

## WATERPROOF AND WAX-BEARING SOILS.

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FROM time to time instances of soils which will not wet have puzzled farmers, who have sent in samples from different localities for examination. These samples were, for the most part, small and represented areas widely separated.

A paragraph in my 1909 report (Annual Report of the Department, 1909, p. 469) mentions, under the heading "Abnormal Soil-constituents," three soils (J 194, from Mataroa; J 265, from Gisborne; and K 2161, from Pukutoatoa, near Woodville) to which the term "waterproof soils" had been applied, as it was stated that it was impossible for rain to wet them, the result being that nothing would grow.

Mr. C. P. W. Longdill, of Taihape, writing to the *New Zealand Times* in April, 1907, says, "At Mataroa, a small township on the Main Trunk line, six miles north of Taihape, there is a curious natural phenomenon in the form of a patch, several square yards in extent, of soil, or rather dust—for nothing will grow upon it—which seems perfectly impervious to moisture, so that, even though it rains in torrents and pools of water collect upon the area, a scratch on the surface causes the dust to rise and float on the top of the water as dry as a water-spider. Can you or any of your readers explain the reason of this? It is quite possible that this dust, being waterproof, might be converted into some substance of considerable commercial value."

Inspector C. Watson reported on this in May of the same year as follows: "I went to Mataroa and examined the soil, of which I am forwarding a sample. The patch of soil,  $\frac{1}{2}$  chain long by 2 or 3 yards wide, is located near Smith and Donald's sawmill, on the top of the bank of a creek several feet above the water-level. I did not ascertain the depth of soil. During the recent rain the surface of the patch of soil has been composed of thin mud  $\frac{1}{4}$  in. deep, and several pools of water have collected in depressions. When the surface layer of mud is removed the dry dust is found underneath. The ground adjoining is in grass; it has been bush-clad, but the bush has been fallen years ago and the bulk of it burned off; the surface soil is vegetable loam, with light clayey subsoil. Nothing is known locally of the patch of