

That is, you get the value of the manure you use?—Yes, to a large extent.

*The Chairman.*] You stated a little while ago that the yield had increased, I think, during the last three years?—There have been high yields during the last three years—approximately 36 bushels to the acre.

I think you stated that there were 185,000 acres of wheat grown?—Yes. Those figures were given out of my head and they may not be absolutely accurate.

The 185,000 acres have been subjected to manures?—Yes; at any rate, 70 per cent. of the wheat sown last year, and we expect it to be well over 70 per cent. this year.

*Rev. Mr. Carr.*] Seventy per cent. of wheat grown under those conditions?—Yes, 70 per cent. of the wheat had 1 cwt. of phosphate per acre. One district which was extremely bad in connection with non-manuring last year was North Otago. Out of about 14,000 acres sown, about 3,000 acres were top-dressed.

That makes the percentage for Canterbury so much higher?—Yes.

*Mr. Macpherson.*] With regard to the increased yield of wheat in the past, has it not been due to the longer spelling of wheat land—that is, allowing it to be kept in grass for a longer period with stock running on it: has that not rejuvenated the land?—I do not hold that view. I may be wrong in not holding that view, but I do not hold it.

*Mr. Macpherson.*] In my district we practically all hold it, and we have proved it to our satisfaction.

*The Chairman.*] You gave us three reasons for the increase in the wheat-yield. You mentioned the elimination of the bad farmer?—Yes, and favourable climatic conditions.

In what order?—I do not like doing so, but I would put climatic conditions first, then the elimination of the bad farmer, then better methods of farming, particularly the increased use of manure. Then there is the reduction in the acreage of low-yielding wheats, or the increase in the percentage of Solid-straw Tuscan.

*Rev. Mr. Carr.*] Dr. Hilgendorf, of Lincoln Agricultural College, stated that with Solid-straw Tuscan, although you got the quantity, it was questionable whether you got quality. The millers say, particularly in the North Island, that to make satisfactory flour they like to use Solid-straw Tuscan. I have discussed that with a great many people, and they say it is not so, but is only an excuse on the part of the miller for importing wheat from Australia because it is cheaper.—Those points naturally would be dealt with by the millers of experience rather than by myself. I would just like to say that Solid-straw Tuscan has a better milling-capacity than is often stated.

*The Chairman.*] In reply to Mr. Jones, you gave us approximately the time ahead the farmer would require to be advised as to where his wheat was to be sown—I think it was according to the length of his permanent pasture.—One would say that the shorter his pasture is down, the shorter, of course, would be his programme. But one feels that all arable farmers should have, at least as far as their major crops are concerned, a knowledge of where they are going to put them about two to three years in advance. They should not be in the position of about March, for instance, deciding that they will put wheat in such-and-such a place.

*Mr. Macpherson.*] The farmer should know at least in the preceding November?—He should know at least two years in advance.

*The Chairman.*] The pasture-lands will not last permanently for more than three or four years?—The majority of the pastures on normal wheat soils in the South are not fit for fat-lamb production.

*Mr. Jenkins.*] Why fat lambs?—Why not fat lambs?

You cannot always have the beasts on poor land.—It is not poor land. It happens that owing to the climate it is not good grassland permanently without renewal. The average pastures on wheat lands last from two, three, to four years.

*The Chairman.*] You say that the farmer wants to know in advance where he is going to sow his wheat?—Of course he does.

How long before would he require to know—the same periods you have mentioned?—Yes. The farmer should know, for instance, with regard to a certain type of pasture that he will have to turn up in three years' time approximately what sort of crop he is going to put into it, and if all farmers were in that position, of course, the chances of getting a better cropping programme would be quite good.

*The Chairman.*] The majority of pasture in normal wheat land requires to be renewed every two, three, or four years?—Yes.

Have you had any experience of wheat-growing in Australia?—I have been in Australia, but I have had no experience of wheat-growing there. I have seen a great deal of wheat in the fields there.

Have they more economical machinery in use there?—Yes, decidedly. The furthest we can go towards making harvesting in New Zealand easy is to thresh out when the harvest is gathered into shocks, but in Australia they are able to thresh the harvest without cutting it at all.

It is not possible to get over that difficulty in New Zealand?—Not with our present knowledge. But, again, the development of varieties and the research by the Wheat Research Institute might eventually lead to the development of methods that might enable considerable economies to be made in wheat-production; but, of course, at present they are all in the air.

From your knowledge, is the machinery used in New Zealand quite satisfactory and up to date for the purposes of wheat-growing here?—I should say so, on the whole. The new types of threshers—unfortunately, of American design—are pretty good.

The cost of production would be considerably less, I take it, in Australia owing to the climatic conditions there?—I should say it should be, although one would prefer that submitted to the Department as a definite question in order that one could go into the figures properly.