

V. *Experiments with Chinese Hemp Seed. In a Letter from Keane Fitzgerald, Esq. to Sir. Joseph Banks, Bart. F. R. S.*

Read January 17, 1782.

S I R;

Poland Street,
Dec. 17, 1782.

EVERY thing extraordinary in art or nature falls, in some measure, within the views of the Royal Society; but how far the following account of what appeared to me an extraordinary production may be worthy of being communicated to that learned body, is submitted entirely to your consideration.

A few grains of Chinese hemp-seed had been given to me by the late Mr. ELLIOT, brother to General ELLIOT, who had formerly resided for some time in China. He told me, the hemp in that country was deemed superior to that of any other, both for fineness and strength, and wished I would try whether it would come to maturity in this kingdom. He gave me between thirty and forty grains of seed for the purpose, which I laid by, as I thought, carefully, with intent of sowing them the spring following, which is the usual time of sowing hemp in this country; but I had unluckily forgotten where I laid them, and did not find them till the beginning of last June, by which time I imagined them to be very unfit for vegetation; but as I concluded they would be still more so by keeping them till the succeeding April, I had them sowed the 4th day of that month, and was much surpris'd to find that thirty-two
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of the seeds had vegetated strongly, and grown to an amazing size, several of the plants measuring in height more than fourteen feet, and seven inches nearly in circumference, by the middle of October following, at which time they came into bloom. There were from thirty to forty lateral branches on a plant; these were set off in pairs, one on each side of the stem pointing horizontally; the others at about five or six inches distance from them, pointing in different directions, and so on to the top, the bottom branches of some measuring more than five feet, the others decreasing gradually in length towards the top, so as to form a beautiful cone when in flower, which were unluckily nipped by a few nights frost that happened to be pretty sharp towards the end of the month; and the plants began to droop at the beginning of November at which time I had them pulled up by the roots.

As I was but little acquainted either with the cultivation of the seed, or preparing the plants afterwards for the production of hemp, and as these plants were very different in their size from any I had ever seen, the best method that occurred to me was, that of steeping them in water, where I let them remain for a fortnight, and then placed them in an upright position against a south wall to dry and bleach.

On trying whether the hemp could be easily separated from the woody part, I was agreeably surprised to find, that on peeling a few inches longitudinally from the root, the whole rind, from the bottom to the top, not only of the stem but also of all the lateral branches, stripped off cleanly, without breaking any one of them. The toughness of the hemp seemed to be extraordinary, and upon drying and beating divides into an infinity of tough fibres. The plants when stripped are quite white, and when the lateral branches are cut off, appear

like handsome young poles. They are perforated in the middle, but the perforation is not larger than that of a goose quill, in a stem of more than two inches diameter. The woody part seems pretty substantial, and if they should be found of any duration, might be applied to many useful purposes; or if not, I should imagine they would produce plenty of good ashes by burning.

The rough hemp that has been peeled from the thirty-two plants, when thoroughly dried, weighed three pounds and a quarter; but I do not think it had come to full maturity, though I can hardly doubt but the plants would have come to perfection if the seed had been sown in the proper season. The summer was remarkably dry, notwithstanding which, although the situation they were placed in was very warm, and the ground not rich, I found, on measuring the plants at different times, that they had grown nearly eleven inches *per* week.

As the culture of so valuable a kind of hemp as this promises to produce appears to be of consequence to a maritime and commercial kingdom, I have applied to the Directors of the East India Company, to give proper orders to their factors and super-cargoes in China, to procure some of the best seed that can be obtained; and send, even a small parcel, by each of their returning ships, which they have very obligingly promised; and from what has already appeared, there can be no doubt of its continuing in a state fit for vegetation for a much longer time than is usually required for that voyage.

If the seed should arrive in safety, I can hardly doubt of obtaining the assistance of the Society established for the Encouragement of Arts, Manufactures, and Commerce; and should expect, from their wonted assiduity and liberal disposition of
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proper rewards for the culture and manufacture of so valuable a commodity, to see it as successfully carried to perfection as several other branches have happily attained by their care and protection; and shall think myself very happy in being any ways instrumental in forwarding so good a purpose.

As you did me the favour of examining the plants in a growing state, I need not trouble you with any specimens from them; but if they should be deemed worthy of being laid before the Society, I shall send some of the hemp in the state it was peeled, and a piece of the stem it was peeled from, as also specimens of the leaf and flower, for their examination.

I am, &c.

