

being furnished for the formation of fire districts in order to provide protection from fire on Crown and also privately-owned lands on which flax is naturally grown or cultivated.

During each winter the heavier country in the northern portion of the Plains has been poached up by stock, with the result that the grass is detrimentally affected, with a consequent reduction in the carrying-capacity of the land, whilst the losses in stock have been above the average. Keen farmers whose lands suffer from this disability have been seeking a remedy, and at present some of them are considering the housing of their stock during wet-weather conditions. This experiment, which is a return to Old Country methods of farming, will be watched with interest. As the poaching of the land is primarily due to inadequate drainage, the surface-water not being removed fast enough, the remedy appears to be in improving the drainage, and especially on those portions of the farms used for wintering stock. The use of the mole-plough, on country free from timber, appears to offer big possibilities towards furnishing a solution of the difficulty, whilst the use of paspalum in conjunction with other grasses would assist in providing a more solid mat of grass, and one more able to withstand the weight of the stock. The question of the use of the mole-plough, as well as other methods of sub-drainage, is under consideration by the Agriculture Department, who propose carrying out experiments on this and similar classes of land.

The development of the peat lands is one which offers a big field for investigation. The shallow peats, especially where there is a fair amount of silt, are usually fairly easily developed, but the peat swamps about 15 ft. in depth and over are full of difficulties when it comes to the development process; and it appears to me that this particular phase of the question should be investigated by the Fields Division of the Agriculture Department in conjunction with this Department.

A general feeling of security and independence is indicated amongst the settlers within the reclaimed swamp area by the changes of recent years from Government control to local-body control, entailing maintenance of many of the completed drainage-works, roads, bridges, and other requirements of modern rural settlement. For many years the Department exercised all the usual functions of a County Council, Drainage and River Board in the district. Since 1923 control of approximately one hundred miles of roads in the settled areas has been handed over to the Hauraki Plains and Piako County Councils, and negotiations are in train with the Hauraki Plains County for the taking-over of control of some sixteen wharves within the area. The Horahia Drainage Board was formed in 1925 to undertake the maintenance and improvement of the drainage system of an area of 13,000 acres, and at about the same time the Elstow Drainage Board extended its district with a view to co-operating with the Department in the reclamation of freehold and Crown land in the Awaitei District. In August, 1927, the Tahuna Drainage District was formed to control the drainage of an area of 10,000 acres forming the southern portion of the Hauraki Plains District. The preliminary steps have also been taken for the formation of two more drainage districts—(1) in the Netherton District; (2) an area of 13,000 acres on the western side of the Piako River, including Ngatea, Pipiroa, and portion of the Waitakaruru district.

The continued rapid development of the district is undoubtedly largely due to the progressive policy adopted by the settlers and energetically executed by the local bodies already mentioned, also the Thames Valley Electric-power Board and the Hauraki Drainage Board. The latter is now amalgamated with the Horahia Drainage Board under the designation of the Hauraki United Drainage Board.

The total rainfall for the year was above the general average. The gauge at Kerepeehi recorded 47.35 in., the average fall for the past twelve years being 45.62 in. Rain fell on 163 days, but there were no excessive storms to cause floods, and drainage conditions were generally good. The annual rainfall recorded at Kerepeehi during the past twelve years is shown on the following schedule :—

Year.	Total Rainfall.	Wettest Month, and Fall.	Driest Month, and Fall.
1916-17	55.57 in.	Nov., 1916—6.65 in.	Jan., 1917—0.65 in.
1917-18	46.41 in.	April, 1917—5.67 in.	Dec., 1917—2.18 in.
1918-19	41.02 in.	Oct., 1918—7.47 in.	Feb., 1919—1.34 in.
1919-20	34.85 in.	Feb., 1920—6.10 in.	Dec., 1919—0.89 in.
1920-21	35.93 in.	Sept., 1920—5.10 in.	Feb., 1921—0.72 in.
1921-22	46.34 in.	Feb., 1922—6.62 in.	Nov., 1921—1.34 in.
1922-23	33.81 in.	Jan., 1923—4.14 in.	Mar., 1923—1.72 in.
1923-24	52.42 in.	April, 1923—9.76 in.	Nov., 1923—1.81 in.
1924-25	52.56 in.	April, 1924—8.55 in.	Mar., 1925—1.36 in.
1925-26	40.29 in.	June, 1925—6.67 in.	April, 1925—0.84 in.
1926-27	60.91 in.	May, 1926—8.86 in.	April, 1926—1.83 in.
1927-28	47.35 in.	July, 1927—6.29 in.	Jan., 1928—0.01 in.

The following is a general summary of the work carried out by the Department during the year :—

DREDGES.

Dredging continues to be one of the main features of the operations, and during the year the aggregate volume of excavation handled by the dredges was 652,413 cubic yards, chiefly in river-improvement and stop-bank and canal construction. The average unit cost was 7.32d. per cubic yard.