

# THE CANADIAN AGRICULTURAL JOURNAL.

VOL. II.

MONTREAL, NOVEMBER 1, 1845.

No 11.

## THE POTATOE FAILURE.

We have copied much from our English exchange paper on the subject of the disease in potatoes, as the information may be useful, the disease being exactly the same that affects the potatoes in this country as in Europe. We before expressed our opinion that the disease first attacked the stalks, but we are certain that it was not from the effects of frost that the stalks decayed at once last year or this. In our own case last year, the stalks turned black in the hottest time of the month of August, before there was the slightest frost, and a third or a fourth of the crop was destroyed, principally the potatoes nearest the surface. This year the tops of our potatoes were not much withered up to the 13th October, the time we commenced taking them up, and very few were affected by the disease, and only those partly uncovered. The potatoes were very deep in the soil in consequence of the manner of planting them, namely, ploughed in grass land, previously manured by top dressing, placing the seed in every third furrow, as the plough went on, harrowing the surface after, and then passing the plough between every four rows of those planted, and shoveling the soil raised by the plough this time over the rows planted on each side. There was no further trouble but twice hewing, to keep down grass, but no other weeds appeared in the crop. We are aware that this mode of cultivation might not answer on all descriptions of soil, unless great care was observed to have the land well drained; but we think it would be possible to do this by shoveling out between every fifth row, and making it answer a drain for two rows of potatoes on each side of it. We have not the slightest doubt, that this mode of planting potatoes would give a better chance to the crop to escape the disease than any other we know of. The new fresh turf will be more likely to preserve the crop of potatoes healthy than soil in tillage the previous year, and manured when planting the potatoes. We recommend this mode of cultivation, having

tried it with success—but by all means, it would be prudent to have seed if possible from a crop not much diseased this year. We have examined the stalks, and potatoes effected with the disease, and in both we found small white transparent worms, and bugs nearly of the same colour. The insects were exactly the same in the stalk, and the part decaying of the potato, but they did not appear in any part of the potato except that which was decayed. Our potatoes and the stalks exhibited the same appearance last year, but as we then observed, we could not say whether the vermin was produced by the disease, or the disease produced by the vermin. The latter supposition appears the most probable, inasmuch as the sound part of a diseased potato has no vermin. On the other hand, if the disease first attacks the stalk, and the worms and bugs are first found in the stalk, which we believe to be the case, this may extend to the tubers, and first to those nearest the surface, and the diseased stalks which are generally found to be the most diseased. We find the disease, and the effects of it, but certainly, we have not yet seen any satisfactory cause assigned for a disease which was never before known in this useful root.

There may be some plausibility in the theory that is published, attempting to account for the disease, but there is no proof of its correctness. We observe no change in the atmosphere or climate, that has any effect upon the other plants cultivated, and why should it have on potatoes? The only cause we can see, probable is, that by our cultivation, we have produced a change in the nature of the potato, which first showed itself by dry-rot in the seed planted, and now by the same disease in the new crop while yet in the soil. The seed potato affected by dry-rot, and the potato now affected by disease while in the soil, exhibits exactly the same appearance, when viewed through the microscope, and has the same vermin. It is expedient, at all events, in planting next year, to procure seed from potatoes that has