

Of the areas marked on the map as suitable for irrigation (approximately 2,900 acres), about 600 acres is already being so treated; but irrigation on this class of land can only be made profitable when an abundant supply of water is obtainable at a nominal cost.

#### HAWEA BLOCK (IX).

From the outlet of the Clutha River this block follows the foothills to Lake Hawea, thence extending along the hill-foot, on the northern side of the Hawea settlement, to Sandy Point.

The areas marked on the map as being suitable for irrigation contain approximately 6,870 acres, the greater portion being the Hawea Flat, which possesses a rich soil, eminently suitable for high-class farming. By judicious cultivation excellent results are already being obtained without the aid of irrigation. At the same time there can be no doubt that this fertile plain could be rendered safer and more profitable if water were obtainable when required.

The balance of this block is poor pastoral country, much of it being river-shingle, almost destitute of soil.

#### TARRAS BLOCK (X).

This block includes the Lindis Valley, stretching from Sandy Point to the head of the Lindis Downs near Grumbling Gully, thence extending along the foothills of the Dunstan Range, below the Lowburn punt. It contains approximately 25,740 acres fit for irrigation.

This land presents features seldom met with, inasmuch as it embraces at least four distinct conditions—(a) land of quality and texture fit for irrigation, and so situated as to be commanded by available water; (b) land fit for irrigation, which cannot be commanded by water; (c) land suitable for agriculture without irrigation; (d) land unfit for irrigation under all conditions.

The belt of land suitable for irrigation, situated on the left bank of the Lindis River, is worthy of special mention, extending as it does for a distance of about thirteen miles between the northern slopes of the Dunstan Range and the Lindis River. It would be provided with sufficient water for irrigation, materially assist settlement, and at the same time assure the prosperity of a number of small grazing-runs, when the country comes to be subdivided.

#### GIBBSTON BLOCK (XI).

This small expanse is situated on the right bank of the Kawarau River, about midway between Cromwell and Arrowtown, and contains approximately 1,120 acres of land fit for irrigation, of which some 200 acres is already irrigated. The soil and contour of the ground are especially good, and the benefits of skilful irrigation are even now clearly demonstrated.

There is also a small area of good land at Waitiri, but from there towards the Cromwell Gorge the small river-flats, which were formerly covered with rich soil, have been destroyed by gold-mining.

#### MANIOTOTO BLOCK (XII).

This plain extends from the Taieri Gorge at Linburn to Kyeburn, and contains approximately 266 square miles.

Of this area some 108,700 acres is situated on the south-western side of the railway-line, and of these about 87,000 acres is fit for irrigation. The balance comprises (a) land which cannot be commanded by water, (b) land with irregular surface-configuration, and (c) isolated shingle-belts.

The soil is decomposed mica-schist overlying fine gravel intermixed with soil and clay. The greater portion of this land is deficient in humus, and where it has not been cultivated both the soil and the subsoil are extremely hard. Cultivation and the ploughing-down of leguminous crops, aided by a liberal supply of water, should materially assist in remedying this.

Where under cultivation the soil of the Maniototo Plain absorbs and responds readily to moisture, and there is conclusive evidence that when irrigated with discretion this large area is capable of being transformed into a highly fertile expanse, eminently adapted for grain-growing and the raising and fattening of stock.

On the north-eastern side of the railway-line the soil and its surface-configuration are very irregular, and may be described as pastoral country containing isolated areas of fairly good agricultural land, suitable for mixed farming without irrigation.

Over the major portion of this area the under-stratum is shingle drift from the Mount Ida Range, intersected with gullies and flats over which there is but a thin covering of inferior soil.

About Wedderburn, however, there is approximately 3,830 acres in one block, and several smaller patches in other places, where irrigation might be made profitable; but, owing to the smallness of these blocks and their scattered positions the cost of procuring water would be too great to be remunerative.

#### SUMMARY.

While engaged inspecting the various blocks of country reported upon, I came in contact with the members of several irrigation leagues, and many other persons similarly interested, and a good opportunity was thus afforded of noting the general opinion on the important subject of irrigation, which, epitomized, is "Give us water for irrigation, and the future of Central Otago is assured."

Where the soil is suitable and the natural conditions favourable I am of the opinion that irrigation, properly applied, will probably do all that is claimed for it. In the course of my inspection I could not help noticing that some of the essentials of good farming are in many instances conspicuously absent in Central Otago. With or without irrigation the average farmer