

quence of the horizontal direction of the stems, a greater chance of falling on the bare soil and perishing, than of descending to and about the tubers. This method, when modified by planting the tubers in raised beds as hereafter described, gives most satisfactory results, the tubers being fine, full flavored, and diseased in the ratio of from one in fifteen to one in fifty.

The Russian Professor's principle resolves itself into the conviction of the existence of the disease-generating agent on, in, or about the seed-tubers, and the remedy thereby suggested seemed plausible enough; it was to effect its destruction by artificial heat; viz., by drying the seed tubers in ovens until they were shrunken and wrinkled to almost apparent destruction. Potatoes so treated grew in the ratio of 66 per cent.; their stems were, as a rule, weak, and became infected as soon as any other; whilst the tubers, moderately sound at the getting-up, rapidly rotted at the proportion of 60 per cent.

Mr. Short offered to the public a remedy which, at first sight, seemed to be the most feasible, and of the greatest avail, of any heretofore proposed; it was given as original, and, as far as he was concerned, probably was so; but it had been previously carried out in principle by ourselves, and stigmatized as scarcely worthy of comment. It consists in planting the tubers in ridges; the former six inches apart, the latter thirty; and as soon as the disease is unequivocally established in the haulm or tuber, in turning down the stems, and covering them with six inches thickness of soil. Now such a plan is, *in limine*, laborious, expensive, almost impracticable in some gardens, from scarcity of soil, and, practically, of scarcely any worth, even when all the skill and patience of the most liberal experimenters are thereon bestowed; for if you cover the haulm on the first appearance of the disease in the leaves, you do it at a time when the young tubers are no larger than marbles, or to be more precise, from $\frac{1}{2}$ to $\frac{3}{4}$ of an inch in diameter, and though they are absolutely sound, they are of no culinary usefulness; again, if you wait till the disease has advanced further down the stem, till the tubers are tolerably fine, and only just tinted, here and there, with the disease, you find the great heat and moisture evolved by the decaying stems and the fungus thereto adherent, so to favour the spread of the disease, that in one week the number of diseased would reach 1 in 10, and go on rapidly increasing till your potatoes would be diseased in the proportion of 1 to 6. Moreover when the haulm is covered with earth, all true ripening processes at once cease, and Mr. Short was premature in his remarks on the quality of the tubers grown by his method, as they always are, and must necessarily be, smaller, closer, and less flavoured when cooked, than the typically perfect tuber, but comparatively good when the generally inferior quality of the potato crop is considered.

OWN METHODS.—No. 1. When the haulm is diseased about half way down, cut it off close to the ground, rake the soil over the lower portions of the stems, and leave them in the ground one month; this plan is simple, inexpensive, and gives in most seasons a very fair result, e.g., in the best of our yields only three, in another only ten per cent. were diseased; the potatoes, in all cases, were of good size, fairly mealy when cooked, and kept remarkably well.

No. 2. Plant the seed tubers in ridges, and when the disease appears in the haulm turn it right and left, as in the Hornsey method, and place a little earth over the roots; then proceed as in the previous (own method No. 1) and you will still have better results.

No. 3. Decidedly the best method hitherto made public, but one unfortunately almost too tedious and expensive to be carried out except for experiment, or in those gardens in which to expense is of so much consequence as an abundant crop of fine sound potatoes, is the following:—Manure your land in autumn, ridge it afresh on some mild day in the winter, and at the planting season raise therewith a series of beds or ridges 30 inches distant from each other, as high as half of the intermediate soil on each side will admit of, and pointing northeast and south-west; in these let a trench be made eight inches deep, therein the seed tubers placed six inches apart, and the whole covered with soil as fine and light as procurable. (We find the best time for planting potatoes, to be treated on this plan, to be from the middle of March to the 10th or 12th of April); after the haulm is well up, rake the soil up each side of the ridge to the stems, once or twice a month, and when the disease appears, carefully watch its progress, and when the disease appears, carefully watch its progress, and as soon as the main stem is affected, strip off all the leaves and the diseased part of the main stem, carrying them carefully away, and deeply bury them, leaving the detached stems to desiccate, or to throw out fresh leaves for one month. On a fine dry day get up the tubers, remove all superfluous dirt therefrom, and when perfectly dry, stow them away for spring use, resting assured that all you had rotten in the spring were tainted and overlooked at the harvest; this method gave in one instance only one, and in another only two and a half per cent. diseased, in both of which cases the tubers were fine, of excellent quality, and kept perfectly sound.

From the above and other similar investigations, we may make the following general observations:—

No. 1. The fungus, as a rule, first attacks the stems (but not necessarily so), and then descends to the tubers.

No. 2. The extirpation of the disease from our island is an impossibility, except by a universal concurrence and through a series of preventive measures.