

last to the conclusion to adopt it as an entire substitute for coffee, as far as I was concerned.

The mode of cultivation I pursue is as follows:—In the fall, plough over a piece of rich land, if possible that which has just been cleared of potatoes, ploughing in as much well rotten manure as I can spare, as like Indian corn land, it cannot be too rich: early in the spring I again plough it very slightly, and harrow it till the mould is as fine as possible; I then divide it into beds from ten to twelve feet wide, and as long as the piece of ground. I procure a board in length equal to the width of the bed, and 12 inches wide, graduated on both sides every 12 inches. I lay this board across the bed, and standing on it, open with a small stick a shallow drill by the edge of the board; the seed, which has previously been steeped in water 12 hours, is then dropped in by hand, one grain only every 12 inches, the drill then closed with the edge of the stick I opened it with; then stepping into the alley, carefully turn over the board. Again, make another drill, planting and covering as before. By this means the plants will stand 12 inches apart each way, and if care is taken to use only good seed, by rejecting all which floats when steeped, almost every one will come up; should any blanks appear, I fill them up on a wet evening, from a small bed I sow in a corner.—All that is afterwards required is, to keep them clear of weeds with the Dutch hoe during summer, and when full grown by July, they completely cover the ground. About the middle of September I get some children to commence picking the ripe pods, which may be continued till the end of October or the beginning of November, as they do not all ripen together, they are then thrashed out and cleaned like other peas, but as they do not part from the hull so easily, some method must yet be devised, with rollers or otherwise, to shell them out quicker. The average return is about from two to four hundred pods from one grain, the plant herewith exhibited had about 370 pods when lifted.

In conclusion, Gentlemen, I beg leave to submit the above for your consideration, trusting, that should you consider it worthy of your patronage, you may award such extra prize as you may see meet.

I remain, Gentlemen,

Yours most respectfully,

WILLIAM MARCH.

To the Directors of the Provincial Agricultural Society.

[From a slight inspection of a dried specimen, we are inclined to conclude that the plant called above "the Canadian Coffee Plant," belongs to the vetch tribe, and it is said to be indigenous to this country. Mr. March received the Society's Diploma for exhibiting it at the Kingston Show, and we believe he is prepared to furnish the public with seed. We hope its cultivation will be fairly tested, likewise its qualities as a beverage, that the public may be satisfied in regard to its being of a nutritious character.—EDS. AGRIC.]

ON THE DISADVANTAGES OF DEEP PLANTING TREES.

From the Horticulturist.

An impression obtains among American gardeners, that trees should be planted deeper in this country than in Europe, on account of the greater warmth of the summer season. This impression is erroneous; it can only have arisen by imperfect observation, as it is opposed alike to comparative experiment and to every known principle of vegetable physiology.

Were not wonder and astonishment incompatible with the character of a wise man, one might think it strange that any person could be found in the universe, who

would persevere in doubtful practices when very simple experiments would often set disputation on subjects forever at rest. But, as Marryat's Stapleton says, "it is all human nature;" and so it must be endured, and the best made of it. Such may be said on the present subject. Let two hardy fibrous-rooted shrubs be planted side by side, the only difference being, that one be planted twelve inches beneath the surface and the other only six, and twelve months will show that the shallow planted shrub has much the advantage. If the soil be any way rich, the difference between them will be the more marked. I once had to plant a very wet piece of ground with hardy evergreen shrubs. I had not sufficient influence to get it drained. I had only to plant. Knowing well these trees would do me no credit if planted in such soil and in the ordinary way, I planted them on the ground. I had the ground dug up, as if for ordinary planting, laid the roots flat on the surface, threw on them broken sods, and covered the whole with fine soil. These trees afterwards afforded me as much satisfaction as any I ever planted. They contrasted strongly with the yellow appearance of others which had been planted in the soil before.

It is the bane of gardening, that it is afflicted with a host of mere theorists. Men of no experience whatever—wanting even an observing turn of mind—will often pass themselves off on the public as first rate gardeners. This acts injuriously on the prosperity of gardening in many ways. One is, that with inconsiderate people, theory is often underrated in its importance. This should not be. It ought to be an established rule, that no person should be deemed a first rate member of any profession, who is not able to tell *why* a thing is to be done as well as *how*. He should, in other words, be master of the theory of his profession as well as the practice. This holds good in the simplest operation. A scientific workman is worth two mere laborers: every one knows that. With these views, it is necessary to consider why trees should be shallow planted.

It has not yet been placed beyond dispute, that vital action, or life in vegetable organisms, is caused by electric agency. Many modern physiologists incline to that opinion. But so far as the principle has been tested by mechanical contrivances, it seems to be a failure. It is, however, certain that vegetable life derives an essential stimulus from heat. A great, probably the greatest, part of the heat necessary to the existence of vegetable life, is derived through the medium of the roots. Hence arises the necessity, that no impediment intervene to interrupt the relations naturally existing between heat and the roots. It is essential that the temperature of the atmosphere should generally approximate to the soil around the roots; because the evaporation of the juices of a plant through the leaves, by a given degree of heat, the same or nearly the same degree of heat can only supply, through the roots. And if the roots of plants, therefore, be in a colder medium than the leaves, more matter will be evaporated than the roots can supply; and if the roots are in the warmer medium, more matter is received into the system than the leaves can digest. In either case, death is the consequence. It is probable the temperature of the earth and air never coincide altogether; one being sometimes much warmer than the other, and sometimes the contrary. It seems to be an established principle, that vegetation is healthier the nearer these approximate. There is a great difference in the temperature of the soil at different depths, near the surface of the earth. Lindley has somewhere published a case, where a trial in summer gave 61° Fahrenheit, at 6 inches below the surface; and at 3 feet, 44°. The nearer then the roots are to the surface, the more equal will be the heat to the roots and to the leaves.

Even could these principles be inviolate, when deep planting is resorted to, it is doubtful whether plants