

parsnip, beside being good food for man, is also an excellent food for stock; and both turnips and cabbage, when mixed with well boiled rice, afford so substantial and palatable a dish, and are so much required for cattle, that they cannot almost be grown in too large quantities.—*Correspondence of the Farmer's Gazette.*

From the *Farmer's Gazette.*

WHITE BELGIAN CARROT.

Stirling, November 2, 1846.

Sir—The carrot having very properly been recommended in the *GAZETTE*, as one of the best substitutes for the potato, it might further be of use to notice the claims of the White Belgian, as one of the best (if not the *very best*) varieties of the species for that purpose. The plant is of vigorous habit, yielding heavy crops; the roots of large size, more palatable, and less watery than any other variety; thick in proportion to their length, and, on that account, better adapted to thin, shallow soils. This variety requires no other mode of culture than the others; the main points, however, may be stated thus:—The soil should be in good condition; if virgin, so much the better; free and deep, if possible: those approaching to a mixture of bog and sand are the best. Plough or dig ten or twelve inches deep in October or November, turning in about as much manure as would be given for potatoes. This previous preparation is most essential to good success, particularly if the manure be not old, and in a decomposed state. In spring, cross-plough and harrow, or in spade culture, point over the surface. Let shallow drills, 15 or 18 inches apart, be then drawn, either with a hoe, pointed stick, or turnip sowing machine; in these sow the seed and cover slightly, or the drills may be made of such width as to admit of the horse-hoe. The best time for sowing is from the beginning of March till the end of April.—From 8 to 10 lbs. of seed are required for an Irish acre. The plants should be singled by the hand, so as to be left at 4 or 5 inches apart, and the ground kept perfectly clean by frequent hoeings and weedings. The roots may be taken up with a three-pronged fork in December, the tops cut off—care being taken not to injure or bruise the roots by rough handling or tossing—and stored in a dry state, being laid or built in regular heaps, and covered with straw, but they are sometimes left in the ground during winter, and taken up as wanted. Twenty-five to thirty tons per Irish acre may be considered a good average crop, although we have heard of thirty-five and even forty.

Seaweed makes an excellent manure for carrots; and good crops have been raised on the poor sands of the seacoast, by trenching over the soil in autumn, and laying the weed plentifully in the trenches.

The most simple mode of cooking the carrot is, after washing and scraping, to divide the root lengthwise and boil sufficiently in salt and water. If eaten hot,

with a little salt, it will be found both palatable and nutritious. As food for horses, it is, perhaps, the best and most nutritious of all the succulent roots; and for milch cows it is infinitely superior to turnip or mangel, imparting a rich, agreeable flavour to a plentiful supply of milk.—*Yours, &c.* D.

EFFECTS OF LIQUID MANURE.—In Mr. Dickinson's evidence before the Select Committee on Metropolitan Sewage Manure, he states that, in one year, no less than nine or ten crops of valuable grass have been grown. The liquid manure from the stable is conveyed to a tank, from which it is pumped into a water-cart, conveyed and mixed with two parts of water, if the temperature be warm; but if lower, mix it with one part of water; and in the winter season put it on neat, to raise the temperature of the earth. The land was not worth 12s. per acre, and the result was as stated above. The crops varied from 10 inches to 3 feet 6 inches high, and the weight per acre has increased from 4 tons in the January crop, to 12 tons when cut in June.—When Mr. Dickinson took samples to the Beverly show, he was told he had exhausted the soil. In reply, he produced plants of the tares and oats, of which the number of grains was astounding. He estimates 1100 gallons of urine, and 2200 of water as sufficient for an acre. In confirmation of Mr. Dickenson's statement we may mention that with 640 gallons from the cow-house, mixed with 40 lb. of sulphuric acid, costing 4s. 2d., the Rev. L. V. Harcourt produced an increase of hay to the value of £1 6s. 3d. per acre.—*Country paper.*

ACIDS.—In order to act on bones for agricultural purposes they should be first powdered, and from half to an equal weight of oil of vitriol, diluted with three or four parts of water, poured upon and well stirred with the powder. Considerable effervescence takes place, and a white pasty mass is formed after standing for 24 hours, which may be afterwards mixed with water as required.—The sulphuric acid in this reaction takes the excess of lime from the sub-phosphate of lime (bone earth), and forms sulphate of lime (gypsum) and a soluble biphosphate of lime, which is afterwards dissolved. It would be preferable to calcine the bones before acting on them in this manner. We think that a better process would be to dissolve fresh bones, previously ground, in diluted muriatic acid, as the bone earth is perfectly soluble in this acid, and the gelatine of the bone would remain in a state of mixture. The whole to be diluted and used as a liquid manure.—Bones cannot be advantageously employed for agricultural purposes unless reduced to powder.—*Pharmaceutical Times.*

DRAINING.—Imperfect underdraining is very common, a writer in the *Hillsborough Gazette*, gives the following good rule:—If water stands on the surface of

a field three hours after rain has ceased to fall, that field is not sufficiently drained for the cultivation of grains.

Newcastle  Farmer.

COBBOURG, JUNE 1, 1847.

It has frequently occurred to us that a great amount of our most valuable land is rendered comparatively valueless, for want of attention being paid to the construction of drains to carry off the superfluous moisture with which much of the very best portion of our fields abound,—rendering them totally unfit for the production of grain crops, and only yielding a coarse, unsatisfactory description of fodder, when they might be made available for the growth both of grain and roots, and grasses of very superior quality, and in an increased quantity, to repay the outlay in a single crop.

The farmers of England and Scotland owe their prosperity principally to the attention they of late years have paid to this all-important department of agricultural operations. Draining with them is the primary movement, and thousands of acres which heretofore produced only sedge and coarse grasses,—in fact little better than so much bog, to which the snipe and wild duck repaired for sustenance,—have by draining been made dry enough for wheat and barley, and rich enough for turnips.

Subsoiling, so invariably introduced, would be but a profitless operation if not preceded by under-draining, as it would merely enable the roots of the plants to penetrate deeper into the chilly subsoil, the cold of which is increased in the ratio of its distance from the surface.

In this country the facilities for draining are very extensive, and there are few farms which present any impediments to laying all the land dry; and we will venture to say that the time, the labour, and the expense, will be fully covered in a couple of seasons at most, and by care and attention to the operation the beneficial results will be seen for an age.

Much has been written,—numerous have been the discussions, and great has been the controversy in Europe, in England in particular, respecting the mode of procedure; but all have agreed as to the vast importance of the subject.

A great difference of opinion has existed as to the depth required, and the