

Five tons of green flax can be spread on an acre and a quarter of ground. This will yield about one ton of unscutched flax, so that a mill of two machines ought to have about five acres of drying ground.

The flax when taken off the green should be piled, and allowed to remain under cover in bulk for as long a time as possible before being scutched. During this period it undergoes a heating or sweating process, which has the effect of still further pulverizing the gummy matter that may still be in the fibre, and greatly facilitates the scutching operation. Mr. Potts reports that Messrs. Jenkins and Co., of Kaiapoi, after exposing the flax to the action of the sun and air for several days till sufficiently dry, place it in a store for two or three months, or even longer, and that the effect of this is to give the fibre a certain degree of mellowness, which renders it more suitable for scutching. He further explains that this mellowness is imparted by the gradual and gentle sweating which the flax undergoes whilst thus stored in bulk.

If scutched on being taken off the ground, the flax will break off short, and make too much tow, on account of the gummy matter still in the fibre. There are two kinds of scutchers in use, so far as yet known—the arm scutcher and the barrel scutcher. The former mode makes more tow than the latter, and does not dress the article so well. Some manufacturers do not scutch at all, but hackle instead. This appears to be a mistake, as the process of scutching is cheaper than hackling, and if the former is well done there will be no necessity for the latter. The ordinary quantity of tow in a ton of scutched flax is between three and four hundredweight. Mr. Potts mentions a very important fact in connection with the scutching process which requires attention, viz., the ventilation of the place where this process is carried on. The scutching process creates a large quantity of dusty matter, which is very injurious to health; and therefore, unless the premises are so constructed as to carry off all such matter, serious consequences must ensue. Mr. Kelly states that in the Egmont Mills, now in the course of construction at Opunake, on the West Coast, fans will be used to exhaust the air from the scutching-room, and thus carry away the dust out of the building. The attention of the owners of flax mills is particularly requested to this matter.

Many of the mills, it is understood, have given up scutching, and opinions are divided as to the best way of getting up the flax for the English market; but when it is considered that the cost of scutching is only 25s. per ton, and that unscutched flax, from its bulk, must pay at least that sum more in freight, and that a much lower price will be received at home for the one than the other, the obvious inference is in favour of scutching here, and though the tow will assist, so far, to lessen the difference, it is thought the wisest and the cheapest course to adopt this plan.

The packing is another important part of the process, as it is certain that a well-packed article will always command the best price, all other things being equal. Care therefore should be bestowed on this part of the process, and proper presses procured for this purpose.

Messrs. Price make a small press capable of making a bale of flax, containing about 2 cwt., costing about £15. This, however, requires to be filled and pressed down twice.

Messrs. Fraser and Tinne make a screw, 7 feet by 3½ in., which can press a bale down at once. The case must be made by others. The whole may cost about £30.

One of these presses is in operation in the Province of Auckland, having two boxes or cases, the one capable of being removed from under the screw and filled again while the other is being screwed down, thus making one screw do for two cases, and in other ways expediting the operation of packing.

Messrs. Price can supply three machines, water-wheel, all pulleys, scutcher, and everything necessary to start a mill, except buildings and receptacle for water-wheel, for £180.

In a large manufactory a hydraulic press should be used, as it saves re-pressing before being shipped. Indeed, but for the expense, it should be in every mill.

Captain Hutton, of the Waikato, bales with 3-strand galvanized wire, instead of flax lashings. He says that with 12 bales to the ton, and 4 wires on each bale, the cost of the wire (including carriage to the mill) is 6s. 3d. per ton of flax. His reasons for preferring wire are

1. Quickness.—He can turn out two more bales per week than with flax.
2. Strength and non-elasticity.
3. Safety in case of fire, from these lashings not being liable to burn.

He puts four shingles at each corner to prevent the wire cutting the flax, though this is scarcely necessary. Shingles are also used for branding bales, but when the ordinary flax lashings are used, these shingles fall out when the bales are handled in the ship, and those having the contents of each bale marked on them get mixed or lost. It is a better way to mark the contents of each bale on a slip of leather, fastened to the lashings. It would also be advisable to cover all bales with some kind of covering, so as to keep the flax from being soiled. The damage received from neglecting this precaution is often considerable, and, of course, the price obtained is proportionately diminished.

The foregoing is a general description of the usual modes of dressing flax by the machinery now in general use. In the Province of Canterbury several of the flax establishments visited by Mr. Potts adopt peculiarities which are worthy of special notice, viz. :—

1. Messrs. Pavitt pass the stripped flax, after being washed, under a grooved roller, which appeared to facilitate the expulsion of the gummy matter.

2. At Stoneyers Mill care is taken to separate the leaves into three qualities before undergoing any process.

(1.) The young leaves from the centre of the bush, which produced fibre of a clear white colour, and as strong as that from any other part of the bush.

(2.) The ordinary leaf, treated in the usual manner.

(3.) The old dry leaves from the outside of the bush, brown and much discoloured, which were laid aside in heaps to soften; and if too dry, they were now and then wetted. The effect of this was to enable an article of fibre to be produced which in July last was worth £25 a ton in London. This, however, is contrary to evidence obtained elsewhere.

3. At Mr. Wilson's, Rangiora, a water scutching machine was in operation, with favourable results.