

to be moved out of the way, and doing so would cost money. It can therefore be disposed of at a very low rate. Such conditions do not apply in this country. New Zealand, although a comparatively small country, is so formed that no one spot can command more than a small proportion of it, and the result is that no one limeworks can command a big enough area to get the large output required to enable the most up-to-date labour-saving appliances to be used. Some of the American works crush more lime in a week than the best-situated works in New Zealand are likely to put out in a year.

The ground carbonate of lime in this country is never likely to be a by-product from works whose main output is either burnt lime or crushed rock required for the purposes I have mentioned. The crushing of carbonate of lime for use in agriculture will in this country be the main object of any works erected, and it is to the carbonate of lime and not to any of the other products mentioned that the works must look for expenses and profit. In the South the climate is fairly wet, and the limestone comes out of the quarries in a wet state and takes a lot of drying. The greatest demand for lime is in the winter and spring months, whereas the time of the year when the limestone is [driest is the summer and autumn months. Grinding in these months would be cheaper than in the winter and spring, but the storage of the ground material involves extra handling, which would more than do away with any saving. If limestone, after being quarried, is left out in the open for a month or two before grinding it dries to a considerable extent, but not enough to do away with artificial drying altogether. This, moreover, involves a second handling, which more than balances the saving in drying. Our southern limestones when taken from the quarry in winter contain from 15 to 20 per cent. of moisture. To grind efficiently the moisture must be reduced to a proportion not exceeding 3 per cent. This makes it necessary to take about 15 per cent. of moisture out of the stone, which means the removal of about 3 cwt. of water from every ton of rock.

In north Otago and Canterbury climatic conditions are much drier than in Southland and south Otago, and limestone could be ground much cheaper there than with us. The same may apply to a comparatively dry climate like that of Hawke's Bay, but I think it is the wetter parts of New Zealand that are going to require lime most. The lime will have to be ground somewhere near the districts where it will be used. Free railage only extends to 100 miles, and if it is carried farther than this and railage has to be paid the saving in the cost of drying in the drier area is lost. If the demand for carbonate of lime increases