

## LARGE-SCALE ARABLE FARMING IN CANTERBURY



Reapers and binders at work on the New Zealand and Australian Land Company's Pareora estate, where some notable crops were produced toward the end of last century.

expanded very rapidly, the record being reached in 1883, when 5,000,000 bushels, of which nearly 4,000,000 came from Canterbury, were exported from New Zealand. Undoubtedly in the late 1870's and early 1880's wheat production was much more profitable than anything else on the better-class land, the average price being 7s. 7d. per bushel over the years 1871-1880. The introduction of labour-saving machines over the same period—reapers and binders, traction engines, threshing machines, and more efficient ploughs—speeded up the change-over, and for some years it seemed that large-scale wheat growing for export would always have a significant place in the New Zealand economy.

### High Freights

As usual, freights were high, up to 2s. 6d. a bushel, inferior types of ships were used to carry grain, partial damage was not covered by insurance, and growers were often careless enough to ship various qualities under one brand. The smaller farmer who could not himself consign was again at a disadvantage, especially as he was more dependent on the return from wheat than the large landowner who utilised only part of his land for grain growing. On some of the large properties—the Levels, Pareora, and Waikakahi—most of the land was sown down in a crop at some time or another, primarily for the purpose of breaking in the land before sowing down grass.

Two of the best-known wheat growers in this period were John Grigg of Longbeach and Duncan Cameron of Methven. These two men developed the productivity of their estates by very different methods. Grigg by large-scale draining and Cameron by an elaborate system of irrigation. In 1879-1880 Longbeach grew 3000 acres of cereals; by 1891-1892 the area had been extended to 4600 acres of wheat, 2000 acres of oats, and 280 acres of

barley. In 1894 on Cameron's Springfield estate there were 5500 acres in wheat and 1200 in oats. Other places at times also had large areas devoted to cereal production. The Studholmes in 1883 had 3500 acres in wheat and 1200 in oats at Willowbridge and one year exported 175,000 bushels of wheat; at Waikakahi in the 1890's there were about 4000 acres in grain each year. Grain acreages were also large on Elworthy's Pareora estate and on the New Zealand and Australian Land Company's properties at the Levels, Acton, and Pareora.

On the large estates costs of production were very low—about 1s. 3d. per

bushel at Longbeach and Acton and up to 1s. 8d. on rolling country at Pareora. As the wheat sold from 3s. 6d. to 4s. a bushel, the profitability of the trade can be realised. Much of the ploughing was done by contract, the usual rate being 5s. per acre, and when tussock land was being broken in the contractors usually received a fixed proportion of the crop.

### Declining Yields

While virgin soils were available even the haphazard methods adopted on some properties gave payable returns, and under favourable conditions yields from cereal crops were high. It is reported that in 1880 70 bushels of barley per acre were threshed in many districts and yields of from 50 to 100 bushels of oats and 60 bushels of wheat were quite common. Nevertheless, though the average yield per acre varied from year to year, it was generally low and declined as the area was extended.

The growing of cereals often spread to unsuitable land and even there they were grown in a very short rotation. Green manuring was never practised and artificial fertilisers were practically unknown. Under such conditions it is not surprising that fertility declined. The average wheat yield in Canterbury dropped from 24 bushels per acre for the 5-year period 1881-1885 to 20 for the period 1891-1895. Average yields of oats dropped from 30 to 25 bushels over the same period.

The most popular wheat varieties were Tuscan (known in the export trade as New Zealand Longberry), Hunters, and Pearl (both called New Zealand Shortberry), though numerous others were introduced. Some of these found favour in certain districts, but little was heard of them beyond these districts and the farmers' knowledge of varieties was very limited.



Duncan Cameron of Springfield, near Methven, was one of the largest "bonanza" wheat producers. He was one of the first runholders to build water races and was also closely associated with the beginning of the frozen-meat trade.