



The Field.

About Potatoes.

At the last monthly board meeting of the Toronto Electoral Division Agricultural Society, after the appointment of judges for the next exhibition and the transaction of other routine business, the following paper was read by Mr. John Paxton, of Brockton, and a vote of thanks unanimously accorded for it. We have pleasure in acceding to a request for its publication in our Field Department:—

"The potato was first described by Casper Beaubien a short time previous to 1599. But it is to Sir Walter Raleigh that we are indebted for the introduction of this now invaluable tuber. That gentleman established a colony in Virginia about the year 1586. From thence he soon after carried home the potato, and cultivated it on his own estate in Ireland. It did not, however, attract much attention, or come into general use for nearly a century afterwards. During the reign of James I it was considered a great dainty, for it is recorded that during the year 1619 some were bought for the royal table at one shilling per pound. The potato in its wild state is found on the western slopes of the Apennines. Though it was brought to Ireland about 1586-97, it is said to have been introduced into Spain previously to that date, and disseminated by the Spaniards throughout France and Italy.

It was, however, from Ireland that it found its way into Holland and Germany, and thence throughout Europe. In Asia, to this day, the potato is unknown, except where colonies of Europeans have established themselves. The climate of Australia is said to be extremely favorable to the culture of the potato; that is fortunate, as that fine country produces no esculent farinaceous root, if we except the roots of the edible fern (*Pteris esculenta*), which you will allow must be but a miserable substitute for a good potato.

In the beginning of the eighteenth century, a colony of Scotch Presbyterians, who had previously settled in the Province of Ulster, Ireland, but had failed to find that civil and religious liberty which they so much desired, emigrated to America and landed at Boston, bringing with them the first potatoes introduced into North America for culture as a field or garden crop. Hailing from the Emerald Isle, those colonists were called Irish, and hence the name 'Irish potatoes,' by which they are almost universally distinguished in this country from the sweet potato (*Dioscorea batata*), the latter being quite a distinct genus from our '*Solanum tuberosum*.'

In the year 1825 the crop was attacked by a disease called 'curl,' which caused the leaves to shrivel up and finally to fall off. The plant being thus deprived of the only apparatus by which it

could secrete those gases from the atmosphere which are so essential to the perfecting of the tubers, yielded almost nothing. From that time, the plant showed symptoms of disease, more or less, until the year 1846, when it was well nigh swept from the face of the earth by that fell disease, the effects of which show themselves to the present day. Thousands have tried to solve the problem, but so far all their well built theories have only proved castles in the air. Last year Earl Cathcart generously gave a prize of £100 for the best essay on the potato disease and its remedy; but though 90 competed, not one of them fulfilled the necessary conditions. Some of their statements were botanically incorrect, and none of them left the beaten track already well known to agriculturists, so that the prize was withheld. Such men as Mr. Paterson, of Dundee, Scotland, and the Rev. C. E. Goodrich, Utica, N. Y., left the deeply worn rut of theory, and like sensible men struck into the practical to find out a remedy, and have happily succeeded. Mr. Paterson was of the opinion that as animals were only calculated to serve their generation, it must be so with the potato plant, and that without a renewal every generation from the seed ball, it would so deteriorate either from disease or sheer exhaustion, as to become utterly valueless. Acting on this principle, he procured sets of all the healthiest varieties he could find, and planted them together. The bees and other insects carried the pollen of one flower to that of another, thereby infusing fresh blood into the seed vessels. The seed thus impregnated was sown, and the produce selected and tested year after year. The result of the experiment is that Mr. Paterson has given to Britain the "Victoria" and many other varieties, of first rate quality and free of disease. The farmers awarded him a gold medal for his labors, which he well deserved.

The Rev. C. E. Goodrich has given us, by a similar process, among others a seedling of 1853—the Garnet Chili—a valuable variety in itself, but still more so on account of its being the progenitor of our very best varieties at the present day.

The new varieties, if we are to believe the extravagant nonsense in some of our seed catalogues, are legion, and all that can be desired as regards quality, &c. One of these catalogues, in describing a new sort, says, "Thousands have testified that they never ate a better potato," and yet they immediately stultify their statement by saying that "this variety is now offered to the public for the first time, and all for a dollar per pound; C. O. D. Messrs. Buss & Sons, seedsmen, N. Y., last year offered \$3.00 in prizes for the greatest yield from one pound of the Early Vermont," and one pound of Compton's Surprise. The result was, that the 1st prize went to Minnesota for Early Vermont, for a yield of 609 lbs., or in round numbers, an average of over 1000 bushels per acre. The 1st prize for 'Compton's Surprise,' went to the same state for a yield of 511 lbs.

I believe that after a careful selection with an eye to quality, productiveness and immunity from disease, only three varieties are actually worth cultivating. At all events the following three have been thoroughly tested and have proved themselves the most valuable varieties. No. 1, Early Rose, a seedling from the Garnet Chili, originated by Albert Bresee, Vermont. This variety is too well known and appreciated to require comment on my part. No. 2, Peerless, another of Bresee's seedlings, raised from the same seed ball as the Early Rose. This is a splendid late potato, and destined to supersede all others. No. 3, Garnet Chili, the parent of the above two. The flesh as white as snow, mealy and finely flavored, very popular in our market, a good cropper—readily yielding 400 bushels to the acre in good soil. There is a spurious variety of a coarse earthy flavor often palmed off for the genuine.

A wet soil, a humid atmosphere, and raw un-fermented manure, will undoubtedly predispose the plant to the attacks of disease. A light sandy loam, with a fair quantity of well decayed manure ploughed in the previous fall, will grow potatoes of first-rate quality, and little liable to disease. It is a fatal mistake to plant too deep or too close, for solar light and heat are indispensable to the welfare of the crop. Large sets are preferable to small ones, for this reason that large tubers have large buds, which latter contain the embryo crop, and hence it is only reasonable to suppose that the buds which produce the strongest stems and leaves will produce the largest yielding tubers. Small sets only produce small stems, weakly shoots, and of course an inferior crop. The practice of breaking off the prominent buds in the spring is a bad policy, leaving only the tertiary or secondary shoots to produce the future crop. This impairs the vital principle of the tubers to a far greater extent than many would imagine.

A new enemy to this vegetable, in the shape of the Colorado bug, has made itself known to farmers during the past year; in fact, it nearly devoured my own crop, notwithstanding Paris green, &c. But entomologists tell us to keep our minds easy for the future; that it will soon run its course and disappear, pursuing its onward and devastating career to parts at present unknown."

A POTATO-SOWING MACHINE.—The *Journal d'Agriculture Pratique* states that among the new machines which especially attracted the attention of agriculturists at the recent meeting of the Palais de l'Industrie was a potato-sowing machine, invented by M. Cousteau, and constructed by M. Peltier, jun. By means of an ingenious contrivance, worked by a gear, the tubers, previously placed in a box, are carried successively into a pipe which opens and shuts automatically, depositing the seed with perfect regularity in the furrow made by a share with which the machine is provided.