

the best in America, for the purpose of making sugar; but as to table-economy, and especially as food for stock, we have found it on certain soils, the most profitable root that can be grown. Although it has been extensively cultivated for the last half century on the continent of Europe, its value in husbandry has been singularly overlooked in England and America, and it is not till within the few past years, that it has become one of the general course of root crops. The cultivation of the sugar-beet is now rapidly on the increase, since public attention has been more particularly called to its merits, by a series of experiments made by Earl Spencer and other distinguished agriculturists, on its comparative value with mangold wurtzel, and turneps, in feeding stock; the beet, so far as our information extends, having invariably proved much superior to the two latter roots in nutritive qualities. In addition to its greater value as an article of food over turneps, its yield is equally large, if not larger, acre for acre; and on account of the destructive ravages of the fly, it is a much more certain crop.

Latitude of Cultivation.—Beets may be grown from the equator as far up as the 45th degree of north latitude, but from 39 to 44 degrees is their best range in America. Farther north than this it does not ripen well, and to the South it is subject to be injured by the blight-fly and grass-hopper; the summers also are too long and hot for it as a winter crop, and corn and potatoes answer a better purpose; still, if planted as early as garden vegetables in the southern latitudes, it may be brought forward for green food for the stock, about the time that grass gets parched up and fails, and thus answer a very good purpose. We think beets might succeed well among corn, planted sufficiently wide apart to admit a row of roots in the centre. In this case, the corn would protect the beets from the too scorching rays of the sun at the South, and we should think add to their juiciness and sweetness by the shade of the stalks.

Soil.—The best soil for the production of the beet, is a deep, light, and moderately rich loam, resting on a clay subsoil; yet, as it has the power of drawing much of the food necessary to its growth from the atmosphere, by means of its large leaves, it will do very well in thin sands, a leachy gravel, or hard clay; a good manuring, however, on such soils would be essential as a preparation for the crop, and frequent stirring of the earth during its growth. A very rich soil, such as the deep alluvials of our river-bottoms, is not a proper one for beets, inasmuch as the roots grow too large and rank in it, and are consequently coarser and less nutritious, and do not abound with as much saccharine matter, as is found in those growing on poorer soils.

Preparation.—Plough deep, and roll and harrow the land fine, and throw it up into beds about one rod wide, and if the subsoil be at all tenacious, have the furrows between the beds well hoed out, so as to drain off all falling water.

Kind of Beet.—The white Sicilian is the best variety which we have cultivated, it being the sweetest and finest grained of all others, and to these good qualities, it joins that of producing an equally large crop.

Preparation of Seed.—It is essentially necessary that the seed be soaked at least three days previous to planting, and if it be a whole week, it is no matter. This should be done in soft tepid water; and just before planting, roll the seed in ashes or plaster of paris, so as to prevent their sticking together, and facilitate the sowing. The beet seed has a thick, hard pericarp or shell, and till this softens and breaks, it is impossible for it to vegetate; and unless one can be sure of wet weather immediately after sowing, it will frequently not come up at all, or be so long about it, as to be the means of losing half the crop.

Planting.—The beet may be sown broadcast like the turnep, but as weeds are likely to spring up in moist soils and prevent its growth, and the labour of exterminating them is much greater in this way, it is preferable to sow in drills. For this purpose, the drill-barrow may be used the same as in planting the Ruta Baga, but the beet-seed is much more difficult to deliver evenly through a small aperture than the turneps, and though we have used a great variety of barrows for this purpose, we have never yet had one that worked well and could be depended upon, especially in tenacious or heavy loamy soils. It is preferable, therefore, to take a piece of joint four inches square, or a round stick of the same diameter, half or just as long as the lands are wide, fill this with iron or wooden teeth in wedge shape, as far apart as you wish to have the rows, put a pair of files to this, and hutch on a stout man or steady horse, and passing once or twice over the land, completely drills it from one to two inches deep. Then follow immediately with the seed, dropping it by hand, or from a long necked

bottle, or tin cup with a hole in the bottom, and a handle attached to it, shaking the cup or bottle as you walk along, and following sharp with the eye to see that the seeds are evenly dropped. Faithful children of ten years old, can do this with more ease and facility than grown persons. As fast as dropped, cover with the hoe; in heavy soils about half to three fourths of an inch deep, in sand or light gravel twice this depth.

The rows may be from two to three feet apart for a field crop—two and a half to three feet is the best. This distance enables one to use the cultivator for weeding, without danger of cutting or covering the plants by the dirt being thrown up as it passes through the rows. The product is not so great per acre from wide rows, but land being cheap and labour dear in America, we must study to facilitate manual operations, at the same time that we have some calculation to a good yield. Four pounds of seed per acre, is generally considered enough, but it is better to have a dozen extra plants to thin out, than to be obliged to transplant one. Those transplanted do not thrive half as well as those that remain where they vegetate; besides, the labour of so doing is more expensive than extra seed and time of thinning. We therefore mean in sowing to have a good seed dropped as near as every two or three inches in the drills.

After Culture.—As soon as the weeds begin to appear, run the cultivator through the row and follow with the hoe. It is very essential that the ground be kept clear of weeds, especially for the first two months, and three hoeings with the use of the cultivator are generally sufficient for the season. As the plants attain a height of about three inches, they should be thinned to a distance of about four inches, leaving the strongest and healthiest; then during the season as they grow, gradually thin out the remainder, leaving the roots in the rows at least about nine or ten inches apart. If left too thick, they shade and choke each other in growth, and the product is not so great as when well thinned. These thinnings are valuable to feed to stock during the summer, and are frequently considered equal to half the expense of the cultivation of the whole crop.

Harvesting.—When the leaves begin to decay and turn yellow, is the best time to gather the beets, for if left longer than this in the ground, the roots grow hard and strong, and do not yield so great a per cent of saccharine matter. This of course will take place earlier or later in different climates, and is undoubtedly as good a rule as can be given, it being adopted after a strict chemical analysis of the beet in its various stages of growth. If the soil be light, as the roots generally grow so much out of the ground, they can be pulled up by taking hold of the tops with the hand—but if more tenacious, the dung-fork is the best instrument that we know of for digging them. Let part of the hands be at this operation, and the other part follow with large knives or bill-hooks; taking up the root with one hand, top off the leaves with the other, and toss the roots into small heaps to dry through the day, and if left out over night and there be danger of frost, let them be lightly covered over with leaves or straw; a hard frost injures the roots, and makes them more liable to decay. They may then be taken to a well-ventilated cellar, or be piled in heaps of 100 to 200 bushels. The beet is rather apt to heat and commence sprouting if thrown into large heaps, or packed away in the cellar. If put in the latter place, any other roots except the turnep may be placed at the bottom, and the beets on top, and if in pits the same roots or straw in the centre. All the beets then have a good ventilation, and an opportunity of throwing off the impure air; and to facilitate this, after covering the heaps with dirt, holes should be made every few feet on the top of them, and wisps of straw be placed in such holes. In this way we have experienced no loss or deterioration in the value of the root, but have preserved them till May, as fresh, sound, and sweet, as when first taken from the ground the preceding fall. In a climate as far as 39 degrees south, they might be preserved all winter in tolerable tight sheds and barns.

Feeding.—Throw them on the ground or floor, and take a hay knife or spade, and a man will slice up a bushel a minute sufficiently fine to prevent cattle choking on them. The best way to cook them for stock is by steaming, but they can not be kept so over two days in warm weather, and a week in cold, without undergoing a fermentation, and losing the saccharine matter so grateful to the taste and so essential to nutriment. Either raw or cooked, stock frequently prefer them to meal or corn. Raw, we think them as nutritious as any root whatever, and as far as our experience extends, three bushels of beets with neat stock, is equal to one of Indian meal. Hogs demand less bulk to fill themselves