

Carrots and their Cultivation.

The carrot (*Daucus*) is a genus of the plants of the natural order (*Umbellifere*). They are mostly natives of the countries surrounding the Mediterranean Sea. The common carrot (*D. Carota*) is a biennial plant, common in Britain and most parts of Europe, also in the Caucasus. It is universally grown not only in Europe, the European colonies, and America, but also in China, Cochinchina, &c. The field cultivation of the carrot is carried on to a much greater extent in some parts of France, Germany, and Belgium than in Britain or America; but it is increasing in both countries. The carrot appears to have been cultivated at an early period in Flanders and Germany, and to have been introduced into the gardens of England in the beginning of the sixteenth century. The orange carrot and its varieties are the most common in England, but the large white and yellow carrots are more esteemed on the continent; they are supposed to contain more saccharine matter, and to produce a greater bulk of nutriment on the same ground. The white carrot will also grow on heavier soil. In this Province both kinds are grown, but the white seems to be rather the favourite variety. Though the carrot will grow in almost any soil, they prefer a light or rather sandy soil, and often succeed well on a peaty one. The best crop of carrots I ever saw was grown on what had been a piece of a cedar swamp.

According to Stephens, the nutritive matter contained in 25 tons or 56,000 lbs. per acre of carrots—consists of husk or woody fibre 1,680 lbs.; of starch, sugar, &c., 5,600 lbs.; of gluten, &c., 840 lbs; of oil or fat, 200 lbs; and of saline matter, 800 lbs.

The carrot crop is deserving of more attention than it generally receives, as it is one of the surest of our roots, withstanding our summer drought better than any other of our root crops.

In preparing the ground for carrots, the best way is to manure and plough the land in the fall, and if there is time subsoil it at the same time, as carrots delight in a deep mellow soil. Then cross-plough the land in the spring as soon as it can be done. After it is in order, and after harrowing and cultivating, and rolling too if required, drill the ground up in drills, say about thirty inches wide—not that carrots require so wide a drill for their growth, as 18 to 24 inches would be wide enough for that; but room is required to clean the carrots—so that they can be easily cultivated between the rows.

If the ground had not been subsoiled in the fall, we would drill up the land, and then run the subsoil plough up one drill and down another as deep as we could, and then drill up the land anew, so that the seed would be sown directly above where the subsoil plough had run. There is a marked difference in the length of the carrot when thus treated, and when the ground is drilled up without any subsoiling. Carrots are often sown by

hand; but if the seed is properly cleaned they can be sown with a drill, care being taken that the drill does not choke up. I generally use a light roller, attaching the seed drill to it, thus rolling the drill in sowing, and the last one sown. In this way the seed is well covered, and the drills left fine and smooth. The carrot is a slow seed to start, so that the weeds are generally before them, and require to be checked as soon as possible. So soon as the young carrot can be fairly seen, a drill cultivator should be run through them. Up one drill and down another will be sufficient, then take a sharp hoe, and pare the sides of the drills as close to the young carrots as possible, walking backward—and paring half the drill on each side, so that the weeds may not be trodden into the fresh loose earth, but die as quickly as possible. When they are well pared off thus, all the weeds left in the row (which need not be much more than an inch wide) will not hurt the young plants much, till they are sufficiently strong to thin out. In thinning and weeding them, use a small sharp hoe about four inches broad. It may be made out of an old cradle scythe, as by this means one can thin and clean them much faster than when all the weeds in the row are pulled by hand. After they have been thinned they ought to be gone through again—some time after,—hoeing out all the weeds and any carrots that may have been left too thick. Carrots, like all other root crops, are the better for having the ground stirred frequently between the rows; indeed, they would be all the better if cultivated once in a week or ten days, if time can be found to do so.

Though carrots grow slowly at first, they grow rapidly in the fall, and may be left in the ground as long as there is no danger from frost. I have pursued different ways of taking them up, according to circumstances; sometimes when they are white carrots, standing well up out of the ground, the harvesting has been done in this way: with a hoe, cut off the tops, and draw them off out of the way; then take a subsoil plough, with the side plate taken off, and run it close alongside of the rows of carrots loosening and raising them up, so that they can be thrown into a cart or waggon without any further trouble. If the ground is clear and mellow, this is perhaps the quickest way. Another plan is to run the subsoil plough alongside the row of carrots, and then pull them up and cut off the tops. This method has to be pursued with orange or red carrots, as they do not grow at all above the ground like white carrots. But where the ground is stony, or there are stumps in it, or where a subsoil plough is not at hand, I have never found any better way than taking a common plough, and going as close as possible to the row of carrots, so as not to damage them, and then pull them over to the ploughed furrow, throwing them in heaps, and leaving

room to pass again with the plough. In this way they have to be pulled out of the way on the next row. It is best to plough two furrows for each row of carrots, one pretty broad, so that the furrow next to the row of carrots may be as deep and as close as possible. These have been the methods pursued on my farm; if there are better or quicker ways of taking them up, I shall be glad to hear of them.

Carrots, as long as they are growing in the ground, will stand a great deal of frost; but they should be secured as soon as possible after they are pulled, as they are then easier damaged by frost than the turnips are.

The principal advantages of carrots are, that they stand our summer droughts well, are very seldom injured by insects, make excellent feed for horses, cattle, sheep, and even pigs, and do not impart any unpleasant flavour to the milk of cows, as turnips do,—but if the red or orange varieties are used, they give a rich colour even to winter butter.

The disadvantages attending their culture are—their slow growth at first, so that if the ground is weedy, there is danger of their being choked as they come up; then they are slow and tedious to hoe and weed, especially the first time, over; moreover, they seem to be rather an exhausting crop on land; at least we never see the following crop as good after carrots as after turnips, mangolds or potatoes, in the same field. I have generally found carrots, when grown alongside of turnips and mangolds, yield a greater quantity from the same amount of ground, but they have required more time and work in hoeing and cleaning.

I have occasionally, as an experiment, tried sowing carrots late in the fall, but with no decided advantage. They grew well enough, but were harder to hoe, grew very little if any larger than when sown in spring, and were very apt to run to seed.

W. R.

Cobourg, March, 1869.

Ploughing Land.

There has been so much controversy on this subject, and such an immense difference of opinion, that one hardly feels justified in adding their mite to the stock of facts and theories already so abundant. Yet useful suggestions may fitly be advanced in view of the lessons taught by the introduction of steam power into field operations. Steam machinery has, during the past few years, done much to subvert some of the old established theories of the past century. Almost all the great steam plough manufacturing firms now universally consider the "grubber," as they term it (that is, an instrument not unlike a succession of cultivators, but much stronger and larger), one of the best instruments in existence to prepare fallow land for a crop. This machine is drawn by steam power deeply across a field. It does