

Wharves.—Onekaka; Otanerau; Queen Charlotte Sound; Nelson Street Jetty, Auckland; Hicks Bay; Kutarere, North Auckland; Endeavour Inlet; Maori Beach, Stewart Island; Wairoa River; Warkworth Harbour; Hokianga Harbour; Whananaki, Whangarei; Pakawa Estuary; Nelson Electric-power House; Kennedy Bay.

Foreshore Leases.—Heathcote Estuary; Mongonui; Mercury Island; Hokianga Foreshore; Paremata; Purakunui; Stewart Island.

Harbour-works.—Gisborne; Hicks Bay; Bluff; Castlecliff; New Plymouth.

IRRIGATION.

During the past year the development of the various irrigation projects in Central Otago has been steadily carried on. No new construction works were started, but those in hand have been vigorously pushed on and extended.

Although the profit on the older schemes is not expected to pay a high rate of interest on the outlay (owing to excessive war costs, &c.), an examination of their position shows that in due course they will pay a reasonable rate of interest, besides rendering considerable indirect benefits. All the later schemes, estimated upon steadier known costs and experience gained, are based on water rentals calculated to return sound rates of interest.

Of the various schemes, two—that is, Ida Valley and Galloway, with which is incorporated Olig Terrace scheme—are now in operation on regulation lines, although a certain amount of construction work still remains to be completed on each. So far water has only been used on about half the area now commanded, and the water rentals on the areas actually served have not nearly reached their intended maximum. Practically every other scheme under construction is now in its final stages of development, and all were in partial working order during the year. It is expected that all of these will have attained to full working-order during the current year, though it will take a few more years before the areas are fully settled, and the land prepared to receive full advantage of the works.

The area actually irrigated under all Government schemes was 14,667 acres, divided among 200 settlers, as against 8,200 acres in the previous year. In their partial stages of completion the works are now ready to serve 47,430 acres, but on full completion, which is aimed at by the end of the current year, the total area commanded will be increased to 61,390 acres.

In addition to the Government schemes, individual company and local-body schemes are completed or in final stages of development to serve 18,000 acres of land. It is therefore evident that, as settlement increases and full advantage is taken of the water-supply made available, the next few years should see a great increase in the productivity of Central Otago.

The results of irrigation have everywhere been most satisfactory, as has been very noticeably exemplified on Galloway Flat. This small area, of about 1,200 acres, which was previously one of the most useless tracts of land, and which is yet only in the making as regards farm development, is now supporting twenty settlers. It is regularly carrying and wintering fifty horses and 250 head of cattle, and producing large quantities of surplus hay. During the year 120 tons of pressed lucerne hay, bringing as much as £7 per ton on truck, were railed away, and in addition about 2,500 sheep from adjoining runs are being wintered on the flat, by arrangement with the small settlers, who feed out lucerne hay to them. The feature of the small settlers providing winter feed for runholders as a side line is remunerative to them, and is affording such a saving in winter losses on the runs as to vastly improve the value of the run properties. Dairying is steadily increasing, and there are good openings for experienced dairy-farmers throughout the district. One ex-North-Island dairy-farmer has carried and is wintering thirty-one dairy cattle on a 62-acre farm, which is yet only partially developed.

A particular feature of the year has been the carrying-out of investigation for water-supply, and surveys and estimates necessary for consideration of further possible irrigation schemes. Further schemes have been fully investigated and proved satisfactory with respect to 74,000 acres of irrigable land in the upper Manuherikia Valley and Maniototo districts, and 6,500 acres in the vicinity of Arrowtown. Besides these, several other large prospective schemes are still under survey.

PROGRESS OF INDIVIDUAL WORKS.

Ida Valley Scheme.—With the exception of a few small distributary races which may be required to be constructed from time to time to cope with the requirements of various farms, all irrigation works in the whole Ida Valley scheme are now completed. The chief works completed during the past year were Poolburn weir, one measuring-weir at the Poolburn and another at Moa Creek, and approximately 2 miles of distributary race. The crest level of the Moa Creek weir was also raised, enabling better regulation to be attained and more economical use to be made of the water stored in the Manorburn reservoir. During the past season water was supplied to forty-four irrigators, who had under irrigation a total area of 7,200 acres.

Galloway Scheme.—Under this heading is now included the contiguous Olig Terrace scheme. On Olig Terrace it was originally intended to irrigate 1,600 acres, but works have not been constructed to supply this full area. It has now been decided to irrigate a lesser area, and the balance of the water previously allocated to the Terrace lands can now be diverted to Ida Valley. The total area commanded by races on the combined schemes is 2,250 acres, and of this an area of 1,650 acres was irrigated during the past season.

Manuherikia Scheme.—During the 1922–23 season only partial irrigation was available, but during the past season, although construction work was still proceeding, a full water-supply was available for all irrigators up to 18 miles. After the end of October, forty-three irrigators, who had a total area