

be, in my opinion, against the tenets of sound farming to plough them in for the purpose of increasing the humus-supply, even when the intention is specifically to prepare the land for the growth of more profitable crops or of pasture.

When these crops are consumed by sheep or other stock a little over half of the organic matter which they contain is retained in the bodies of the animals; the other half goes to form humus. But this 50 per cent. of organic matter in the form of dung is of much greater value than 50 per cent. of the organic matter of the original crop, inasmuch as it is not so subject to the great decomposition losses which take place when green stuff ferments after ploughing under. Another consideration: the dung is well distributed, whereas the green crop, being lightest on the patches most deficient in humus and heaviest on places already well supplied, tends to still greater irregularity in the fertility of the paddock after straight-out green-manuring. The loss of mineral elements of fertility in feeding off a crop is practically negligible. These are approximately facts from which one cannot escape the conclusion that humus should be maintained by what goes through the body of the animal rather than by ploughing down valuable crops.

*The Lime-supply.*—This is a matter which has agitated the minds of farmers in recent times from the North Cape to the Bluff. It is right that it should, as, generally speaking, lime is without doubt a very frequently limiting factor in the production of the soil. I am inclined to think that on the drier and freer working soils of the plains districts on the eastern seaboard of both Islands its effects will be scarcely apparent in the actual amount of production of pasture, although an improved quality in the pasture even there may be reflected in better condition of the stock. In nearly every other part of New Zealand systematic liming will be productive of much higher net profits than have hitherto been realized.

As an example of what I mean by "systematic" liming I would state the following case: A pasture has become worn-out and unprofitable. A minimum dressing of 10 cwt. per acre of crushed limestone is applied to it. It is turned over in preparation for a crop of oats or of roots. After these crops have been harvested it is ploughed again with a deeper furrow in preparation for a pasture mixture, with or without rape. A further dressing of 10 cwt. of ground limestone is applied on the ploughed surface, and worked in by subsequent cultural operations. The pasture seeds are then sown. The results that might be expected to follow