

From general observations made during the last two seasons the writer is of the opinion that at least 2 cwt. per acre is necessary for obtaining immediate results; that where fern is at all bad 3 cwt. per acre in the first year, followed by $1\frac{1}{2}$ cwt. in the second, is better than 2 cwt. to $2\frac{1}{4}$ cwt. each year; and that it is more economical to top-dress one area in two successive seasons than to proceed from one paddock to another each year.

NOTE.—The fertilizers for these trials were supplied by the Auckland Fertilizer Manufacturers' Association and Auckland Manure Merchants' Association, who provided the superphosphate and basic slag respectively, and the assistance thereby rendered is duly acknowledged. Thanks are also due Mr. Ellis for the efficient manner in which he kept the records, and for the interest taken by him in organizing field-days and showing visitors over the area.

GRAPE-VINES FOR NEW ZEALAND CONDITIONS.

RECENT TRIAL IMPORTATION OF EUROPEAN VARIETIES.

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WITH a view to extending its experiments in the selection of suitable grape-vines, and to keep abreast of the increasing interest taken in the culture of outdoor grapes throughout New Zealand, from Central Otago to the north of Auckland, the Horticulture Division imported last year a number of European varieties of vines from France, particulars of which are given in the accompanying list. The vines have been selected for qualities which are most likely to render them suitable for the needs and conditions of the Dominion, and from them it is hoped to reselect a number which can be added to those that have already proved their worth under the numerous local conditions of both Islands. An important feature in the choice made is the selection of vines from a point of view of early ripening, which is an essential condition for their successful adaptation to climatic conditions in the cooler parts of the Dominion.

The vines were treated before despatch from France with a fungicide and insecticide, and received a similar treatment on arrival here. They were then grown in quarantine for one growing season, and after being passed as sound and healthy have now been planted in the State experimental vineyard at Te Kauwhata, whence they will eventually be made available for viticulturists after having been given a thorough trial under the supervision of officers of the Horticulture Division.

Besides some of the best varieties of pure European vines, the collection includes a number of American \times European hybrids known as "direct producers." The object of the hybridizers has been to produce fruit having the finer qualities of European vines on vines having the disease-resistant qualities of the American varieties. Many thousands of these hybrids have been produced and tested in France during the last forty years, but few have given satisfaction. It is from among these that a choice has been made. Some of the vines are said to give the best results on their