

CULTURE OF THE POTATO.

By common consent the potato has been placed at the head of all edible roots wherever it has been introduced, and the climate would admit of its cultivation. Originating from an obscure root among the Cordilleras of South America, in spite of prejudice and opposition, it has spread with a rapidity unknown to any other vegetable, and is doubtless destined to make the circuit of the globe, adding in an incalculable degree to the means of subsistence. There are few if any vegetables grown in the temperate zone that yield so great an amount of food per acre as the potato. Wheat, according to Sir H. Davy, contains 950 parts of nutritious matter in 1000; and the potato 250; but when it is remembered that the yield of the potato on an average is from ten to fifteen times as much per acre as wheat, the advantage in favor of the potato is manifest. Besides such is the human organization, that pure nutritive matter is injurious to its healthy functions, and the stomach requires to be more or less distended with other matter before the excitement necessary to nutrition takes place. We are, therefore, justified in supposing that good potatoes used exclusively as an article of food, would be less injurious than pure wheat flour. Be this as it may, the potato in most civilized countries now ranks next as an article of food to the rice of the tropics; and wheat and maize of the more temperate regions. To Europe is America indebted for the Graminæ, and had we returned them nothing more than the potato and maize, the debt must have been considered as cancelled.

The potato is usually propagated by the tubers or roots, but new varieties are obtained or old ones that have partially degenerated restored, by cultivating them from seed. There are few plants that show more decisively the improvement that may be made by cultivation than the potato. In 1838, a quantity of the original roots were brought from South America to England and carefully planted. The result was a small inferior root, more resembling the ground nut than the potato, and not widely differing in appearance from those of the first years' growth from seeds. There is an idea prevalent among many farmers that potatoes are mixed, or what by the breeder of animals would be called crossed, by having several kinds planted in the vicinity of each other. This is an erroneous opinion. The crossing takes place in the flowers or seeds and not in the roots; and hence there is the same uncertainty that the seeds of any given variety of this root will produce potatoes of the parent kind, that there is that the apple's seed will give apples like those from which they are taken, a thing of very rare occurrence.

Every farmer who has paid attention to the manner of growth in the potato, is aware that the tubers are not produced from the roots proper, these being, as in other plants, used solely for the purpose of nutrition, but on shoots thrown out above these and nearer the surface of the earth. It was the opinion of Decandolle, that by repeated coverings of the stems such shoots, and of course potatoes could be produced the whole length of the stalk, and some experiments that he made, seemed to favour such a supposition; still we must be permitted to say, that having in part repeated his experiments, we have found nothing to justify the opinion, that such a result would be effected by this treatment of the stem.

The propriety of cutting the tubers or planting them whole has been much discussed, and the multitude of experiments on record would seem to

show by their conflicting results, that at least as much is depending on other circumstances, as on the root being planted in a whole or cut state. If an acre of ground be planted in hills or drills with whole potatoes, and another acre be planted with sets or cuttings at equal distances with the other, the experiments made by the Horticultural Society would go to prove, that the acre planted with whole potatoes would yield the most, but not much if any more than the additional quantity of seeds required in planting. If whole potatoes are used, from 25 to 30 bushels will be used; if cut, not more than half that quantity will be required. In both cases, however, much will be depending upon the size of the whole potatoes, and the number of eyes in those cut. The distance between the rows must be determined by the length of the stem produced by the potato, and the several varieties vary much in this respect.

In cultivating the potato a climate rather cool and moist is found most preferable to any other. Of course the root succeeds much better in the northern states and in the British American Provinces than in the southern parts of the United States. In the north, parts of Maine and New Hampshire, and the Province of New Brunswick, are celebrated for the excellence of their potatoes. In New York, the tract lying east of Lake Ontario, between that and the Mohawk and Black rivers produces good potatoes; and the elevated lands in the south of New York and the north of Pennsylvania are noted not only for the quality of their potatoes but the large crops they annually produce. The potato will succeed well on almost any kind of land provided it is rich, and is not wet and clayey; but for this as most other crops, a friable loam of sufficient consistence to prevent drouth will be found superior to any other. Swamps containing large quantities of vegetable matter, when sufficiently drained, have produced great crops, and what in new countries is termed muck land, is also favorable to their growth. Two things in a potato soil seem to be indispensable; it must be rich, or a crop cannot be expected; and it must be sufficiently loose to allow the shoots that form the tubers to spread and enlarge freely. In Europe the British islands are justly famed for their root culture, and the introduction of the potato into Ireland has enabled that country to double its population; if it has not banished want and distress, these evils are not of as frequent recurrence now as formerly, notwithstanding the increase of consumers. Cobbett, indeed, charged upon the potato all the evils of Ireland: and Dr. Tissot has demonstrated to his own satisfaction, that no potato eating nation has ever produced a great man.

The greatest crops of potatoes on record are those grown by General Barnum of Vermont, which reached from 1,500 to 1,800 bushels per acre; and he gives it as his opinion, that in a good soil, and with his mode of culture, from 800 to 1000 bushels per acre may be safely calculated upon. The reports of the agricultural societies of our country show that from 500 to 700 bushels per acre are not uncommon. Mr. Bache, of Wellsborough, Pa., in 1839, raised 600 bushels to the acre, and the crop of Mr. Morris, of Cattaraugus, in N. Y. State, fell but little short. The average crop in the country cannot be estimated at more than from 175 to 250 bushels, the influence of the seasons being more felt on this crop than many others.

The methods of planting are various, Gen. Barnum's mode, after a careful and thorough preparation of his land is to plant in drills 22 inches apart