

Canterbury Chamber of Commerce

Agricultural Bulletin

PASTURE PLANTS

SEED PRODUCTION IN NEW ZEALAND

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Nearly every country has the chance to produce certain goods and services under more favourable circumstances than its rival countries enjoy. The circumstances may be those of climate or natural products, such as iron or coal, or cheapness of power, or proximity to a market, or natural aptitude, or cheapness and efficiency of labour. It will always be found that permanent prosperity is built on the production of those goods which can be produced most favourably. In New Zealand they have proved to be first and foremost those connected with sheep and dairy cows, and in these we are easily supreme. We have more sheep per head of population than any other country in the world—our 20 sheep per head comparing with Australia's 17, and Uruguay's 9. In dairy cows the position is still more marked since per head of population we have more than twice as many cows in milk as our nearest rivals, Denmark, Holland, and Switzerland.

A Possible Development.

In the past sheep and dairy products are those in which their portability, our climate, and our natural aptitude have enabled us to compete with other countries, but there are doubtless still other avenues of advance. If it can be shown that we have special advantage for progress along any of these avenues, they will be worth exploration.

For any new agricultural product to be a success the following conditions seem necessary:—(1) High quality; (2) good organisation for production and distribution of lines that will command a payable price; (3) a suitable climate, natural skill, and facilities for gradual development with our existing farm plant; (4) good organisation of an export trade. The suggestion is that the certified seed of grass and clover fulfils these requirements.

Britain uses about three million pounds' worth of grass and clover seed each year, and under present circumstances imports about one million pounds' worth. The Irish Free State uses about one million pounds' worth, and Canada about the same. While these are not large quantities, they are worth attention, and if any considerable proportion of the requirements of those countries could be supplied by

New Zealand it would be a welcome addition to our trade

Certified Seed of Pasture Plants.

1. High quality—

Denmark and Holland, the chief seed exporting countries, have developed strains of grass and clover that are valuable chiefly as seed producers but of little value as fodder producers. Samples of their production are growing at the Christchurch Show Grounds, at Canterbury Agricultural College, at Palmerston North, and at other places, and farmers can judge for themselves. Many English grasslands that are harvested for seed have at some time or other been sown with these strains, and the result is that temporary, poor-leaved types are in the majority. Now certain areas in New Zealand were sown down before these new strains were produced, and Nature has for long years been selecting the leafy types, so that when seed is gathered from such areas the resultant grass is of exceptionally high quality. This is not a matter of opinion but of demonstration. The plots at the places mentioned are open for inspection by all. At the South-Eastern Agricultural College, Wye, Kent, large plots of white clovers of all nationalities are grown, and even as early as 1922 the New Zealand plots were seen to be superior to all others, except Kentish Wild White. Since then very much better white clovers have been found in New Zealand, and they are probably the best in the world. A trial conducted at Aberystwyth in Wales in 1928, 1929 and 1930 showed that New Zealand commercial true perennial ryegrass gave 33 per cent. more feed than British commercial, while in cocksfoots New Zealand commercial excelled British commercial in yield of leaf by 37 per cent. In a trial on another matter the Welsh "Journal of Agriculture" states almost as an afterthought: "It must be noted, however, that the New Zealand ryegrass supplied much more bulk of feed than the British commercial."

The best commercial New Zealand grass and clover seeds are at the moment undoubtedly better than the best commercial seed of other lands.

2. Organisation for Production.

It is here that our greatest advantage lies. While the best New Zealand seed is very good, there are bad strains of ryegrass and white clover, and a small

proportion of even our cocksfoot has been contaminated with Danish strains. While good and bad are on the market together the bad will always be the more widely spread on account of their greater seed production and lower price. But the Department of Agriculture has got into full working order a scheme of certification of grass and clover seed, whereby seed is inspected and tested by actual growth trials and then certified and sealed. If ryegrass or white clover seed is wanted for permanent pasture, or for production of seed suitable for permanent pasture, the lines certified and sealed by the Department are easily and directly available. Such lines have been high in price, but much true perennial ryegrass from both Canterbury and Hawke's Bay has now been certified as "Mother Seed," and the new process of differentiating true perennial from temporary types by means of ultra violet rays, will facilitate the early acceptance of suitable lines. Unfortunately much "Mother Seed" off very old pastures contains weed seeds, and buying merchants as well as farmer purchasers should demand the certificate of purity and germination in addition to one of permanence of strain. Unless the defect of impurity is immediately remedied, the trade in certified "Mother Seed" will be doomed to failure.

Of permanent types once harvested one firm has considerably over 500 acres growing in Canterbury this year, and this will probably produce 15,000 bushels. It will be examined in the field, the sacks sealed as they come off the mill, carefully dressed, re-sealed, certified as once harvested true perennial and should soon be available at about one half of the present prices.

3. Climate, Skill, and Working Facilities

There is little doubt that New Zealand or at least the Eastern districts have an excellent climate and suitable soil for the production of agricultural seeds. New Zealand has on occasion exported large quantities of grass seeds, clover seeds, peas, and linseed, and it has generally been found (except sometimes in the case of Chewings Fescue) that the seed was of excellent quality as regards condition and germination. The three or four thousand acres of garden peas grown in Marlborough and some thousands of acres grown in

Canterbury are put up in pound packets and sown in the kitchen gardens and allotments of England and their quality is unexcelled by that of any other country in the world. Some of the J.W.S. linseed grown in Canterbury and sent for growing in Ireland has been reported as being the best ever received there. We have at the moment a not inconsiderable export trade in agricultural seeds:—

	1928.	1929.	1930.
	£	£	£
Red clover ..	8,433	4,420	9,533
White clover ..	6,522	11,008	15,695
Other clover ..	1,768	3,929	3,086
Brown top ..	11,078	30,273	30,755
Chewings fescue ..	71,248	75,614	66,256
Dogstail ..	20,769	16,231	18,507
Cocksfoot ..	4,382	7,158	4,081
Ryegrass ..	24,116	26,448	9,070
Other grass ..	14,136	7,825	9,631
	162,452	182,537	166,221

This export, though slight, is an indication that our product is satisfactory, and that under favourable circumstances a trade could be developed.

It is probable that seed growing requires special skill, but our farmers are already seed growers to some extent, and could easily modify their practice to make this branch of their work more and more important. No revolution in practice, no expensive new machinery are necessary. Over 7000 acres of perennial ryegrass and over 2000 acres of white clover were cut for seed during the harvest of 1930, and all that is necessary is to secure that these seeds, instead of being merely ryegrass or white clover, should be certified ryegrass or certified white clover and of

good germination and free from impurities. With this modification it is probable that lines that would pay well on the world's markets could be produced at little more than the cost of the uncertified lines at present being grown.

4. Organisation of Sale.

For this seed to secure a market abroad it is necessary that overseas farmers be impressed first with the differences between strains of grasses, and second with the superiority of our strain. New Zealand, Sweden, and Wales are well forward in propaganda for improved strains. Nearly every number of the "New Zealand Journal of Agriculture" for the past three years has contained references to the subject, and every volume of the "Welsh Journal" gives it special prominence. An inspection of the "Journal of the British Ministry of Agriculture" for the last three years, however, reveals no single reference to strains of grasses, though the formation of a certification scheme for wild white clover is recorded. The thousand odd publications of the American Agricultural Experimental Stations for the year 1930 contain only one reference to grass strains, and that is to a strain of brown top for golf greens. It is clear, then, that the value of special strains needs forceful and repeated presentation to the British and American farmer, if a trade in certified grass seeds is to be built up with those countries. The Department in New Zealand has taken the initial most necessary steps. Seed of true perennial ryegrass, cocksfoot, and true wild

white clover from New Zealand is being sent to every agricultural college, experiment station, farm school, and demonstration area in the Empire, and along with the seed a pamphlet setting out the peculiar excellences of the strain, and a request for a trial of this grass against the best available in the particular district. At the same time all seed merchants in New Zealand are being supplied with the pamphlets, to send to their overseas corresponding houses, inviting them to apply for seed to try out on the farms of their customers abroad. Material is also being prepared for the High Commissioner in London for publication and publicity purposes.

It is hoped by this means to demonstrate the merits of this New Zealand product in other countries, and so build up a demand for our seed.

Conclusion.

It appears then that New Zealand has good strains of herbage plants whose seed should command profitable prices, she has the climate, her people have the aptitude and the organisation for putting these strains on the market. It may be reasonably hoped that a demand will be built up, and it would therefore appear good policy gradually to develop the production of certified seed as a more important branch of our arable farming.

Copies of this Bulletin may be obtained from the Secretary, Canterbury Chamber of Commerce, P.O. Box 187, Christchurch.