such treatment, and which in most instances do follow to an extent which must be seen to be believed, are great growth and vigour of the pasture, and all-round improvement in palatability and nutritive value, as shown by evenness of grazing, greater carrying-capacity, and thrift of stock.

An extended use of lime is certain to be a prominent phase of farm-management during the next ten years or so, and it is certain to lead to a still greater expansion of the stock-raising industry in the North Island, phenomenal as that has been up to the present time. On the western side of the dividing range, at any rate, the benefits are likely to be so pronounced and the exceptions so few that nothing short of the absolute impossibility of procuring lime at all, or at a landed cost on the farm of not more than £2 per ton, should prevent any farmer from making at least a preliminary trial. I know of many cases where other means of improvement, such as deep cultivation, various kinds of manuring, various pasture mixtures, &c., were tried, only to find at the finish that deficiency in lime represented the lowest stave of the fertility-barrel.

Fertilizers.—It has been established, practically beyond question, that of the elements of fertility the most generally and notably deficient throughout New Zealand is phosphorus, supplied to the soil in phosphates of various kinds. Except for a big-money crop such as potatoes, a payable increase from the use of fertilizers containing nitrogen seldom results. Blood, which is a nitrogenous manure, is a constituent of many fertilizers; but except on very light sandy soils subject to heavy leaching it is always more or less doubtful whether its application is worth while. This element should certainly seldom be required in any form under a proper system of farm-management in this country.

Our chief interest centres about the phosphate-supply. Some of our lighter and poorer lands have hitherto required very large applications of phosphates in order to crop or grass at all satisfactorily. The Department's experimental farm at Ruakura is a case in point. On the 22nd November last year one of the paddocks on this farm was sown with rape with 3 cwt. of basic superphosphate per acre. The same paddock in the previous year had been sown in wheat, also with an application of 3 cwt. of basic superphosphate per acre, or a total dressing practically within one year of 6 cwt. of basic superphosphate per acre. The maximum amount of phosphorus which could be removed by the wheat and in the bodies of the sheep which fed off the rape could not have been much more than the equivalent of 1 cwt. of basic superphosphate per acre, which would leave an equivalent of 5 cwt. basic superphosphate per acre in the ground. 3 cwt. of the same manure