

large crops of turnips from the same land is yearly increasing, and to point out the advantage to be derived by a more extended cultivation of mangold wurzel, for on all descriptions of soil too heavy for producing turnips, its cultivation may be adopted with the utmost certainty of success, of all the known cultivated root-crops it is less liable than any other to become attacked by insects or by mildew or blight of any description. Provided the temperature is high enough, and the moisture moderate, it flourishes almost without interruption; and its keeping in perfection for so many months together without the slightest deterioration, places it, in our opinion, at the head of our winter supplies of cattle food.

An opinion has become prevalent that mangold-wurzel is not calculated for feeding cattle before Christmas, and not even then with advantage until February is past; and we confess that for many years we ourselves laboured under the same misconception. But we have since discovered that the cause did not arise with the roots themselves, but in the mode of their application; and if instead of feeding cattle upon them alone, they are combined with sufficient cut-straw chaff, none of that violent scouring will ensue, and both roots and leaves may be used with decided success by the combination.

With the Swedish turnips, the same mode of application may be made, with advantage; but it does not become in their case, absolutely necessary that such practices should be followed, as they are not liable to produce relaxation of the animals to any extent so as to become injurious when used alone. But it must have become notorious that they yearly become more difficult to produce upon land on which they have been continuously grown for many years, whilst the numerous diseases to which they are liable, and the attacks of insects to which they are subject, renders them more and more difficult to obtain as we proceed; and that upon most land which has been devoted to their production, a progressive depreciation, both in quality and quantity, has been for a long time taking place; and with the common turnip a similar depreciation is equally apparent.

The potatoe is also another example of a root depreciating in quality, and becoming liable to diseases which a few years ago were not known to prevail; and the extreme difficulty that we now have to secure a crop of this valuable esculent has become so apparent, that, under certain conditions of temperature and moisture ensuing, little chance exists of securing a crop of healthy tubers.

The attack that has taken place this season has, we believe, been almost as universal as in other years when nearly all the tubers were destroyed, and would doubtless have been attended with like results had the temperature fallen as low as upon previous occasions. The amount of rain that has fallen during their growth has also been less—not, perhaps, in precise quantity, but less in saturating property, owing to the extreme dryness of the sub-soil, consequent upon the absence of almost any rain having for nearly a year previously penetrated to any considerable depth and it is entirely to these circumstances that we attribute the successful result that is this season accomplished.

From the closest observations we have been able to make, we have invariably found, upon the same plot, that those plants least exposed to cold and moisture uniformly escape with least injury; and in several instances that have come under our notice this season, we have observed that the stems have not been affected where the plants were growing next a

wall or other shelter, whilst those that were farther removed from such protection, suffered to a greater or less extent in proportion as they were removed from it. In the memorable blight that first occurred, the same result then took place as regarded the greater or less injury sustained by the tubers; and although the latter this season have escaped injury, had the temperature fallen a few degrees lower for two or three days at the period when the rain had become prevalent in July, the same catastrophe would most probably again have happened.

It is not our intention to urge this subject unnecessarily. Our object is rather to show that the continuous propagation of any description of plant upon the same land for a series of years tends to a depreciation of its productive qualities, and that such depreciation is pretty certain to be adopted to prevent such a recurrence? We hold that a change either of the land or description of crop is that obviously the best to secure that end. If after Swedish turnips or cabbages mangold wurzel or potatoes were grown in the next rotation, and then common turnips or rape, and so on from year to year, so as to obtain the longest period possible betwixt the cultivation of any description of crop in particular, the object would to a great extent become attained. Upon a proper rotation of crops the main success of all cultivation depends; the cereals alternating with the legumes, root crops, and grasses, constitutes the true application of the science of agriculture. Will it not, then, be attended with corresponding success to produce an alternation with our root crops, as before stated? So firmly are we convinced of this, and so rational must it appear to others, that we believe we should hardly be accused of making converts to our opinions, but we trust, notwithstanding, that we may calculate upon being the means of directing investigation and inquiry into its right channel, and also for a beneficial purpose.

#### CURE OF DISEASED POTATOES.

On Tuesday last, we witnessed the experiment of Mr. Meekins, in the cure and preservation of diseased potatoes, in Leinster Lawn, the premises of the Royal Dublin Society, according to the public announcement. The experiment was made on half a ton of potatoes, in the proportion of two hundred-weight diseased, to four hundred-weight sound potatoes, and has been conducted in the following manner:—The sound and unsound potatoes are mixed, and packed in a potato pit on the common plan, in layers of single potatoes, like eggs for transit, and then some finely-pulverized subsoil, from Mr. Meekins' farm, spread over them so as to fill the spaces between, on which another layer of potatoes are packed, and so on till they are built up in the shape of the common potato pits, covered with straw, and then again with earth in the usual manner, where they are to lie entombed till February next. Such is Mr. Meekins' mode; the subsoil has not been mixed with any composition, and Doctor Davy, the chemist to the Society, has got a parcel of it for analysis, as also a parcel each of the diseased and sound potatoes, on which he will report hereafter. It will be recollected that Mr. Meekins exhibited some potatoes at one of the evening meetings of the Society during last session, and also a large parcel at the last spring show of the Society, which were perfectly cured. He has now made the process public, and we hope many of our readers will this season put the above simple process to the test of actual experiment. That it succeeded with Mr. Meekins, at Glasahale last year, there can be no doubt, but that it will