

plants which may possess in one or more respects the valuable and necessary characteristics aimed at.

For some years past, and at the present time, indications are in the direction that cereal-growing, particularly wheat, is not looked upon by New Zealand farmers as a paying proposition, and even the somewhat increased price for wheat since the war began does not attract farmers in the way one would expect. No doubt this can be attributed mainly to the enhanced prices obtained for some years past, and now, for wool, frozen meat, and dairy-produce, and the difficulty the farmer has in securing the assistance of skilled labour nowadays to help in harvesting and other farm-work, together with the high wages which have to be paid for labour, which in most cases is not skilled and therefore dear at any price. Moreover, the farmer is likely to produce that which is easiest and pays him best. It seems obvious, therefore, that there will be little or no surplus of wheat for export in the future if similar conditions continue to prevail, and that on the other hand New Zealand may be importing wheat to meet her requirements.

Whilst it would not be wise to neglect entirely the importance of cereal-growing and investigations that may tend to increase the production per acre and a higher quality of grain, yet the best energies of agriculturists and farmers in the Dominion should be directed towards the frozen-meat and dairy industries, which are the backbone of the country, with a view of increasing these and providing for an assured annual production.

New Zealand's primary exports are derived from its agricultural and pastoral industries, principally the products from farm-animals. The important bearing which these have on the prosperity of the Dominion is best understood by examining the exports for year ending 31st December, 1915, where the value of these and other exports can be compared, as follows:—

Pastoral produce: Wool, frozen meat, tallow, skins, hides, pelts,	£
butter, cheese, and other pastoral products ...	26,486,706
Agricultural produce: Wheat, oats, barley, peas, potatoes, seeds	
(grass and clover), and other agricultural produce ...	610,020
Phormium-fibre ...	571,621
Produce of the mines, forests, fisheries, manufactures, &c. ...	3,369,785

Total value of exports for year ending 31st December, 1915 £31,038,132

No doubt the values of the agricultural and pastoral produce exported last year, and particularly wool, are somewhat inflated on account of the war. There has been, however, a steady and continuous increase of animal-products exported for many years past, with a relative advance in values, and as these represent the fundamental industries and revenue-producing factors of the Dominion I made it a point in my travels through the United States and Canada to take particular notice of any phase of agriculture or other element likely to be of benefit to the further promotion of these.

It must be evident to all interested in both the frozen-meat and dairy industries how very dependent these are for success upon favourable seasons and abundance of suitable animal-food. A dry season in any district under present farming conditions means a great decrease in exports, and invariably disaster and ruin to many farmers. Too much dependence is put upon pastures which burn up when there is a lack of moistures and drying winds set in. At present little or no attention is given to testing, discovering, or growing reliable forage crops to supplement the pastures in such seasons. Turnips and rape are not now reliable crops. Every other year both these crops are subject to the ravages of insect pests which make them almost valueless, and turnips are periodically subject to fungus diseases, and when dry seasons occur there is little or no crop.

Farm-animals depend upon the plant kingdom for their food. Therefore if we are to increase our primary exports of animal-products we must of necessity increase our plant-food. This can be done by making use of and growing those plants in our pastures and as forage which are of a more reliable character and will produce abundantly under almost all weather-conditions, thus ensuring that a larger number of cattle, sheep, &c., can be reared and carried on the lands of the Dominion, avoiding fluctuations as far as possible, and guaranteeing an annual increase for many years to come in the production of animal-products for export. To effect this reform there is no surer way than to grow lucerne. Lucerne is undoubtedly the "king of forage plants," and those countries which have early recognized its value are annually reaping an assured harvest of wealth from its abundant production. Nothing that I saw in the whole of my travels through the United States and Canada impressed me so much as the possibilities there are for the Dominion of New Zealand should farmers be induced to grow lucerne. There are few parts of the world so well adapted to grow lucerne to perfection as New Zealand. It has been proved that it can be grown in the driest seasons in the most unlikely soils without the assistance of irrigation, and where irrigation is necessary there is abundance of water in most places now running to waste which can be utilized for that purpose when the Dominion is prepared to give its attention to irrigation projects.

In New Zealand lucerne is no innovation. It was grown successfully over forty years ago on down land with a clay subsoil on the New Zealand and Australian Land Company's Levels Estate in South Canterbury, and on Clydevale Estate in Otago. That was in the early days when the squatter reigned, and with the vast areas of land then at his command, and abundance of other feed available at the time for the number of stock carried, lucerne was considered too much of a luxury and only used particularly as a feed for stud animals. Lucerne has also been an established crop for many years in the Marlborough Province, where it has now become one of the staple crops. Further, for the last six years the Department of Agriculture, in order