

servations and practice. My experience has been chiefly on a strong clay loam soil, rather too heavy and damp for a good turnip soil. I once heard a good farmer say that he could sum up turnip management in three words—clean, rich, fine—and it has been sometimes said that five things were essential to the successful cultivation of turnips: 1st, a dry soil; 2nd, a rich soil; 3rd, a deeply worked soil; 4th, a well pulverized soil; and 5th, good after culture. The crop will be abundant as these several requisites are present, and deficient in proportion as they are wanting. Though turnips can be grown without all these requisites, they are desirable when they can be attained.

It may likewise be premised that turnips are to be regarded as a fallow crop—one that ameliorates the soil, and that profit should be looked for fully as much from the succeeding crops as from the turnip crop alone; for after a good crop of turnips we always get a good crop of any kind of grain that may be sown after them. It is generally easy to distinguish the place where they grew for the two or three following crops.

PREPARATION OF THE SOIL.

In preparing ground for turnips, my practice has been to take a field that has been in some grain crop the previous season, and as soon after harvest as time will permit, give it a deep ploughing, taking care to open out all water furrows, that no water may be on the field during winter or spring. As soon as other crops are sown, and the ground becomes dry enough to work well, cross plough it, and give it the necessary harrowing. Should the land be clean (a rather rare occurrence), and not lumpy, nothing further is done to it until it is drilled up for manuring: should the land be weedy, it should be cleaned at this stage, destroying by repeated harrowings, cultivatings, rollings, and ploughings, if necessary, all quick grass, thistle, and other weeds that may be in the land; or should the land be cloddy or lumpy, from having been ploughed wet, or any other cause, it should be made as fine as possible, as this is essential to the successful growth of turnips.

MANURING.

Having made the land as clean and fine as can conveniently be done, the next step is to drill it up into drills from twenty-six to thirty inches wide, and dung it with farm yard manure, laying enough of dung in the middle drill to manure one drill on each side—that is, lay down the dung in heaps in every third drill, being careful to spread and cover up as soon after it is drawn out as possible by splitting the drills over the manure. Though this is mostly my own practice, and one to which I am a little partial, I have seen some good turnip growers, after they had the land properly cleaned, spread pretty well rotted manure on the surface, and then drill up and sow; while others, after spreading the

manure on, plough the ground over, and sow in drills on the level. On light land it is better to lay on the barn-yard manure in the fall, before ploughing, and then either sow the turnips without any further manure, or else, when drilling up the land, apply bone dust, super-phosphate of lime, plaster, salt, or salt and plaster mixed, any of which artificial manures helps to push forward the young turnips. It is desirable that dung for turnips be short, and not very strawy. If the field be at a distance from the barns, the dung may be drawn out during winter, or before the snow goes off; and if laid in a large heap, will be sufficiently heated and rotten before it is wanted for use; or it may be turned over in the barnyard two or three weeks before it is wanted, when it will be heated sufficiently to destroy all weeds, seeds, &c., that may be in it. The quantity of manure has to be regulated by the wants of the soil, or the quantity on hand for use. Turnip land can hardly be made too rich.

I have sometimes taken a piece of ground from which hay had been cut, or that had been pastured during summer, ploughed up before harvest, and harrowed; then left till some time in the fall, when if dung was to be applied, it was done then and cross-ploughed, and left thus till the spring, when just before time to sow turnips it was again ploughed and harrowed, and drilled up and sown. This is a good way for getting a crop of turnips, but in this case they cannot be looked upon as a fallow crop.

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Ridge and Furrow System of Fallowing

This system has been pursued for many years in Britain, and under many circumstances has found warm advocates. The fact of being able to go over nearly double the quantity of land in a day, is of itself a great inducement to try the plan. And again, when we consider that land is to a great degree fertilized from the action of the air, the largest possible surface to be exposed within certain areas is manifestly advisable. It will at once be seen that any field ridged and furrowed will afford nearly double its surface to the action of the elements, when measured into the furrows and over the ridges, than if measured on its absolute level area. It has often been found that the trenching alone of poor land has produced a very great amendment in its fertility. I had an old Irishman hired as a labourer for many years—in fact, until he died—and he always argued that “trenching the land in the fall would do double for a crop the succeeding year that simply ploughing it would give.” No doubt the increased drainage thus afforded helped immensely to accomplish this, but the chief value consists in the large surface you can thus expose to the action of the air. When summer begins and spring work slackens, the ridges can be as easily split as

originally formed and with the same despatch, as to quantity of work done. Three acres a day of such ploughing is an ordinary day's work, as it will readily be seen that scarcely more than half the land is to move, and after splitting, ridge and furrow is again the state of the surface of the field. Let any farmer give this plan a fair trial, and he will acknowledge its advantages.

I have heard intelligent farmers argue that the ridged state of potato ground helps the crop that succeeds to a very great degree. Certainly such land is always necessarily well drained. The system of surface draining wet lands where no outfall exists, is well worth attention. On my farm, I had a very wet piece of land, and from which the water could in no way be induced to run off. I had occasion to dig a large hole or pond in the centre to utilize some black muck, and the same land that had hitherto always lain wet and soggy, was drained two weeks sooner, and much more effectually, than heretofore. The water all drained into the centre pond, and was thus much more early exposed to the action of the air and sun than if protected by a quantity of muck and grass, as was the case with the piece of land alluded to before the pond was dug.

On the other hand, had the pond been enclosed by dense trees, the water would have gained in it rather than evaporated. As in some parts of England, ponds for cattle are kept up in this way, but in this dry climate directly water is exposed to the sun it becomes more or less warm, and evaporation takes place faster. So with the ridged and furrowed field; the furrows receive the surface water from the ridges, and the water is more readily dried up. This system of fall ridging will not answer so well where there are thistles, as no amount of covering up will hurt them; nothing will destroy them effectually but absolute exposure to the sun and wind, to dry the life out of them, combined with the fact of never touching them unless when full grown. C.

On Mangel-Wurzel

Mangel-wurzel, or more properly Mangold-würzell, is now grown over a very much larger area than formerly, and is deservedly regarded as an excellent root for the use of milk cows in winter. The late Dr. Lettson introduced this variety of esculent some 80 years ago into England as a field crop, and since that time it has been steadily gaining for itself confidence amongst the largest stock raisers.

Mangel-wurzel will suit itself to any land which is moderately moist, and although it will grow to great size even in wet lands, yet in such it becomes watery, hollow, and will rot quickly. The young plant is very easily killed by frost, and should not therefore appear above ground previous to the middle of May. Land should be ploughed deeply, and