

Mangawai.—About 50 acres has been dug, and of this an area of 25 acres could be turned into immediate use. There was one difficulty in the great quantity of kauri stumps and other timber which had to be disposed of. After the timber has been removed shelter-belts should be planted, and for this purpose black-wattle (*Acacia decurrens*) was suggested as the most suitable. He did not consider it would be advisable to burn the timber on the land, as the soil, being of a peaty nature, would be liable to catch fire. The land is well drained by several open drains, spaced about 2 chains apart, and connected with a main outfall drain. It would be necessary to tile the drains before the land could be ploughed. The land adjoining the swamp is partly flat and partly hills, with gentle rising slopes; the soil is of a peaty, sandy nature, with a clay subsoil. This land could be easily worked, and he was confident it could be brought into cultivation and by the application of lime could be made to grow almost anything. The swamp lands are well adapted for fruitgrowing and an ideal place for growing forage crops, such as lucerne, mangels, carrots, turnips, maize, and grasses. A crop of Algerian oats had been sown on an area of 10 acres of the land turned over; a good crop was obtained, successfully harvested, and subsequently cut into chaff. Pumpkins, cabbages, peas, and beans were also grown with good results. There is no doubt a great future for these lands if properly cultivated and limed.

Waihopo (Bulldog Flat).—About 40 acres had been turned over. The land is of good quality, the soil being a black loam intermixed with a little sand. If it is properly cultivated and manured (lime being essential) it could be made to grow almost anything. The land has been well drained by drains cut at 2-chain intervals, discharging into an outfall drain. The land is well adapted for growing grasses and forage crops, and he thought that fruit could also be grown. Shelter-trees would have to be planted before the fruit-trees were put in. Bulldog Flat is within half a mile of a boat-landing, and is about four miles from the Houhora Wharf at Pukenui. The timber lying on the surface would have to be got rid of before any cultivation could be done.

Waiharara (Big Flat).—An area of about 60 acres has been turned over here. The land is of good quality, the soil being a good black peaty loam with a little sand intermixed. The land is situated two miles from the Waiharara Landing, and is about six miles from the Kai-maunau Wharf. The land which has been dug has been well drained, like the other areas, and the timber is stacked on the surface. With proper cultivation and manuring the land would grow almost any variety of crops. *Acacia decurrens* should be planted for shelter, as was done at the Albany demonstration area. After proper shelter has been provided he thought fruitgrowing could be made successful in the Waiharara district. A small area of the dug land has been planted in oats; no lime was used, and the season was a dry one; all things considered a fair average crop was obtained.

Waiharara (Pausina's Flat).—This is a very good swamp: the soil is a rich, black, heavy loam, and once the land is cultivated it will be very productive. It is situated near the main road, and within a mile of the Waiharara Landing. It would be a suitable place for a demonstration area. About 12 acres has been dug and the timber thrown up on the surface; good drains have been cut, and a large outlet drain made. The land in this swamp compares favourably with the best lands in the Dominion.

Mr. Rowan also visited some of the kauri-gum swamps in the Northern Wairoa district. Referring to the swamps at Scarrott's, near Te Kopuru, he says, "There are three good swamps in close proximity to each other. This land, like other swamp areas, is of rich quality, and if thoroughly dug over the value of the gum recovered would probably pay for the cultivation if the digging is done in the same manner as it is being done at the Government face-digging works. The land could be cultivated and made to grow anything. Some of the Aratapu Swamp lands give a good illustration of what can be done by cultivation and manuring on gum lands. A good proportion of the hill lands adjoining the swamps could be worked with the swamps. I am confident if these lands were taken in hand and dealt with like the lands in the Far North they would prove a valuable asset to the Dominion."

Mr. Rowan also refers to "potholing" by the gum-diggers. He says, "It is a pity to see this land 'potholed' by the Austrians and other diggers. The diggers should be compelled to dig the land as the Government are doing, and so leave it in a fit state for cultivation later on. As it is now the land is so much potholed and left in such a bad state that it is practically of little use to any one."

THE GUM LANDS OF NEW ZEALAND.

The kauri-gum lands lie scattered throughout that portion of the North Island lying between latitudes 34° 20' and 38° 20' south, approximately north of a line drawn from Kawhia on the west coast to Tauranga on the east.

The total area of the gum-bearing lands was estimated in 1898 at 814,000 acres; of this area 435,000 acres were then Crown lands, the balance being made up of privately owned lands and Native land which had not then been through the Court. Of the Crown lands 276,000 acres were set aside in 1898 as kauri-gum reserves; since then about 120,000 acres have been withdrawn from the reserves for settlement and other purposes, the greater proportion of the land having been found to be not gum-bearing.

The gum lands are of two different classes—namely, the peat swamps and the clay lands.

The Clay Lands.

The swamps still contain valuable deposits of kauri-gum and other products, but the clay lands are practically exhausted as far as the gum-digger is concerned. Large areas of these