

FARMING IN NEW ZEALAND



Land Improvement

THE pastoral industries of New Zealand have been asked to accept the task of endeavouring to produce an extra 50,000 tons of meat and 30,000 tons of butterfat within 7 years. This can be achieved only if most existing farms are made more productive through land improvement and more efficient livestock management. This article by P. W. Smallfield, Director of the Extension Division, Department of Agriculture, Wellington, is the first of four dealing with proved land-improvement practices, some of which, if more widely adopted, will help to fulfil the immediate task of increasing food production, while others are concerned more with the long-term improvement of farming. These articles will deal with land classification and the general fertility-building and conservation methods appropriate to each class and with some of the more important variations imposed by certain soil types within each major land class.

NEW ZEALAND'S first duty should be the preservation and improvement of the fertility of the land. Apart from labour, the land is the country's only real asset and must be the basis of its future well-being and wealth.

The land of New Zealand has been farmed for just over 100 years, during which time fertility has been improved over little more than a tenth of the land and not a great deal has been done to mitigate fertility depletion on the remainder. Early farm practices conformed to the demands of nineteenth-century industrialism for cheap food and raw materials—demands which despoiled large areas of the virgin lands of the New World and caused the growth in the Old World of vast congregations of people unable to provide their own sustenance. In common with those in other new countries New Zealand settlers burnt and over-grazed natural pastures, exploited the stored fertility of forest

lands, and started on the path of improvement only when forced to take in hand land of such low natural fertility that soil-fertility building was necessary before the land could be farmed. From the latter lands grew the practices of intensive grassland farming which are the basis of the country's present prosperity—practices which the Dominion must aim to adopt for the improvement of a much wider area of land so that the fertility and production of the major part of the pastoral areas may be improved progressively.

The task of land improvement is not easy, and it is a collective as well as an individual responsibility. If the task of the individual land improver is hard, his reward is great, for what satisfaction can compare with the satisfaction of land improvement (quite apart from the profit which normally accrues from such work)? To the nation the collective responsibility and the rewards are just as great, for

no nation that does not sustain the productivity of its land can long endure.

Land and Wealth

"Wealth," says the economist, "consists of all potentially-exchangeable means of satisfying human needs." New Zealand obtains its wealth and well-being by exchanging the products of the land chiefly for the products of industrial Britain, and the exchange is generally approved on the grounds that each country concentrates on a low cost of production. However, New Zealanders may ask themselves: "Are our costs really low or are we exchanging our land (our capital) rather than the products of the land?" If soil fertility is not being maintained or improved, whence will come the wealth necessary for the well-being of a greatly-increased population?—such a population as may be necessary to maintain the security of the country.

The history of man's domination of the land shows far more instances of destruction of soil fertility than of improvement or even of maintenance. His destruction of the natural plant covering (which under Nature normally has given back to the soil as much as it has taken from it) has generally resulted in fertility depletion, and unless this path is changed the world in future will not be able to feed its peoples, for there are now no New Worlds to exploit.

From areas where man has succeeded in maintaining or improving fertility certain lessons may be learned, and the lessons are that methods of land improvement and soil-fertility building must be such as can be carried out by the occupiers of the land and will be of tangible benefit to them.