

OPUNAKE, Taranaki, January, 1871.

There are two flax mills at Opunake, belonging, one to the Cape Egmont, and the other to the Opunake Company; both companies have extensive flax fields, leased from the Natives. The sites for their mills are excellent, with abundance of water for motive power, and for washing purposes. Considerable capital has been expended, and the buildings and drying grounds are good and sufficient; in fact, there are few other mills in the North Island equally good, and possessing such natural advantages; and Opunake Bay is a convenient and safe shipping place. The fibre turned out from the Cape Egmont mills is the better of the two, because greater pains are taken in scutching; but in neither is sufficient care taken to reject old and damaged leaves; consequently the sample is not so equal and good as it ought to be, and it can hardly realize a fair price in the London market. The green flax on this part of the coast is much damaged by a small "looper" caterpillar, about an inch in length, which attacks the under side of the leaf, and eats quite through the fibre, in patches from a-half to two inches long, and a-quarter of an inch broad. As these patches are numerous, the fibre is cut into short lengths, so that in scutching there is a great loss in tow. The plants growing in sheltered places were the most damaged, as the insect cannot so readily attach itself to leaves that were kept in motion by the wind. The caterpillars appear to have come to their full growth about the month of December, and they must have been very numerous at that time. The Opunake Company use Price's, Gibbons', and Murray's machines, and consider the small ones made by the first, preferable to any others. After stripping, the flax is washed by hand, and then floated down the tail race, at the end of which men are stationed to take up the flax, which is soaked for an hour in a trough, through which the water flows freely, and is then kept on the drying ground for twelve or fourteen days in the summer season, and for a longer period in the winter. The color is good, and it would be above the average if damaged leaves were rejected. The plant of the Cape Egmont Company is first class, and has been erected at considerable outlay. A 16 feet water wheel, 8 feet broad, set upon masonry supports, works smoothly, and puts in motion four of Price's smaller machines, and one of Fraser & Tinne's, besides two scutchers. After stripping, the flax is well washed by hand in the mill race, and then placed in cradles in the water for a couple of hours, being pressed down and trodden on by one or two men, so as to squeeze out as much gum, etc., as possible. It is intended to use wooden stampers for this purpose, and the colour and softness of the fibre would be much improved by this, or by any other beating process. Twenty-four hands are employed, the men receiving 5s., and the boys from 1s. 6d. to 3s. per day. A few Natives are at work, but European labour is preferred, as the former cannot be depended on for regular, steady work. About one ton and a-half of green leaves can be passed through each machine daily, and it takes at least 7 tons of leaf to produce one of fibre. The manager, Mr. Kelly, thinks that Price's machines are not strong enough, or sufficiently large; and that it would be an advantage if they could be set from the back, so that they might be adjusted by the engineer when necessary, without stopping the machine.

NELSON BROTHERS, Napier, 29th May, 1871.

The mill is ten miles from Napier, with about fifty acres of good flax swamp. It is worked by steam power, and two of Price's machines are kept going; water is abundantly supplied from two artesian wells, 57 feet deep. A constant flow is kept on the flax whilst passing through the stripper, and it is then put between wooden rollers, and washed in tubs in which fresh water is continually pouring, so that much of the gum or cement is separated before it is put out to bleach. It remains out for a week or more, according to the weather, and it is then scutched by a barrel scutch, and the uncleaned tips are cut off by a knife, which is fixed to the scutcher at one end of the beaters. Great care is taken in sorting and cutting the leaves, which are from three to five feet long, only, and these are separated into bundles of the three sizes, and the edges and keels are stripped off before passing through the machine. The leaves now used are of twelve months growth; the flax was cut fifteen months since, the three centre leaves of each set being left. Within that time there has been a fresh growth of four full-sized leaves to each set; and at the second cutting, the three centre leaves were again left, the four outer ones only being taken, and of these the two first were frequently rejected, as too much spotted and decayed for manufacture; proving that, under these conditions, after a second years growth, the leaves have passed their prime and begun to decay. This ground was formerly very wet, but from draining and treading it is now comparatively dry, and the growth of the plant is much improved, for the younger leaves are invariably longer, and more luxuriant than the older ones. This field of Mr. Nelson's affords an excellent opportunity for further observations, as the plants are most carefully cut, and it is under the constant superintendence of the proprietor. From those already made here, and in other flax fields, we may conclude that each set from an established vigorous plant, in suitable soil, will yield four good leaves for manufacture every year. Mr. Nelson pays 12s. a ton for cutting the leaves, and estimates that 5½ tons give him a ton of fibre; and he prepares about 1 ton a week, with 5 cwt. of tow. He pays his men £1 a week, and his boys 7s., besides their food; and estimates that the total cost (not including wear and tear, his own superintendence, interest on outlay, &c.) is about £15 a ton for scutched flax, besides 12s. for carting into Napier. He has been hackling some three tons of fibre, after scutching, and has produced a beautiful sample; but half of the fibre passes into tow, and he calculates that from 12 tons of green leaf he gets—

1 ton of fibre costing	...	...	...	...	£23	0	0
1 ton of hackled tow, valued at	...	...	...	...	12	0	0
5 cwt. of scutched tow	...	...	...	...	2	0	0
					<hr/>		
					£37	0	0

If the tow is worth the money above stated, the fibre would yield a good profit, as it is perfectly clean and uniform. Mr. Nelson sends a bale of this hackled fibre for the exhibition at Wellington.