

raw vegetable produce has been much less than might have been expected; but this arises from intelligible causes. Of the several subjects especially selected for reward, olive oil, flax, linseed oil, hemp, cotton, hops, and silk, the only specimens actually forwarded have been of flax and hemp, and the Board have been able to award only one premium, and that conditionally, under the 2nd and 3rd clauses, though they have considered themselves justified, under the 4th clause, in awarding to Mr. Martelli, Mr. Kidd, and Mr. Craig, the amounts previously specified.

With regard to the experimental farm of Mr. Martelli, the following particulars relative thereto were furnished for the information of the Board:—

The farm in question is situated three miles beyond the little village of Lillydale, on one of the two roads to the Gipps Land diggings in the Yering Valley. A stream of very pure water flows down it, on its way to the Yarra. This stream, which used to flood the contiguous lands, Mr. Martelli, in conjunction with Mr. Castella, has conducted into an artificial channel, of about eight feet broad by four in depth, which gives the means of irrigating effectually about 3,000 acres of land. The flow is sufficient for working either an hydraulic ram or a turbine. From this main current Mr. Martelli has made a series of cuts, dividing the lower land into rectangular blocks of fifteen acres each, each of which, by the application of a few simple wooden gates, can be flooded. It is, in fact, simply the Italian irrigation system, well carried out, but the only specimen, it is considered, of the kind, thoroughly done, that has yet been seen in Australia. The total property consists of 320 acres. Of these, the upper half is poor thin soil; as the land slants, the soil becomes loamy, passing, in the bottom, into the richest alluvial mould. Upon the two last-mentioned soils the following crops are growing:—

1. Silk mulberry trees (six in number), seven years old, imported a year ago from Italy. These are very flourishing, but, being few, their chief value lies in proving that it is possible to bring out nearly full-grown fruit trees, with success, all the way from Livorno (Leghorn) to Melbourne.

2. Eleven thousand silk mulberries (seedlings). This is the one case, it is thought, in which the silk mulberry has been raised from seed in Australia; the others are from cuttings. The difference is, that the seedling grows slower, but lasts five-and-twenty years; the other goes off at about the twelfth. These plants will be able to give three pounds of leaves next year—equivalent to the production of about a ton and a quarter of raw silk.

3. Odessa wheat (six acres). This is the “grano duro,” *alias* hard grain, which makes both macaroni and vermicelli. The common wheat is useless for the purpose. The ordinary consumption of macaroni is not sufficient to make this, as yet, a matter of consequence for the colonists, as the sale of Colonial-made macaroni has been so limited that Messrs. Cavassa who have tried it, found it a failure, and had to leave for California. But there is no doubt that there will be a considerable demand for it with the increase of the population, and the introducer is *pro tanto* a benefactor, though hitherto an unsuccessful one.

4. Hemp (Italian). The difference in price between the common Riga hemp and the Bologna (Italian) averages about one-third in favour of the latter—that is to say, in the rough. If Riga be worth £40 per ton, Bologna is worth £60, which is the price that Mr. Miller will give for it. Hemp, unlike flax, requires a very rich alluvial soil, and Mr. Martelli, having grown a portion of his upon the upland (excellent for flax, but not rich enough for hemp), and having reserved a very large portion for seed will not have more than, at most, seven cwt. to show. What there is, however, is of excellent quality.

5. Hops. These are flourishing, but not sufficiently advanced to require special notice.

It will be seen, from the above brief *résumé*, that at least three thoroughly new productions—namely, seedling mulberries, Odessa wheat, and Bologna hemp—have been introduced by Mr. Martelli, of which the third is very important, the first *will* be so, and the second *may* be so. The most important innovation of all, however, is the perfect system of irrigation carried out, which Australia so grievously wants. Mr. Martelli has expended £1,300 on this work.

With reference to Mr. Kidd's piece of ground, cultivated for flax-growing, at Eltham, it is only a patch of indifferent soil; but, as flax will grow on nearly any soil, the fibre is not affected as to quality; and that which was seen by the member of the Board by whom the farm was visited, appeared to be particularly good as to quality. The quantity did not, however, exceed from four to five hundred-weight.

Not only has good flax been grown on this farm, but Mr. Kidd has converted a portion of it into first-rate flax-cotton, which, being something quite new, comes under the 4th clause of the Regulations. The great difficulty of growing flax to a profit in Australia is the price of labour. Some new machinery however, has been recently invented in America, which will rectify this. Mr. Kidd understands this, and is ready to import, at his own expense, if he could, upon arrival, receive a portion of the cost. It may be mentioned, that his taking the initiative has induced many of the small farmers in the neighbourhood to commence growing flax next season.

The Board received the following particulars relative to the farms of Mr. Craig and Mr. McAndrew:—

Mr. Craig occupies an allotment under the 47th clause of “The Land Act, 1862,” for the express purpose of cultivating flax.

In December last he had six acres of growing flax, besides a quantity of the previous year's crop in his barn; at a subsequent visit to his farm it was noticed that he had gathered his crop, but had no machinery either for preparing the flax or expressing the oil from the seed, of which he had saved a large quantity.

Mr. McAndrew, of Bellerine, is a grower of flax, and has fitted up machinery for scutching. He occupies the old Bellerine flour mill, which he has had fitted up with flax-dressing machinery. The machinery was at full work in May last. It is driven by a sixteen-horse engine, and consists of one set of flax-breaking rollers and two scutching-wheels, with provision for extending shafting so as to employ full power of engine.