

we embarrass ourselves with inquiring whether it is owing to this or that chemical peculiarity. It may be very true that the potatoes have formed unstable *casein* instead of stable *albumen*; or some other explanation may be more correct. For us it is enough to know that the *vitality of the potato is affected*. The living principle is changed; of that no doubt can exist; and such being the case, it is much to be feared that the disease of last year will continue to appear until, or except where the original constitution of the potato is recovered.

But we would not sound a note of alarm upon mere speculations. We grieve to announce that we have now before us evidence that confirms the view we have ventured to take. Among the *Bickon* potatoes above alluded to, was one which the most practised eye would, we think, have pronounced sound; its skin was clear, its texture uniformly pale yellow, with no tendency to change colour when exposed to the air, and its surface had not a blemish, with the exception of a small very narrow short streak on one side, which seem to have been the scratch of a fork. This potato pushed vigorously; its main stem is half an inch in diameter; it must have shown all the symptoms of the most robust health; and yet gangrene has attacked the haulm just above the tuber, and the usual blotchings have appeared upon the leaves. This potato plant is unequivocally diseased.

We will suppose that some trace of disease could have been found in this potato, by cutting it into thin slices, though we have failed to discover them by that process. Admitting this, yet it is perfectly clear that if healthy potatoes can only be discovered by such a process, the crop of next season is doomed, wherever sets from diseased fields are employed.

We therefore warn the country, in the most emphatic language that words are capable of conveying, to think well of what is coming; to plant no potatoes to which suspicion attaches; and, if sets from uninfected districts cannot be procured, to crop their land with something else. There can now be no doubt that in the absence of such precautions there is no security for the potato crop of 1846.

[Since writing the above, we have received confirmation of our worst fears. Mr. Errington, gardener to Sir Philip Egerton, at Oulton, in Cheshire, writes that in a garden near him, "the early kidney potatoes in frames are totally destroyed." He adds that he "saw the frames last week, and the stems had mortified from the leaves downwards, exactly as they did in the open fields, last September."

Mr. James Cuthill, of Camberwell, informs us that Mr. Hale, a market-gardener at Ware, in Hertfordshire, has had his early potatoes attacked with last year's disease; that "half his crop, amounting to about 60 lights, is gone;" that the plants "were looking well, and about 8 inches high, and all at once they were attacked." Mr. Hale, florist, Stockwell, saw these potatoes, and authorises Mr. Cuthill to say so; the owner was dusting them with lime.

We have received a sample of potatoes from Mr. Milburn, of Thropfield, near Thrisik, just taken out of the pits, and "quite sound as far as he can judge," in which indeed there is not the smallest outward sign of decay, and yet we find every one marked with the disease upon cutting into them. We are also informed that the forced potatoes at Col. Wyndham's, at Petworth, have proved to be diseased, although great care was taken in picking out what appeared to be sound sets. Of this last case, however, we have no certain knowledge as yet. — *Gardeners' Chronicle*

ON POTATOES.

Sir,—If you think the enclosed statement will be of any use, you are at liberty to do as you will with it. I wish a series of accurate experiments could be instituted on various soils; thus in a few years certainty would take the place of supposition. I would premise by stating that my farm is in Lincoln Heath, soil of good quality, on a limestone subsoil. The rows were 2 feet and a trifle

(not an inch) asunder. The potatoes were set 1 foot apart. The red potatoes (French) had been grown for some years on similar land; the white ones (Captain Hart's) were fresh seed from a distance of some miles.

I weighed many roots of each sort, but give the average weight of twelve roots—

No.	Number of Roots.		Number of Potatoes		Number of Potatoes		Number of Potatoes		Total Weight.	
	red.	whit.	red.	whit.	red.	whit.	red.	whit.	red.	white.
1	12	12	62	63	45	39	37	24	11 lb. 14 oz.	12 6
2	12	12	69	60	52	48	16	12	11 2	12 1/2
3	12	12	68	48	36	33	33	15	8 11	9 6
4	12	12	63	69	44	45	9	24	9 6	11 15
5	12	12	58		40		13		9 1/2	
6	12	12	62		33		21		10 6	
7	12	12	53		34		19		7 14	
8	12	12	65		64		11		7 9/8	

How manured:—

1. Lime and salt 70 strikes per acre, 2 strikes of lime to 1 strike of salt. It had been mixed several months. It was put on very accurately.
2. Nothing whatever.
3. Soot and salt mixed, 2 parts soot, 1 part salt; 35 strikes per acre.
4. Fresh soot; 35 strikes per acre.
5. Well manured with rich oil-cake manure made by sheep.
6. Heavily dressed with a compost of twitch sods, rotted by the application of quicklime, the layers of each being watered with strong brine as the compost hill was made.
7. Heavily dressed with a compost like the last, excepting the brine.
8. Guano, 17 ounces on 18 yards in length on the drill, i.e., 4 cwt. per acre.

It will be seen that the diseased white potatoes were as 1 in 2 1/2, and that numbers 1, 2, 3, and 4, the diseased red ones, were as 1 in 1 1/2. Whether the comparative results here given are the effect of the season, or whether they will prove generally correct, further experience alone can tell. In picking twelve roots which were as wide apart as any I could find over the variously manured pieces, I found 79 potatoes, weighing 10 lb. 6 oz.; in picking twelve roots as close together as I could, I found 68 potatoes, 9 lb. 12 oz.

CAUTION.—DISEASED POTATOES.—Our attention has been called to a circumstance which may be of service to those who are employed at the potato mills among the diseased potatoes. Two men belonging to the town, employed some weeks among the potatoes preparing for the new mill at Friartown, happened to get, one a thumb, and the other a finger, slightly scratched, but so trifling were the wounds, that they paid no attention to them, and continued at their work for two or three days after. The injuries, however, continued to increase in severity, the limbs having become dreadfully swollen and painful, they were obliged to drop work. The swelling, accompanied with the most severe inflammation, continued to increase, extending along the hand and up the arm; and to such a state has it reached, that at the present time it is doubtful whether both the workmen may not require amputation of their arms to be performed. A boy, about eight years of age, while engaged in grating diseased potatoes, about five weeks ago, to make weavers dressing, got a finger scratched upon the grater, and is also in a state of suffering similar to that mentioned. This leads to the belief, that there must be some highly poisonous quality in the potatoes, of which it would be well for those who work among them with broken skin to be aware.—*Perth Courier*.

CONSUMPTION OF GUANO IN ENGLAND.

One hundred and thirty-seven thousand and three hundred tons of Guano were consumed in this country between the 1st of July, 1844, and the 1st of July, 1845.