In fact, anything which is organic in its origin. All the above wastes have been successfully composted in the Dannevirke scheme. Of particular interest in this connection is the disposal of omasums, or more commonly known as " bibles " or " books," these being the third stomach of a beast and occur in slaughterhouse wastes. Normally these are particularly difficult to dispose of and cannot be successfully destroyed by ordinary burial or burning. Omasums were exhumed after six years of burial and were found to have undergone very little change in structure during that period, whereas when disposed of by composting were completely decomposed, as were dead horses, cows, and fish-shop garbage, in six weeks.

(*b*) *Methods Adopted.*—The basic idea behind composting is that raw material is decomposed outside the soil, an imitation of soil conditions being arranged in the heap or pit. The conditions are: aeration, non-acidity, moisture, but not sodden wetness, warmth and nitrogenous food for the bacteria. The various schemes for composting are based upon the provision of these favourable conditions. The great advantage of the compost heap over decomposition within the soil is that the heap can preserve, even in winter, very much higher temperatures, so that the speed of humus production is much accelerated. Raw organic matter in the soil will be very slowly decomposed during the winter months. Generally, the method used is an adaptation of the Indore system as pioneered by the late Sir Albert Howard.

(*c*) *Costs of Sales.*—The cost of establishing and operating the scheme to date is as follows:—

| | £ | s. | d. |
|---|---|---|---|
| Labour .. .. .. .. | 549 | 19 | 1 |
| Plant and materials .. .. .. | 435 | 14 | 9 |
| Miscellaneous cost .. .. .. .. | 29 | 4 | 9 |
| | £1,014 | 18 | 7 |

It should be pointed out that the above costs cover a considerable amount of experimental work. In order to improve the working conditions and generally increase the efficiency of the plant it is proposed to expend a further £1,000. The whole of this expenditure is in the form of capital expenditure and is of a non-recurring nature.

The material is selling very readily both in the borough and the surrounding district. Actually an offer has been received from a mercantile firm to take the whole output. The present selling-price is £2 per cubic yard or 5s. per manure bag, both prices including delivery within the borough. There are approximately twenty-four bags to one ton, and ton-lots are being sold at £5. It is expected that some 600 to 800 cubic yards will be manufactured this year. When it is possible to organize for the collection of the whole of the available organic refuse in the borough the annual manufacture will be in the vicinity of 1,200 to 1,600 cubic yards.

(*d*) *Agricultural Aspect.*—The results obtained by the use of the compost as an organic manure have been very satisfactory, the author himself having obtained good results in both the vegetable and flower garden. This experience is shared by others in the town. Also tests carried out in the growing of lettuces from seed by the Soil Survey Division of the Department of Scientific and Industrial Research, Wellington, proved that Dannevirke composts gave quick responses far in excess of those given by equivalent quantities of dried blood or sodium nitrate.

The stock of fully-matured compost available at the commencement of the current planting season was somewhat limited; consequently sales were also limited. It is, however, anticipated that a heavy demand will be made on the product in the autumn, particularly by farmers in the Central Hawkes Bay area.

(*e*) *General.*—From the results so far obtained it is quite apparent that the venture will earn a return for the ratepayers, which return should more than cover the expenditure incurred in the collection and composting of refuse and sludge.

Some criticisms have been made of the scheme, one being that selected refuse is being used. This is incorrect, as any and all kinds or organic refuse are being used, as will be seen from the list given earlier. Another and more general criticism is the amount of nitrogen recoverable by municipal composting. It should, however, be pointed out that it is the production of humus which is of importance.

The physical and bacteriological condition of humus may well prove to be of greater importance than its chemical composition. In any case it is an acknowledged fact that fertilizers cannot take the place of humus in soil fertility, although they may be required to supplement it.