extensive as anticipated. Frost damage was not wholly harmful to Hilgendorf, because in a number of instances this variety escaped, whereas Cross Seven on the same farm was badly damaged. The impression of previous years was confirmed: that Hilgendorf is not as thoroughly reliable in all circumstances as Cross Seven; that in some circumstances it does even better than the standard, in many as well, and in others not nearly as well. To be widely grown, this wheat requires a fairly substantial incentive premium, which is thoroughly warranted in view of its extremely high baking qualities. Continuance of the premium of 1s. per bushel has been secured for the harvest of 1951.