

se to be next to useless, and besides, the best of the doddered Flax-plants is only found measure twenty-four inches. As the plot then, speaks so favorably of the clean flax, so the plot B offers equally important evidence of the folly of sowing dirty seeds; and, besides, it shows how Dodder really is induced from seed like any other plant, seeing, by sowing its seed, we can produce it at pleasure, and that it has been introduced with crop-seed few botanists will doubt; for though it is found in most dirty Flax patches, it is not found elsewhere, and it is so little indigenous that though a Flax crop will sometimes scatter thousands of seeds of Dodder, yet succeeding crop is not affected by it, nor do I think that if clean Flax-seed again took its place in the rotation, we ought to expect it to be doddered, as our experiments show that flax when sown germinates as readily upon the action of heat and moisture as any other plant, not having its foster parent near it dies away or three days after germination.

The *Linum perenne* (perennial flax) has been an object of our earnest attention, as we have been anxious, if possible to procure a perennial plant. In this we have fully succeeded, though the present example, from the flax which it has occupied the plot, and the immense quantity of ripened plant and seed we have taken from it, now show evident signs of being: for it should be remembered that we have yearly taken a crop and restored nothing in the shape of manure, and hence its permanency is really a matter of surprise.

This, which was sown in 1858 from seed raised from plot C, is in a most vigorous state of growth, measuring forty-one inches in height, and stooling out so plentifully that we counted as many as 147 stems to a single root. Then, we conclude, that so far we have secured a freely growing perennial flax plant. It, however, is very small and comparatively useless. What its fibre may be we have had no means of determining, but what its relative value in this respect when compared with the usual crop or annual flax, we are quite sure that much may be done to amend its characters in any direction in which may be desired; and, as the changes which we have already effected in the appearance of perennial flax in only two generations is so great, it quite leads us to the hope that still more important ones may yet reward further experiments. The nature of these changes have been reported to members of the British Association for the advancement of Science, from whom we extract the following:—

1854, I sowed one of my plots with seed of *L. angustifolium* gathered at Hele, in Cornwall. It came up very well, and in 1855 I have been seen its plants in rows with stems a few inches long trailing along the ground, some with light, others with dark-blue flowers, somewhat small when compared

with the *L. usitatissimum* or *L. perenne*. In this state it presented little to recommend it as a cultivated plant. In the past year it had advanced to a strong and vigorous upright plant, somewhat more than two feet in height, with handsome dark-blue flowers, indeed rivaling the *L. usitatissimum* in size and beauty. As regards its fibre, I have as yet had no opportunity to make experiments; but if in this respect it should equal the annual flax, I cannot help thinking that we shall have in the *Linum perenne* a plant of great economic value.

“As regards the specific distinction of the *L. angustifolium* or *L. perenne*, I must after these experiments express great doubts; nay, I am almost inclined to think that *L. usitatissimum* is but an annual form of *L. perenne*, so that this year I shall collect the seeds of my perennial patch with a view of commencing an annual cultivation. At all events, should I fail in proving this point, we may fairly expect other changes of great interest, seeing that so much has already been done in bringing a little straggling linseed from its wild habitat, and cultivating in a different soil and climate, not by imitating its wild conditions, but by making for it a new soil, and planting in rows, so that one row has the effect of inducing the upright growth of its neighbor—a fact readily seen in examining the growth of my plant as its shoots first start in a trailing method—a circumstance which shows that, in order to test the capabilities of some plants for a crop, we can only do so, not by growing single specimen examples, but by planting a quantity side by side.

“As subjects for experiment, it fortunately happens that the linseeds are readily affected by cultivative processes, so that we possess in them subjects capable of affording much information as the result of carefully conducted experiments, which leads me to remark that, as there are some tribes of plants which we cannot so easily act upon, permanency of our appointed species must not be concluded from the failure of our limited experiments, though, on the other hand, species must give way in those cases where, as the result of properly conducted experiment, the seed of one plant can be made to produce what has been considered as a distinctly specific form.

Watch Manufacture.

Our fame as a clock-making nation is world-wide, for where can we travel—in Africa, Australia, India, or China—that a Yankee clock is not to be found, reminding the inhabitants of “the land of steady habits.” With regard to the manufacture of watches, we have also begun to do something creditable; still it is well known that the works of nearly all the watches sold in the United States are imported from abroad. The manufacture of cases for them is carried on extensively in a few places, but they are only lids to foreign mechanism, while a