

appears to me reasonable, because established principles of natural history justify it.

It appears necessary:—

1st. Because the committee appointed by the Viceroy of Santa Fe de Bogota, nearly one hundred years ago, to investigate the same subject, after laborious research reported that the disease was caused by loss of vitality, which must be renewed by planting the seed from the vines; and further, after five years they reported that among the planters who had propagated new varieties from the seed balls of healthy tubers, not a rotten potatoe could be found. This is a matter of record found in the archives of the government. (See Mr. Williamson's statement Agricultural, p. 44.)

2nd. Because the well attested facts, stated by Mr. Smith, of Buffalo, as the result of his experiments prove the same thing. (Agricultural, p. 51., and Cul. p. 21.)

It may be stated also that the Savans of Russia, appointed by the Emperor, to investigate the subject have come to the same conclusion, and induced the Emperor to order from this country all the seed that could be procured, as stated here by the venerable Mr. Thorburn.

That the inference is fairly drawn from principles and facts in natural history I shall now attempt to show, and I hope to do it satisfactorily to every candid mind. It may be proper here to state some of these principles and facts—I offer the following propositions:—

1st. Although most plants may be propagated either by seed or by cuttings, the former method only can be perpetual: the latter can not be continued for any length of time.

2nd. The progeny of any plant will possess all the essential properties, and generally most of the incidental properties of the progenitor.

3rd. There is in the procreation of plants a tendency both to improvement and to deterioration.

4th. The better the condition of the plant at the time of procreation the better will be the condition of the progeny.

5th. Although great changes may be produced in plants, yet these changes require time and frequently many reproductions.

6th. The circumstances of soil, climate, and cultivation, &c. will do much to vary the apparent loss of vitality from age in plants.

7th. Plants that have lost their vitality are more subject to the attacks of parasites than plants in a vigorous state. Plants have their peculiar parasites but they are not always confined in their depredations to the plants in which they originate.

8th. The production of abundant blossoms few of which are succeeded by mature fruit, is an indication of loss of vitality, and generally on account of old age.

These propositions are too simple, and obvious to every careful observer, to admit any doubt. It would indeed, seem to be a retrograde movement in science to attempt to prove them, yet if granted, they are sufficient for my purpose: they will explain all the phenomena that have been observed and reported in relation to the potatoe rot.

The plant is said to be attacked by aphides, this is true, but as explained by the 7th proposition above—Plants that have lost their vitality are more subject to the attacks of parasites than plants in full vigour. Fungi have been found in great abundance upon the diseased plants. This is explained in the same way, but it is said the attacks of these same fungi are not confined to the potatoe, and hence it is inferred that they do not originate in a disease peculiar to this plant. Parasites often prey upon plants in which they never originate.

It is said again, that crops, in many instances, were less injured by the rot in 1846, than crops upon the same ground were in 1845; although the seed for the crop of 1846 was taken from the crop of 1845. This is explained by the 6th proposition, which also accounts for the different degrees of disease in different soils and with different manures. In short there is no well authenticated fact in relation to the disease, that may not be satisfactorily explained by supposing the cause to be from the continued propagation by the root, without renewing from the seed.

Although I have already said more than I at first intended to say, yet I cannot dismiss the subject without bestowing a passing notice upon some editorial remarks in the Albany Cultivator.

I regret that a person who stands so high, as does the editor of this valuable periodical, allow himself to take so superficial a view of this impor-

tant subject. In an article in the January No. p. 21, he says—"If it were true that the potatoe disease were wholly constitutional, as our correspondent supposes, the vegetable would be equally affected in all locations, which is not the case." This is a strange inference indeed! He might as well say, if a man is affected with the scrofula, or any other constitutional disease, it is of no consequence what regimen he adopt, he will be just as likely to die under one course of treatment as another. Again, he says—"If it can be proved that varieties of fruit degenerate by being propagated by grafting or budding, we should regard it as evidence that the potatoe might be effected in the way indicated." He must be a young man, or have spent his days among seedlings, not to have had opportunity of knowing by his own observation, that although the quality of fruit is not deteriorated but rather improved by grafting; yet the vitality of the graft cannot be protracted much beyond the natural age of the original stock. The choicest fruits of former times have all passed away, notwithstanding the efforts to continue them by grafting, and have been succeeded by new varieties, obtained from seedlings, many of which equal or surpass their predecessors. This is a fact so well established and so important, that it ought to be known to all interested in the cultivation of trees, and other plants; and especially to those, who, from their position, are to give direction to the opinion and practice of others.

Again he seems to infer from his own experience that the disease in the potatoe cannot be eradicated by planting the seeds. He says—"of the six or seven kinds produced from seed, nearly all were evidently effected (affected) by the potatoe disease." Yet he admits that—"One or two kinds seemed to have more natural stamina than the others, and continued vigorous till the close of the season." This is precisely the result indicated by the 3rd, 4th and 5th of the above propositions. It is not to be supposed that a deeply seated constitutional disease can be wholly eradicated from plants or animals, by a single reproduction.

His own account, however, shows considerable advancement towards renovation by a single experiment.

There is certainly enough of probability about this theory to claim for it a candid consideration. Let it then be fairly and fully investigated. Let experiments of planting seed be continued, and let the facts observed in all attempts, to renew the vigour of the plant in this way, be compared with the laws of propagation. If there are apparent discrepancies let them be published, and if they cannot be explained, by the principle of this theory, let it be abandoned.

An important step has already been taken by Mr. Smith of Buffalo, and his success has been as great as could reasonably be expected. It has, in fact, been in exact accordance with the fixed laws of nature.

This subject should be met by careful investigation, founded upon sound principles, and guided by common sense; not by that guessing method which knows no principle, unless it be to adopt the most popular opinion.

In conclusion, let me ask—is there not much reason to believe that if these experiments be continued not only planting seed but the seed of balls selected from the most vigorous plants: in a few years the potatoe rot will have wholly ceased, and this distressing calamity will have passed away.

To the Editors of the Canada Farmer.

GENTLEMEN—I beg to state for the information of your correspondent "Thisle Farmer," that a sure way of extirpating the Canada thistle is as follows:—Plough them early in the spring and continue ploughing them every two or three weeks during the summer. The next year pursue the same course and in the fall you may sow wheat, your ground will be in good order and you will not be troubled with many thistles. I have killed and seen killed, several patches of these weeds by this simple process. You will at once see, Messrs. Editors, that this plan is in exact accordance with the principles you so clearly explain. I substitute the plough for the hoe, which would require too much labour for a large patch. Wishing you every success—an increase of Canada Farmers, and the utter extinction of Canada thistles, I beg to say, I am,

A SUBSCRIBER.

Whitby, May 15th, 1847.

WARTS.—Warts on the udder and teats of cows may be easily removed, simply by washing them in a solution of alum and water. We have known this application to result favourably even after all other prescriptions had failed, and the disease seemed to have advanced beyond the possibility of cure. Try it.

FORWARDING BUSINESS—CITY IMPROVEMENTS.

From the Government wharf at the west to Gooderham's wharf at the East of the city is a distance of about two miles, along which is interspersed a large number of wharves, all showing signs of substantial improvement. The class of vessels employed in the Lake and River trade is every year getting larger; and it is found that the smaller ones have not the slightest chance of competing successfully with the larger. It is said by those who understand the subject, that when the canals to Montreal are completed, flour can be profitably carried from this city to Quebec for 1s. 3d. a barrel; though last summer the forwarders charged 2s. and in the fall 2s. 6d., and even higher than that. The Kingston forwarders have not yet published their tariff of rates, but it is said that they stoutly refuse to carry flour from Kingston to Montreal for 3s. and it is expected that they will demand 3s. 6d.

In noticing the improvements that have taken place in the wharves of this city since the close of navigation last fall, we will commence at the East and proceed to the West:—

GOODERHAM AND WORTS WHARF.—This is a new wharf, built during the winter, with a store-house upon it, by Gooderham and Worts, owners of the City Steam Mills.

The mention of steam mills reminds us that Mr. Cleal has just got a Steam-mill into operation in the vicinity of the market, in the Engine of which he has made some improvement.

MR. SMALL'S WHARF is the next as we proceed westward. A new Glue Manufactory and shed for drying have been built on this wharf during the winter. A new Steamboat, the property of Mr. Lamontaine, has been built at this wharf. She is intended to run to the Island, her proprietor having leased five acres of ground, from the City Corporation, near the Block-house on the Peninsula.

MR. CULL'S SHIP YARD.—A new three-masted Schooner, the *Iceland*, 130 tons burthen, has been built here during the winter. A new Schooner, the *Ardelia*, 75 tons burthen, has been built at Mrs. Maitland's old wharf since the fall of last year.

MR. CAWTHRA'S WHARF.—New buildings have been put up here for a Timber Yard.

MR. ALLEN'S NEW STEAM MILL.—The next important undertaking westward, on this line, is an extensive new Steam Flour Mill, which is being built on the property of Mr. Geo. Allen, son of the Hon. Wm. Allen, and which we believe is to contain six run of stones.

MACHELL'S WHARF, which is the next in order, has had a new Store-house built upon it during the winter.

FRONT OF THE MARKET.—The Corporation have put down breast-works, and are busily employed in filling up with earth, which when completed will extend to the esplanade hating about 80 feet.

MR. BOULTON'S WHARF has been extended 13 cribs in length during the winter.

MR. HELLIWELL'S WHARF has likewise been extended 9 crib.

MR. MAITLAND'S WHARF has undergone thorough repairs and extensive improvements. A new front has been put to it, and the old parts at the sides renewed. A new Store-house 100 feet by 60, and capable of holding about 15,000 barrels of flour, has been built at a cost of about £1000, under the superintendence of J. Johnston, Esq., Architect. The Custom-house has made it a bonding-warehouse. There are now three bonding-warehouses in the city, viz., Maitland's, Brown's, and Gorrie's. On Maitland's wharf there are 1000 barrels of flour and 100 barrels of oatmeal, for the Toronto Highland Relief Fund. A handsome new brand, "Highland Relief Toronto" has been made for the purpose of branding them. There are also on this wharf 50 barrels of flour for the Scarborough Highland Relief Fund.—[Examiner.]

"WE HAVE DONE WITH THEM."

Our readers must bear with us: we have an unpleasant subject in hand. The Editor of the *Cultivator* has thrown down the gauntlet; and the first law of nature, self-defence, bids us take it up. With that peculiar cunning, which characterizes the lower order of animals, the Editor of that paper attempts, in the outset, to get the better of us by placing us in a false position. Let the public hear his accusation:—

"In the April number of the above paper (the *Canada Farmer*) the learned Editors have thought proper to make three most unwarrantable attacks upon us; and indeed their short career has been pointedly marked with a tactless spirit of opposition to the conductor of this magazine, which strangely and strongly contrasts with the spirit we have, both in private and public, manifested towards them."

We deny the whole charge, and call upon the Editor of the *Cultivator* to produce his proof, not a title of which has he attempted to bring forward. That our allusions to the *Cultivator* have invariably been made in the spirit of candour and fair discussion, we appeal to our readers, we appeal to the public, we appeal to the whole contemporary press, which from Halifax to Wisconsin has noticed our labours in a most flattering manner. Unless the *Cultivator* produce proof to support his accusation, he will stand convicted of having uttered a deliberate falsehood. He claims great credit for "the spirit which he has manifested" to us in private. We acknowledge that until recently we have no rudeness or incivility to complain of. On the contrary, one of the Editors of this journal, was, after a very slight acquaintance, asked by the Editor of the *Cultivator* what Grammar there is, composed for children, from which he the (Editor of the *Cultivator*) would be likely, in the shortest time, to learn the rudiments of his native tongue. "Cobbett's Grammar" was recommended in the same friendly spirit in which the advice was asked. But, we are sorry to observe, that every subsequent number of the *Cultivator* bears conclusive evidence that our advice has not been acted upon. And now the Editor of the *Cultivator*, who cannot write a single sentence in English correctly, and whose journal, save a few extracts, would be a disgrace to the literature of any country, turns round and advises us "not to write on subjects we do not understand."

The Editor of the *Cultivator* never lets slip an opportunity of piling himself: "For the information of these Editors (of the *Farmer*) we would state, that we print an edition of eleven thousand copies of the *Cultivator*." "Print?" Pray, Sir, how many do you circulate? As this information is given for our especial benefit, we are, of course, at liberty to make use of it, and comment upon it in all its bearings. We have no doubt that two thousand, or thereabouts, of the *Cultivator*, is sent into the world at each issue, of which some hundreds have been, in a very unfair manner, thrust upon the members of Agricultural Societies; many of whom, however, have the good sense to leave copies addressed to them in the Post Office, rightly judging that it would be very foolish to add the loss of postage to the subscription.

The *Cultivator* has been got into circulation by the most barefaced jugglery that ever imposed on a credulous public. Before that journal came into existence, several really valuable American Agricultural journals were circulated in the Province. But on the establishment of Agricultural Societies in Canada, which the parrot-like Editor of the *Cultivator*, echoing the sentiments of American journals, recommended; and has since incessantly continued to chatter about; at this time, or shortly after, he made these Societies a crutch for his deformed banding to lean upon. So soon as he succeeded in getting it made part and parcel of these Agricultural Societies, his object was gained. The speculation was successful, and the Editor of the *Cultivator* set up for a Patriot! Somewhat different from the Patriot of former days.

There can, of course, be no impropriety in Agricultural Societies taking Agricultural papers; on the contrary, it is their duty to disseminate knowledge by such means; but it is not right that every member of an Agricultural Society should be forced to pay for a journal which all the more intelligent look upon with contempt. Valuable Agricultural journals have in consequence of this manoeuvre been nearly driven out of circulation; and the *Cultivator* has therefore inflicted a serious injury on the Agricultural interest. The thing was managed in the first instance by whining and spiritless appeals to the sympathy of the farmers; by fabricating stories about five-hundred pounds being lost in one year by the *Cultivator*; when, as any printer will attest, the whole cost