

AGRICULTURE.

CULTIVATION OF CARROTS.—FROM JACKSON'S AGRICULTURE.

Carrots have not hitherto been considered as an article of culture in the system of Scotch husbandry, although they are occasionally grown on some farms for the use of the horses. On the sea-coast of the Frith of Forth, in the neighbourhood of Aberlady, however, they are extensively cultivated, and large crops are obtained, from which the Edinburgh market is supplied, and even the neighbouring farmers prefer purchasing to growing them for their horses. The soil around Aberlady is a deep sand without any admixture of clay, on which this crop grows very luxuriantly, but they have been found to thrive occasionally on newly reclaimed peat soils, and even to produce large crops in high exposed districts. In England, they are grown extensively on the sand soils of Suffolk and Surrey; and a deep loam, inclining to sand, seems best adapted for their cultivation. On such soils their cultivation has been too much neglected; as it is allowed, that on land of good quality they will yield a more valuable crop than any bulbous or taprooted plant whatever. The most experienced cultivators say, that the richness of the ground is not of so much consequence as its depth and freeness from stones; and on this account carrots are frequently produced without manure, on soils favourable to their growth. Some, however, recommend an application of rotten manure or ashes to the soil before sowing; and this is the practice of a farmer in Norfolk, who cultivates carrots very extensively. The cultivator, however, must look to the nature of his soil before applying manure, as the practice must altogether depend upon this.

The quantity of seed sown must depend upon its being good or bad; and to obtain a seed which can be relied upon, the best way is for the farmer to grow it himself. From four to ten pounds per acre is about the quantity, the average price of which is about one shilling and sixpence per pound. The seeds of the carrot are very small, and apt to adhere to each other, which renders drill sowing somewhat difficult; and in many places the broadcast method is practised in consequence. To mix the seed with sand or fine mould is found of great importance in drilling; and Mr Burrow's plan is to mix the sand and seed a fortnight before it is sown, watering it every day, which brings it into a forward state of vegetation. The seed thus watered springs very soon after it is put into the ground, and is better able to contend with quick-growing annual weeds than when sown in a dry state. Carrots have been found to succeed very well after both potatoes and turnips; and this place in the rotation of crops is not unfrequently chosen, as both conducive to the interest of the farmer and the benefit of the soil. The land is usually prepared with two ploughings, one in autumn and the other in spring; and when manure is applied, it should be with the second ploughing. From the middle of March to the end of April is thought the best time for sowing, early crops being generally found most productive. In about five or six weeks the carrots will be ready to hoe; the first hoeing being employed to cut up the weeds and the second, which is done by six-inch hoes, thins the plants to about from seven to eight inches apart. From three to four careful hoeings are given, according to the nature of the soil and season; and the whole expense attending this operation is calculated to be about thirty shillings per acre; but of course this will depend upon the state of cleanness the land was in previously.

This is the only operation necessary until the crop is ripe, which it will generally be about the end of October. Some prefer allowing the carrots to lie in the ground, lifting only as they are required till the spring, when it becomes necessary to remove them, in order that the land may be prepared for the next crop. Others prefer lifting them when ripe, and storing them through the winter in out-houses or pits, much in the manner of potatoes; and this mode is certainly recommended, as it leaves the land free for any operations which may be required. The method of lifting carrots is by using a three-pronged fork, wdanomen and children to cut off the haulms, and collect them in heaps ready for carting. It is a matter of little consequence whether the carrots be stored in pits, out-houses, or cellars, provided the haulm is cut off, and the crop put up in a perfectly dry state. Carrots are not materially injured even by the severest frosts, and will keep in good condition till the month of June following. There are several varieties of the carrot; one, called the early horn, is grown exclusively for the table; another, called the long organ, is in high estimation among farmers for its great produce; and the Altringham carrot, a new sort produced in Cheshire, is now cultivated on the greatest scale as the most productive both in root and haulm.

Carrots are of great use in feeding cattle and horses, both as

count of their nutritive qualities, and the length of time they can be preserved in a fit state for food. Mr Burrows states, in a communication to the Board of Agriculture, that for a number of years he had fed ten cart-horses upon carrots, without giving them any corn whatever, and that by this he effected a greater saving than by feeding them on corn and hay. He gave about seventy pounds weight of carrots to each horse per day, the carrots being sometimes shed with hay, and at other times given whole, with a little hay. Mr Burrows calculates that with carrots, lucerne being grown in summer for soiling, he could maintain an able Norfolk team-horse upon one statute acre of ground, the horse working every day. He also states that his horses enjoy the best health, and that he has been very successful in feeding hogs in winter, upon the same root. The haulm of the carrot is very delicate, and is frequently mown for cows in summer, who relish it exceedingly. When the animal is fed on carrots, the milk and butter are richer in colour, finer in flavour, and are produced in larger quantities than when fed upon either potatoes or turnips. Horned cattle of all descriptions are highly benefited by being fed upon this root. The produce of carrots upon good soils has been known to reach from 800 to 900 bushels per acre, which is considered as a very high crop, and the average may be estimated at from 400 to 500 bushels an acre.

PARSNIPS.

The parsnip is very like the carrot in the appearance of its root, except that its colour is white. The culture of both is the same and for feeding cattle the parsnip is considered equal to the carrot. The parsnip is a more hardy vegetable than the carrot, and will grow on clay soils, where the carrot does not succeed. It is cultivated in Jersey, Guernsey, and France, for feeding cattle, which are said to be very fond of it. It is said that when milch cows are fed upon this root and hay during winter, the milk is equal in flavour to that produced when the cows are fed on pasture grass. They answer remarkably well for garden culture, and will grow on moist soils; but being a longrooted plant, the softer the ground is, the better.

CULTIVATION OF CABBAGE.

The cabbage, the *brassica oleracea* of botanists, is indigenous to Britain, and is found growing wild in many parts of both England and Scotland. No one, however, would imagine, from seeing it in its wild state, that it is the same plant as that cultivated in our gardens, cultivation having almost entirely changed its appearance. The following are the varieties most approved of for cultivation, either in the fields or gardens:—The small early dwarf, Early May, Early York, Chinese, Eastham, Large sugar-loaf, Drum-head, Scotch, and many others, which are generally known by the names of the individuals who were so fortunate as to produce them. In farm culture, the large sorts are considered as the most profitable, and are consequently most cultivated; but, from our own experience, we consider this predilection as originating more from partiality than actual experiment. The weight of the early York and the sugar-loaf does not, in general, exceed from five to seven pounds per head, but the Scotch, the ox-head, and the drum-head, will on favorable soils, well manured, produce a head weighing from ten to twenty, and even thirty, pounds. The large cabbage will require to be planted two and a half or three feet apart, and 8761 plants will be necessary for a Scotch acre at two and a half, and 6084 at three feet; while of the early York, or sugar-loaf, occupying only the half of this distance, 24,382 plants may be grown on an acre. A much smaller quantity of manure will also answer for the latter kinds, a fact which is well known to gardeners, if not to farmers. Indeed, if the land is in tolerably good condition, we have found an application of liquid manure sufficient to produce all the weight of head calculated upon for the early York and sugar-loaf; all these kinds will grow upon land of very inferior quality. The drum-head and ox-head cabbages are the kinds most generally cultivated on the dairy farms of England and the ka-l-yards of Scotland. They require a clay or strong loamy soil, or one situated in a marshy ground; and when good, we have seen large crops produced upon newly reclaimed moss land. On whatever soils they are cultivated, a good application of farm-yard dung, or well prepared compost of a rich quality, is necessary; and when the plants begin to draw together at the top, pouring liquid manure between the rows will be found greatly to increase their growth. If the weather is dry, the liquid should be diluted with water, but ~~if dry~~ this is not necessary.

On favourable soils when well manured, and attentive cultivation is bestowed, cabbages will produce a valuable crop of food for live-stock. Some complain that they impoverish the ground, while others say that they enrich it; and to prevent them injuring