

## GRASSING OF CONSOLIDATED SAND AREAS, NORTHERN WAIROA, NORTH AUCKLAND.

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FARMERS are always interested in virgin land that can be quickly and cheaply converted into good pasture-land, and the consolidated sand areas of the Northern Wairoa offer considerable scope for development in this direction. The extensive grassing-work carried out in the development of this land for settlement under the Small Farms Act has shown that good permanent pastures can be quickly established on this land, provided the soil is carefully cultivated, permanent species of grasses and clovers are sown, and the pastures adequately manured with superphosphate.

Mr. N. H. Taylor, of the Soil Survey Division of the Department of Scientific and Industrial Research, who, at my request, made a brief examination of the area, supplied the soil map and wrote the following sections dealing with topography and soils.

### LOCATION AND CLIMATE.

The district referred to in this article as the sand country of the Northern Wairoa is a strip of land fifty miles long and approximately five miles wide, extending from Mangonui Bluff to Kaipara North Head, and lying between the Kaihu and Wairoa Rivers on the east and the sea on the west.

The mean annual rainfall for the district is 50 in., with 150 rainy days per annum(1). The mean monthly temperatures vary from about 63° F. in January and February to 50° F. in August(2). The area is swept by the prevailing westerly winds.

### TOPOGRAPHY.

The greater part of the district (a strip along the western side two to three miles wide) is an area of flat-topped spurs and steep-sided valleys, the floors of which are occupied by peaty swamps. In the north the flat-topped spurs reach heights of 400 ft. and 500 ft., but farther south few rise more than 300 ft. above sea-level. West of Mamaranui, where the streams are closely spaced, the bleak, scrub-covered spur-tops and steep valley-sides, scarred with white slips, present a most dismal appearance, but west of Dargaville, where the land is lower, broad flattish spur-tops are the most conspicuous features of the landscape.

The whole of this area is underlain by consolidated water-sorted sands, interbedded with which are small lenses of lignite. On the west the water-sorted sands are buried by drifts of wind-blown sand, but they appear again in an almost unbroken line of cliffs bordering the shore.

The blown-sand country of the west is of three types: (1) The older fixed dunes; (2) the younger fixed dunes; and (3) the bare sand-drifts.