

*Dune-sands from Rangitikei, Wellington, and Waikato Heads, Auckland* (E976/1-2 and E1027), were analysed for the Lands Department in connection with the problem of foresting the dunes. Organic matter, and therefore nitrogen and humus, is lacking, but the mineral plant-food, both available and total, is present in remarkably good quantities.

*Kaipara, North Auckland* (E1080/1-4), are various soils on which it is desired to plant orchards. They are generally deficient in total and available phosphoric acid, and sometimes in available potash. No. 1 is from limestone country originally growing kauri-trees; No. 2 is on limestone growing heavy manuka and cabbage-trees but not kauri, and is not considered so suitable for fruit-growing; No. 3 supported light manuka and tauhinu (*Pomaderris phyllicaeifolia*); No. 4 was originally heavy manuka and cabbage-trees.

*Maruia Plains, Nelson* (E1233).—A soil collected by the Geological Survey at the foot of the Spenser Mountains. These are micaceous soils, rich in available and total phosphoric acid and in total potash, lime, and magnesia, the ratio of the latter two being slightly unbalanced. They are similar to the grey mica-schist silts of the West Coast (see my 1908 Annual Report, p. 246, and Wire-basket Bulletin, No. 2, p. 8).

*Clarence River, Kaikoura*, soil (E1268).—This is a country of which very little is known. The lime and magnesia ratio is 1-1, and the amount of total and available phosphoric acid is low.

*Wanganui garden soil or sand* (E1537).—A soil which refused to grow anything, and probably owes its sterility to want of humus and consequent parching. Analysed for the Horticulture Division.

*Hastings, Hawke's Bay* (F159/1-2).—These are soils analysed for the Fields Division. No. 1 is deficient in available phosphoric acid and low in total phosphoric acid; well supplied with available potash. No. 2 is low in total phosphoric acid.

*Ruakura Experimental Farm, Hamilton*, soil (G394).—This is a remarkable swamp soil which in patches refuses to take the moisture and remains permanently dry, no crops growing on it. Analysis shows that all plant-food is present in good and even (in some cases) high amounts. The peculiar physical conditions which make it permanently dry have yet to be determined.

*Ashhurst, Wellington* (G488).—This is another example of water-proof soil—*i.e.*, a soil which will not wet. The ordinary chemical analysis shows nothing unusual.

*Lower Wairarapa* soil (G499) from Turanganui, near the outlet of the Wairarapa Lake. This shows a deficiency in phosphoric acid, total and available, and slightly unbalanced lime-magnesia ratio.