

working certain runs, the owners of which, though unable to grow feed, would be glad to procure hay, &c., from a neighbouring run better fitted for cultivation. We feel accordingly that provision should be made to allow the sale of produce under certain circumstances. As for growing winter feed generally in high-country sheep-stations, far more could be done in this regard. In many places it is quite feasible to grow cocksfoot, red clover, and probably lucerne, and such in years of heavy snow would be invaluable; while, if considerable areas were cultivated in this manner, the carrying-capacity of the runs would be considerably increased. Cases of such increase of carrying-capacity have come before us in evidence. So, too, on many runs where at present no winter feed is grown even turnips can be produced. At present it is not the custom to grow winter feed—a large run may pay well enough without—but in these days of subdivision the growing of such feed must become imperative.

It is this growing of winter feed which is greatly assisting to make the small runs of Central Otago profitable and increasing their carrying-capacity. There, where depletion rules, cultivation is absolutely necessary on the lower ground. Here, happily, lucerne can be grown in its greatest luxuriance by aid of irrigation, and even in fair abundance (say, two hay crops a year), by methods of dry farming. (See photographs appended to this report, together with their explanation.)

PART III.—IRRIGATION.

(Part (7) of the Order of Reference.)

Your Commission finds, both from observation and evidence, that the available water-supply within those areas where the rainfall is especially low is not at present being used nearly to the best advantage; further, that in addition to the data already in the possession of the Government, it is desirable that expert inquiry should be made into the sources of supply of water for irrigation conservation areas, together with the economical and modern methods of construction of races, and the approximate acreage of areas in Central Otago, North Otago, the Mackenzie country, and other portions of Canterbury (especially the driest parts of the Canterbury Plains), and Marlborough which could be profitably irrigated. In the past mining was the primary industry of Central Otago, but to-day mining has been superseded by agricultural and pastoral operations necessitating the more profitable use of the existing water-supply not actually required for mining. Recent experience shows that the time has arrived when, owing to the altered conditions, a complete revision of the law relating to water-rights is imperative.

Your Commission therefore recommends in this connection that a Royal Commission of those well versed in the question be set up at the earliest possible moment to take evidence in regard to all the water-rights in Central Otago, and to make recommendations to the Government with a view to framing legislation which will deal equitably with both miners and farmers and suit the changed conditions.

Wherever water-races constructed for mining purposes, but no longer used, are found to be suitable for carrying water for irrigation the present owners should receive fair value.

Irrigation of land in the drier portions of Central Otago has been carried out with more or less success for the past thirty-five years, and in every case it has given satisfactory results. This is especially the case in the most arid situations and during the hottest and driest summers.

As it is essential that the huge areas of practically barren country in Central Otago should be brought into a state of productivity with as little delay as possible, your Commission recommends that the Government move most energetically in this direction and with the utmost speed.

As irrigation on an extensive scale is practically in its infancy in the Dominion, and except in Central Otago very little has been done, experiments might be carried out with great advantage not only in Central Otago, as already