

## APPENDIX C.

## CHAFFEY IRRIGATION COLONY, MILDURA.\*

The progress of this settlement cannot but be noted with the greatest interest. It is giving striking proof that the arid waste lands of Victoria can be tilled and brought to sustain those who settle on them, thereby affording what is so much needed in these days of over-stocked labour markets and congested centres of population—greater scope, and more opportunity for working capacity. It is, by its example and teaching, assisting to develop a comparatively new but most important industry, by which the resources of the colony will be greatly increased, and is demonstrating to the farmers and fruit-growers of the country what irrigation properly employed can accomplish, and how best to make use of it.

In the Departmental Report for 1890, Appendices Nos. 8 and 35 were devoted to the subject of the Irrigation Colony of Mildura, and a phenomenal growth was predicted for it. The history of the past year fully bears out the wisdom of that prognostication.

The progress that has been achieved is, without doubt, largely due to the liberal manner in which the Messrs. Chaffey have interpreted their obligations. According to the agreement with the Victorian Government under which the Messrs. Chaffey entered upon the occupation of the present area, they were bound to expend on the land the sum of £35,000 during the first five years. There has actually been expended up to the 30th June, 1891, £275,000, though the colony will not be four years old until October, 1891. In addition to that, it is estimated that the settlers themselves have spent, in improving their land, £100,000.

The population has increased to about 3,000, and continues to increase. The additions to its fleet by the River Murray Navigation Company, in order to provide a service twice a week between Mildura and Morgan, in South Australia, and Swan Hill, in Victoria, which was found necessary to meet the increasing passenger traffic, have aided development by multiplying facilities for reaching the settlement.

The increase in population is marked in another way. The new school-house, opened about a year ago, has been found inadequate for the accommodation of the 350 children who attend it, and considerable enlargements have been found necessary. The school board has applied to the Department of Education for the erection of two additional school-houses in localities distant about four miles from the centre of the present township, a fact which indicates how rapidly the inhabited area is being extended into the country.

The building industry has been very brisk during the past year, numerous private dwellings having been erected within the town area. Mildura is not a match-box town, almost all the new buildings being of brick made on the settlement, where an excellent bed of clay exists suitable for the purpose. The demand has hitherto been in excess of the supply, though there are turned out over 40,000 bricks per day, but an American expert has been engaged to re-model the brickyards and enlarge their capacity.

Two new industries have been established—the manufacture of fire-proof porous terra-cotta ware, which, from its being a non-conductor of heat and cold, is suitable for the climate; and the making of paper pipes, to be utilized in the conveyance of the domestic water supply.

Of public buildings, the Custom House and Post Office have been completed for some months.

\* See Fifth Annual General Report by the Minister of Water Supply, page 22. Parliamentary Paper, No. 135, Session 1891.

The returns from the former give a good idea of the progress in the commercial life of the settlement, which indeed it may be reasonably expected from its position will yet become a valuable commercial *entrepôt* for the supply of the interior of the country.

Customs returns—

1888	...	...	...	...	£73 12 10
1889	...	...	...	...	1,723 11 4
1890 (nine months)...	...	...	...	...	3,226 7 10

The numerous issues of new Savings Bank books, as disclosed by the Post Office statistics, afford an interesting indication of the condition of the settlers.

The foundation stone of the projected Agricultural College was laid by His Excellency the Governor in April, 1890, on a prominent site in the principal thoroughfare—Deakin Avenue. Its erection is being pushed on, the contract for one wing having been let at £5,000. The importance of this institution—fully endowed as it is, one-fifteenth of the entire value of the land having been set aside for that purpose—not only to Mildura, but to Victoria, cannot be over-estimated. It will not only provide that technical instruction so necessary for the successful carrying on of agricultural or horticultural pursuits—and that, too, of the very best of its kind, of which there is already a sample in the skilled experts brought by the Messrs. Chaffey from California—but it will afford means for the higher general education of the young of the settlement, who will thus in no way suffer by being removed from the educational advantages of the city.

A Public Institute is in progress, for one wing of which a contract has been let for £3,160.

Tenders for a hospital, to cost £1,400, are under consideration.

There are now over 60 stores and places of business.

Two commodious new stables have been erected at suitable centres, each stalled for 25 horses; the company has in all 300. These buildings are intended to be utilized hereafter for fruit preserving and canning works, to provide which the Messrs. Chaffey have bound themselves, for the development of that most important branch of the fruit industry.

It is intended that the town shall be lighted by electricity, the Messrs. Chaffey defraying the cost of maintenance for the first two years. The machinery has arrived, and the installation will be at once commenced.

Outside the township area the horticultural blocks are everywhere dotted with comfortable settlers' homes, surrounded by their vineyard or orchard, from which the owners confidently expect to realize a competency.

## LAND.

The 25,000 acres now being dealt with were three years ago lying untouched, so bare that even rabbits were dying by hundreds on the parched soil, covered only by balar and mallee. More than 20,000 acres are in the hands of purchasers and cleared. Fully 6,500 acres are already cultivated, about 6,000 acres being devoted to vines or fruit trees, the remainder being under feeding stuffs, such as sorghum and lucerne, or cereals. The proportion of the amount of land under cultivation to that sold shows that it has been purchased to produce wealth.

The value of the land has steadily risen, keeping pace with the improvements effected, and will, no doubt, continue to do so, especially in the township, with the increasing importance of Mildura as a *commercial* centre.

Though the company has eighteen traction engines at work in clearing and cultivating, orders have been sent to England for four more, to enable it to get through the fast accumulating orders for grubbing and ploughing.

## IRRIGATION WORKS.

An engine intended to pump water from the River Murray into King's Billabong, the natural reservoir of overflow water which is such an aid to the irrigation system, has now been placed in position at Psyche Bend, on the river bank. Of 1,000 h.p., it will lift 650 tons of water per minute.

At the chief pumping station there has been erected a new pumping plant of 50 horse-power, double cylinders, with a lifting capacity of 20,000 gallons per minute, to raise water from the 50-foot channel into a part of the 70-foot channel.

A branch channel has been constructed at a level of 92 feet, as an offshoot from the 70-foot channel, from which the water is pumped into it by an engine of 25 horse-power, with a lifting capacity of 10,000 gallons per minute. This latter is the highest channel of the entire system, which, by having channels at the levels of 50, 70, 85, and 92 feet above the summer-level of the river, insures that land of various levels will be supplied by some one of the four.

There are now constructed 125 miles of main channel and 200 miles of subsidiary channels; 50 miles of various channels are surveyed, and, as the surveying parties are pushing beyond the 25,000 acre limit, are being daily extended.

The engineering works and the foundry have been greatly enlarged, and afford occupation for a large staff in these works and the other work of the settlement. The company's pay-sheet shows a disbursement of £7,000 per month.

Extensive timber storage and goods storage have been provided, and a building for cold storage of meat and other perishable goods, and the production of ice in summer, is in full use.

The entire township has been reticulated by wrought-iron pipes for the conveyance of the domestic water supply, which is pumped from the river.

Several hundreds of acres have been planted by the company with lucerne, and are irrigated to provide pasturage.

The construction of a wharf on the river bank will be undertaken shortly.

#### RETURNS.

The raisin industry is manifestly to be the leading one at Mildura; this partly from the evident demand, but also largely from the ease and cheapness with which, on this settlement, raisins can be prepared. The grapes are laid out on wooden trays, to be converted into raisins by the warm sun and dry atmosphere. Mildura is exempt from the fogs which are such a drawback on the Californian colonies at the drying season. This sun-drying preserves the aroma and flavour of the grapes, and raisins so prepared have been found marketable at 1s. per lb.

The fact that 4,000 of these trays were required for the present season's crop at this age of the vines shows the extent and earliness of the productiveness under scientific irrigation and intense culture. Twenty-five pounds of raisin grapes were taken from a single vine planted as a cutting in August, 1889.

Three successive crops were taken from a 10-acre block this season, the third picking amounting to 3½ tons. Another holding realised £8 per acre from raisin grapes. Apricots, peaches, and figs have all been treated by drying, and have been found excellent. Orange and lemon trees only two years old are found heavily fruited. Every possible fruit has been found to flourish amazingly, with the exception of apples, but Mildura oranges will yet become a feature.

The early and large returns which have been obtained are due not alone to the quality of the soil or the character of the atmosphere and climate, though these aid, but also to the methods of irrigation and cultivation practised and advocated by the Messrs. Chaffey through their staff of experts. The method of irrigation is one of "seepage," as opposed to flooding; the water being taken to the highest corner of each lot by a "head-ditch," furrows are then run alongside the rows of vines or trees, and the water allowed to flow to the end of these; the flow is continued for a length of time, varying with the season of the year, the state of the ground, and other considerations. After the water has sunk from the furrows they are filled in by means of a "cultivator," which is then passed over all the ground to keep it worked. A noteworthy feature of the vineyards and orchards, and to which much of the success is due, is their perfect cleanliness and well-worked surface, "cultivators" and other means of cleaning the ground being kept constantly at work. This constant stirring and culture of the soil adds materially to the result of the combination of soil, climate, and weather.