

THE CO-ORDINATION OF AGRICULTURAL RESEARCH IN NEW ZEALAND

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In the following paper attention is drawn to the necessity of a better organisation of agricultural research in New Zealand. Considerable amounts of money are now being spent on different branches of research and while the results obtained indicate that every practice that is advocated has proved under experimental conditions to be a highly profitable one, there is a tendency on the part of the farmer to view the results with suspicion, and make less use of them than even the very conservative estimate of the research worker would suggest. As examples of this we have topdressing showing increases that more than warrant the use of manures, mineral content of pastures investigations that show our pastures to be low in minerals and capable of improvement by added manures, rotational grazing that shows how carrying capacity can be profitably doubled or trebled by keeping grass short; better strains of grass that aim at improving pastures; farm surveys that show conditions of prosperity or otherwise in most striking colours, herd testing. Pig feeding and pig recording that all demonstrate their worth.

In every case where these practices have been associated with increased production that is immediately convertible into cash, they have made remarkable progress, e.g., herd testing and topdressing in the North Island, but where the increased production is not so immediately seen in cash as in the case of sheep, very little progress is made. It can be reasonably advanced as an excuse for the failure of farmers to apply the results of research, that the research has failed to combat the chief difficulty of the farmer. His main difficulty with sheep is to feed them adequately during the long period of non-production, i.e., January to September, in Canterbury in late winter and early spring particularly. Most farmers now depend too much on Nature's production, or else find that the supplementary crops are too costly to use, and are uncertain about the results of sheep production even up to the time of slaughter, most of the practices advocated by research, mean the spending of more money either on topdressing, on better grass, on rotational grazing, and this cannot be done unless there is some assurance of increased returns. Increased returns can be obtained mainly by having more stock and until the present stock can be wintered satisfactorily, it is utterly impossible to carry more stock. With dairy cows, where the yield per cow has been doubled, in many districts, it is unnecessary to increase stock numbers, and this is one of the reasons why there has been such a wide application of the results of research in the dairying districts.

Field work conducted at Canterbury Agricultural College on the winter feeding of sheep clearly shows the possibilities of using numerous feeds that are now not used, and that the present stereotyped methods of winter feeding in Canterbury are capable of improvement. The value of stock products in New Zealand is as much dependent on the utilisation of feed supply as it is dependent on the production of that feed supply and it is a curious position that while much effort is spent on producing more grass, nothing is done towards a better utilisation of grass.

The subject of grass utilisation is intimately bound up with the question of topdressing, better strains of grass, rotational grazing, mineral content of pastures and presents a wide field to the investigator. An experimental service on the same lines as those of the Experimental Division of the Department of Agriculture, whose function would be the collection of information about the problems of utilisation of feed, would be of very great assistance to the stock owners of the Dominion,