

bility of obtaining, if possible, from its original source, a small number of real natural tubers, merely to afford renewed experiments, in relation to the existing disease. And there should be efforts made, *in time*, by every one who cultivates the potato crop, in order to arrive at a system whereby to lessen and check the disease as much as possible. The utter destruction of this malady in any particular country, and during any one year or season, would lead only to the miraculous. The theory advanced by some writers, whereby to destroy the potato disease by the production of tubers from the seed apple, is indeed very questionable. That tubers of a new or different variety may be thus produced is apparent, but since it is conclusive that the visitation is still endemic to the whole vast family of the potato, it *must* follow that renewed seed propagated in this way, will enter into life open to the same influences that are now attached to the parent plant.

The impression as regards the production from the seed of the plant, with a view to introduce a pure and healthful race, when first made upon the mind, led me to think along with others in favour of the experiment—but apart from such experiments that have been made, and their results—there remains in my opinion but one conclusive consideration, which is, that it would be just as reasonable to suppose, that the new-born child—because it is a new-born child—will thereby escape all or any of the endemic diseases to which the human family is liable, as to imagine that the potato produced anew from the seed, can be free from a disease to which its whole race have been predisposed during a lapse of seventeen years. That the root may be renewed, and in a measure improved in quality by the process there is no doubt.

In the year one thousand eight hundred and sixty, I had planted with potatoes about half an acre of light land; they were of three different sorts, viz.: Pink Eyes, Ohios, and a new variety called "the Prince Albert;" these were planted, each sort by itself. The crop in progress of growth received every attention, the yield was abundant, and in other respects large in size, sound, and of good quality. That season (1860) my attention was drawn to the very unusual quantity of seed apples that formed and matured, and I was induced to collect a great number of the largest of the berries, for experimental culture. However, as ill luck willed it, they were, after remaining a long time in state of supposed decomposition, mistaken for some useless compound, and thrown out of doors. In 1861, the same piece of land was put into culture of the carrot crop; and from the great care taken to subdue all kinds of weeds and anything that might vegetate, save the carrot plants, there was not even a solitary potato permitted to live from any of the few that might have been left in the ground the preceding year.

I have now to introduce a very interesting

phenomenon—if I may be allowed the expression in respect to the seed of the potato. I have stated that an unusual quantity of seed apples were produced in 1860. I have also declared that nothing of the potato kind vegetated in 1861. In 1862, the identical piece of land was a second time put under the carrot culture. Some few days after the carrot seed had vegetated, in looking through the drills, was observed that an abundant crop of very diminutive potato plants had sprung up; as more so on those parts of the land where the Prince Albert, and Ohio potatoes grew in 1860, as although the seed apples were seen in abundance on the plants of the Pink Eyes, but very few seeds of that sort seemed to have vegetated in 1862.

The discovery of these young seed plants afforded a wide field for experimental culture. I due time I selected a quantity of the most healthy looking young plants, and some of them were removed and transplanted to a particular spot, whence potatoes of a diseased character had been dug in the fall of 1861; this step was taken with a view to ascertain the contagion—if I may so term it—still lingered there. The other plants that were removed were transplanted into various parts in the garden—the whole of them received similar attention during the summer, with respect to cultivation—as did also a great many more that were left in favourable places amongst the carrots where they first vegetated.

When the produce of this seed crop was vested I did not find the yield thereof as I had been led to anticipate, viz., "small potatoes the size of marbles," but on the contrary some of them were extremely large—in those generated of the Prince Albert sort assured, some of them, as much as five inches long—there was no discernible disparity of size in any of the tubers raised from the Prince Albert plants—but in shape there was seen a marked change in a few, some of which were quite round, whereas the parent stock is that of a very pointed potato. In respect to the produce of the other plants, not only was there a disparity of size observable but also an unmistakable new variety of oval and round formed potatoes, and the clear white skin—the Ohio being natural pale purple. There is one thing I ought to remark, which is, the produce from the plants that were removed and transplanted was of a superior description to that found under the plants that remained undisturbed, although the whole that were harvested received equal attention in cultivation. This perhaps may be attributed to the death of some of the young tender plants caused in the act of transplanting them, which would naturally tend to strengthen those that remained uninjured; and although the tubers were not so great in number, they were much larger, and more fully formed, than those found under the plants that were left.