

has much to learn, or, at any rate, to put into practice, before the best results can be obtained from the soil. The most casual observer cannot but note the lack of thoroughness generally prevalent in the methods of agriculture. In many cases nothing approaching a reasonable attempt is made to pulverise the soil, the surface being left uneven and rough, thus permitting the moisture to escape instead of being retained in the soil to support vegetation, as it would were more thorough cultivation adopted.

In several instances where irrigation has been adopted the results are harmful, in so far as, through neglect to remove surplus water by drainage, the soil is becoming sour; and unless this is remedied, the land will become a barren moorland of rushes instead of thriving fields of grain or profitable orchards. Scarcity of labour has doubtless much to do with this, although negligence on the part of some owners is noticeable. It is not unusual to find a small family attempting alike the cultivation, stock-work, and every duty pertaining to a large holding containing perhaps several hundred acres of good agricultural land, without the aid of any hired labour, which, even were it desired, is not obtainable. Under such conditions irrigation could not be rendered profitable.

The question naturally arises whether, with land capable of being highly fertile, but now lying practically idle, the State should not encourage the adoption of more modern methods of agriculture, including irrigation, by instituting a series of field experiments in Central Otago, a large area of which can only attain its full productiveness by the aid of irrigation. On the other hand, it must be emphasized that irrigation can only become profitable by thorough cultivation, involving the employment of much labour directed with skill and intelligence.

Any scheme to provide an adequate water-supply for a large area must necessarily be expensive, entailing a fairly substantial price for water, apart from the cost of distribution to the farmer. I am informed by several trustworthy persons of long experience that the cost of distributing water, attending to water-races, &c., is not less than 10s. per acre yearly over the area treated. Add to this amount, say, £1 per week for each sluice-head of water used, and, assuming that a head of water, under favourable conditions, will irrigate 100 acres, the land becomes burdened to the extent of £1 per acre annually.

In my opinion, irrigation in this country can only be adopted with advantage where the land is sufficiently fertile to produce the best results, and where the occupier is prepared to pursue a regular system of cultivation. The irrigation of purely pastoral country can only be rendered remunerative when an unlimited supply of water is obtainable at a low cost—a condition seldom likely to pertain to the arid regions of Central Otago.

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