

and 170 lb. of manure mixture per acre, of equal parts slag, dried blood, and bonemeal.

In passing it may be remarked that I believe this is the first year in which potash has been omitted from the mixture used for cereals at the Marton plots; and although a little rust is usually noticeable on varieties subject to same, this season even varieties like the Ruakura oat, which at Marton is usually practically free from rust, rusted considerably. Owing, fortunately, to habit of this variety of maturing early its period of greatest development had passed before the rust made its appearance, and consequently the yield was not affected to any considerable extent. The oats were sown on 15th September.

John Brown wheat, a variety originally imported by the Department from Australia, grown at Marton plots and from there distributed to farmers, was the variety purchased from one of the New Zealand growers and sown for the season. The seeding was 160 lb. per acre, and manure 150 lb. per acre. The manure mixture was equal parts slag, bonemeal, and dried blood. The actual weights threshed were as follows: Area C (drained, limed, green-manured, and subsoiled) yielded 39 bushels 35 lb. per acre. This sample off the mill gave, roughly, 56 lb. of first quality for every bushel of total yield. Area B (drained, limed, and green-manured) yielded 33 bushels 8 lb. per acre. This sample gave, roughly, 54 lb. of first quality per bushel of yield. Area A (drained and limed) yielded 35 bushels 36 lb. per acre, and gave about 56 lb. of firsts for every bushel of yield.

Owing, unfortunately, to a breakdown in the gearing of the drill when these plots were being sown, areas C and B had to be resown, and consequently for record purposes they cannot be compared with A, which had the advantage of being sown earlier, with the seed lying convenient to the fertilizer. Areas C and B were resown without further manure nearly a month later.

As regards the clover, according to the scheme two acre plots in each area were to be sown with this crop. It was, however, found necessary to fallow plot 11 for a time to clear it from weeds. The clover on plot 21 was also ploughed up to utilize the land for another leguminous crop. Thus practically only 1 acre of clover in each area was left for comparative purposes.

Owing to climatic conditions at the time of the first cut it was not possible to stack the produce of each plot separately, but the total weight of the first cut when pressed was found to be within a fraction of the total weight of the second cut. The interim notes taken place the relative yields of the plots in the same order as in the second cut. It will therefore be permissible to place the weight of the first cut approximately at the same as the second cut. On this basis the yields were as follows:—

Area C (drained, limed, and subsoiled), plot 23: second cut, 42 cwt. 1 qr. 7 lb., baled by machine; first cut, 42 cwt. 1 qr. 7 lb. (approximate): total, 84 cwt. 2 qr. 14 lb.

Area B, plot 13: second cut, 27 cwt. 2 qr. 2 lb., baled by machine; first cut, 27 cwt. 2 qr. 2 lb. (approximate): total, 55 cwt. 0 qr. 4 lb.

Area A, plot 3: second cut, 26 cwt. 2 qr. 18 lb., baled by machine; first cut, 26 cwt. 2 qr. 18 lb. (approximate): total, 53 cwt. 1 qr. 8 lb.