

Copy of Letter received by Major GRAY from Flax Extension Association.—1871.

I was favoured with your letters of 1st August, and 31st December, 1870: the latter accompanying a sample of New Zealand flax, but no sample was received with your letter of August.

With reference to this fibre, it is more analagous to hemp than flax. Some time since one of our spinners procured a bale of best quality New Zealand flax from London, which he tested in every possible manner, and the following was his report to me on the subject:—"We have tried a variety of experiments on New Zealand flax, but in no way can we find it beneficial for spinning in connection with flax; it is more difficult than Russian hemp, and, at best, is only fit for heavy cordage."

I sent the sample which I received from you to a fibre merchant in London, and the following is his report on it:—"The sample you have received from Canterbury and sent to us, is badly prepared. You will find, on examination, that the gum has not been got out of it, while the fibre has been broken and injured, and its strength greatly impaired. In spite of its good colour we could not value it over £26 per ton, and in such a state it would be unsaleable in quantity." My correspondent continues:—"It cannot be too strongly impressed on those engaged in the preparation of the article, that if they injure the strength they take away the most valuable property of the fibre. We are inclined to believe that if the plant were cut young, and a proper mode of preparation adopted, it might be made fit for spinning into coarse numbers of yarn. Considering, however, the prices at which Italian hemp and coarse flaxes are sold, although we think the experiment deserves to be tried, we doubt whether it would be more remunerative to prepare the fibre for spinning than to prepare it perfectly for rope making. In preparing the article for rope making, the points to be kept in view are: to have the fibre of good colour, as thoroughly as possible cleaned from straw and from the gum which exists in it, and to preserve its natural strength."

This fibre is chiefly used for rope making, and varies in price, according to quality, from £36 10s. to £20 per ton; and lower qualities, called half-dressed, from £18 down to £14 per ton. During the year 1870, over 3,000 tons were imported into London.

I hope this will give you the required information. And now, let me direct your attention to the cultivation of flax used for the manufacture of linen fabrics, which varies in value from £240 to £40 per ton. I send you by post instructions for the culture and preparation of this fibre, which, I think, would answer in New Zealand admirably. I enclose you a small sample of the seed. Would you kindly mention what method is adopted for the separation of the woody matter from the fibre in the New Zealand flax. We find the process by fermentation the best for flax; this you will find described under "Retting," in Instructions. If it has not been done, I would suggest that this method should be tried with your flax, choosing *soft* water and warm weather. I send you the annual report of this association; and, if you wish for more information, I shall endeavor to procure it for you.

From DEVITT & HERR's Report.—London, 31st May, 1871.

New Zealand Flax.—* * The demand has prevailed almost exclusively for the well-dressed kinds, and the common half-dressed sorts (which now, happily, seldom appear amongst new imports), are quite neglected.

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It is a fact worthy of notice, that the deliveries have steadily kept pace with the imports all this year, shewing that there is a regular consumption going on.

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The time has now arrived for calm consideration of this fibre as an article of commerce, and we are very happy to speak most confidently of its future prospects. We have all along advocated *regular* shipments of one uniform well-dressed quality, and are now able to speak from practical experience of the advisability of such a course. We do not look for anything like fancy prices, but we certainly count upon a steady continuance of demand for the quality we recommend, at our quotations, which we are pleased to learn will leave a good result to shippers.

There is no doubt whatever that rope-makers have taken a liking to this fibre, and that Manilla hemp has suffered from the competition; but it is to be regretted that supplies are likely to fall for some months to come, as it is of vital importance that a regular supply should be kept up, as otherwise, consumers will lose their interest in the article, and their orders will be diverted into other channels.

NOTES on *Phormium tenax*, or New Zealand Flax, delivered before the Auckland Institute, 5th November, 1870, by THEODORE F. S. TINNE, Esq.

During a visit I lately made to England, I made a point of gaining whatever information I could about the so called New Zealand flax. The result of my enquiries I now lay before you in the form of the present report, and the samples I collected.

The first sample, numbered 1, is a piece of new rope made by an extensive firm of rope-spinners in Liverpool. A part of this rope was put on board a vessel, on which it was used during one voyage only, to New York and back, in a pulley block in the running rigging. An inspection of the sample No. 2, will show that the yarns that have been exposed to friction are entirely worn away, owing to the want of something in the substance of the flax to make the ultimate fibres adhere more firmly together, as they do in Manilla. It may also be seen that where the strands have "ridden" over each other, in the centre of the rope, they are somewhat chafed in the same way.

Sample 3, is a bundle of yarns from an old rope; they were given to me to show that one inferiority of New Zealand flax is that the old yarns will not work up for the centres of new rope, as they will in Manilla.