



## A New and Singular Variety of Radish.

We learn from the *Gardeners' Chronicle* that Mr. W. Bull, the eminent London seedsman, has recently introduced to British horticulturists, a remarkably useful and interesting Radish. The seeds were imported from the East Indies, and portions of them were cultivated by Mr. Bull in the stove, in the greenhouse, and in the open air respectively. "In the stove the plants failed, in the greenhouse they did very well, but in the open air, its cultivation was most successful." The seed, it appears, when sown, easily vegetates, and in about eight weeks the plants flower profusely. Numerous seed-pods quickly follow, and "elongate in the most rapid manner (sometimes as much as three inches in a night), until they get about three feet in length. The seed pods vary in colour, on some plants they are purple, on others green, while others again are purplish-green. When the plants are tied upright they have a very singular appearance, for each plant produces from 15 to 20 pods, some hanging quite straight, others twisted or whorled into fantastic shapes. These pods being succulent and far superior in delicacy of flavour to the ordinary root radishes, can be eaten in their young state the same way, and applied to all similar purposes; for salading they are delicious, and for pickling invaluable; indeed it may be regarded as one of the most useful vegetables that has been introduced for many years." Mr. Bull appends to this flattering description of the new comers, the following modest offer to intending purchasers:—"Price, in sealed packets, three seeds, half a guinea; seven seeds, a guinea!"

## Grape Culture for Wine-making:

BEING THE SUBSTANCE OF AN ADDRESS GIVEN BEFORE THE LINCOLN COUNTY GRAPE GROWERS' ASSOCIATION, BY W. H. READ, OF FORT DALHOUSIE.

THE subject for to-day's discussion is:—What are the most desirable varieties of grapes to be cultivated in this district for wine? This is, probably, one of the most important questions to which our attention, as an Association, can be directed. By way of introducing the subject, I would remark that the vine is extremely long-lived. It is stated that some have lived six hundred years; and, according to Bosc, there are vines in Burgundy four hundred years old. Our native grapes, the indigenous vines of this district, unmistakably show that they have braved the northern blasts of more than a century, ascending to the summits of the highest trees of the forest, growing sometimes to enormous dimensions, entwining the tops of some half dozen trees, and bearing an abundant crop of fruit from year to year. The fact that the grape is found growing wild and bearing abundantly over the whole Niagara District, is a sufficient guarantee of the adaptability of both land and climate for successful vineyard culture.

The question naturally arises:—Are these native grapes of any value for wine? I reply, yes, certainly. A few years ago, I sent a pencil drawing, accompanied by a description of the Chippawa grape, to the editor of the *Country Gentleman*. In the course of time it reached Mr. N. Longworth, of Cincinnati, who wrote me, saying that he was making a collection of wild native vines from all parts, and testing them for wine purposes, and would like to try the Chippawa, offering to send me any vines desirable in exchange for some cuttings. He died soon after-

wards, and the cuttings were not sent; but in the letter above mentioned he said that he had imported from the different wine districts of Europe 30,000 grape vines, consisting of their best varieties for wine, and after giving them a fair test, had finally abandoned all on account of their liability to mildew and winter kill, and that now he confined himself altogether to the native American sorts, from which he said he had made wine, and had stored in his wine cellars, one hundred and fifty thousand bottles of sparkling Catawba, and expected to add fifty thousand more the next year, worth one dollar per bottle, and further stated, "this wine is all sold here, mostly to our German population." Again, a gentleman near St. Davids, in this district, whose mother owns thirty acres of vineyard in Germany, sent him five thousand cuttings of the leading sorts, both for wine and raisins. I saw them growing on a hill-side, which had been prepared after the German mode. The aspect was one of the best—East by South—and the soil good; in short the spot was admirably well adapted for the purpose. The vines grew finely, and looked very promising for a year or two, then came the inevitable mildew, and blighted all future prospects of success. This has also been my experience with foreign vines. They will not do for open air culture here. Seeing, then, that none but natives can be depended on for vineyard culture, and that they have flourished probably for centuries past, it is not reasonable to suppose any failure can take place now. We may lose the sheltering benefit of our forests, yet our great inland lakes, by whose waters we are nearly surrounded, will, by their modifying influences protect our climate and vineyards from those fierce and sudden extremes of cold which prove so disastrous to the vine in many other places. Here, on the Niagara peninsula, every inducement is held out to the vigneron, and if the members of this Association carry out what they have so nobly undertaken, and erect a house and wine cellars, with their appropriate appurtenances for manufacturing wine, what an immense source of profit will it be to this district; for after an experience of twenty years with the vine, I can truly say thousands of tons of good grapes can be grown here with as much certainty as Indian corn.

To show the importance of grape culture, I will bring before you the following statistics: "The number of proprietors of vineyards in France is very great. In 1823 there were 1,270,000 acres in cultivation. The annual mean product 920,721,088 gallons of wine, at an average value of about thirteen cents per gallon, amounting to \$120,000,000. and the product per acre near 200 gallons. This estimate was sustained by the Minister of Commerce in his report for 1823. Beside this, 24,000,000 gallons of brandy are made from wine, nurk, pummice, grape seeds and skins, after being pressed." The wine product of France must have greatly increased since 1823 when these estimates were made.

The statistics of vineyards about Cincinnati for 1862 give as a fair average yield per acre 363 gallons; amount produced that year, 500,000 gallons of native wine, mostly sparkling Catawba, worth \$1 per bottle and all sold in the state.

It has been reported that the young vineyards at Cooksville, Canada, will turn off, for 1865, 50,000 gallons of native wine, and that this wine has all been purchased by the Lower Canadians. This augurs well for the future, and means nothing but real success.

The question has been asked, how many grapes can be grown on an acre? In reply, this will depend in a great measure on the variety, manner of training, and number of vines planted. The Delaware, Concord, Chippawa No. 2, and Canada vines, will be the most reliable to commence with for wine. These planted 8 by 6 feet, will take nearly 1,000 vines per acre. Allowing 15 lbs. of fruit to each vine, the product would be seven and a half tons of grapes. Our native vines, planted forty feet between rows, and trained to a trellis six feet high, and then over an arbor covering the entire forty feet, would probably yield 20 tons of grapes per acre.

My advice on quantity is, that we should not overtax our vines. I would rather have one ton of Delaware grapes grown at the rate of 7½ lbs. per vine, than two tons at the rate of 25 lbs. The former will ripen up of a dark red colour, early in the season, sweet and full of sugar; the latter in part will not colour well, and be very inferior to the former. However, the amount to be grown is, to a certain extent, under the control of the vineyardist, who, by pruning and pinching can regulate the crop according to the strength of his vines. Our natives are capable of carrying and maturing larger crops than any other varieties with which I am acquainted. I have been credibly informed that eleven bushels of grapes have been gathered from one of these native vines in one year, and driven to Marshville market. This variety has been in bearing on my ground for the last five years,

and fully sustains its reputation as a productive and early variety. It is as hardy as an oak. This grape makes a wine resembling port, but of a darker color, and when mixed with Delaware, bushel for bushel, and pressed together, the wine is beautifully transparent and excellent. In my last experiment I added one-third Concord, and have now what I think a very promising claret, with and without sugar. There seems to be a difference of opinion with regard to adding sugar to the must. In modern France, sugar is now added, when its presence is essentially wanting; and vineyards, which before would never make anything, or but very poor wine, are now by this addition alone, rendered productive in good wine. In this way we can make good wine from Diana, Isabella or any other variety that will ripen early. There are several varieties recently introduced which claim our attention, such as Roger's No. 15, Iona, Hattie, Adirondack, Lincoln County, and our own natives of which I have five in bearing, one from the Township of Clinton, one from Grantham and three from Chippawa Creek. These vines belong to the class *Vitis Cordifolia*, vine strong and vigorous, foliage large and clean, clusters medium, compact having a small bunch attached to one side like the Delaware, berries medium in size, black, covered with a blue bloom ripening up early and in advance of any of the American sorts; not desirable as table grapes, but valuable for wine. It is well known that people in Europe never think of eating the grapes from which some of their best wines are manufactured; and I cannot do better than urge upon this Association the great importance of our own native vines for vineyard culture with a view to wine-making.

The vines composing the bulk of the Cooksville vineyards, are of this class, and from the description given me of the clusters and quality of the fruit grown there the past year, I am inclined to think it is the native vine of Clinton, Canada, as it was first seen growing there. This native is very prolific, ripens early and uniformly, but the fruit is very acid. From this grape Mr. Kilborne makes his first-class wine. The American Clinton in most localities particularly about here, ripens very unevenly, its clusters remain at the end of the season full of mouldy and green berries which never ripen, this is a great objection to it as a variety for the vineyard, and I will not recommend it for general cultivation here. To obtain a good and suitable wine grape for this locality, I should recommend our natives to be impregnated with the best European wine grapes such as the White Kissling, Red Traminer, White Tokay, &c. A hybrid from any of these would probably possess the good qualities of both parents; our native vine to be used to mature the seed. From such a crop might be produced a variety worth millions of dollars to the country.

In conclusion, and aside from the commercial aspect of the subject, to the amateur and lover of nature, what sight can surpass that of a vine covered over with its beautiful foliage, and laden with its elegant and delicious fruit; or who can contemplate throughout the progress of every returning season, the beautiful elaborations of nature in the successful development of the bud, the leaf, the blossom, and the fruit of the vine, without emotions of the purest gratification.

## The Cultivation of the Mushroom.

BY MR. JAMES BARNES, GARDENER, DIXON, DEVON.

WHERE I lived fifty years ago this winter, there was a mushroom house, heated from a flue by peat fires. The shelves were placed one above another for the reception of the heating material or mushroom beds, cow-lung was collected from the fields, the stable droppings were shaken out, and turned and dried in open sheds, the beds made, rammed tight and spawned in due course; the whole then covered with nice friable loam to the depth of two inches or thereabouts. This system was then called "Clidacre's method." At that time it was considered a great feat among horticulturists to grow the mushroom successfully; and I well recollect watching for the mushrooms springing up—and so they did, very nicely, in about six weeks.

Three years later I entered a large London market garden, now all built over. There, besides extensive pine, grape, cucumber, and general forcing and plant culture, mushrooms were largely grown, on pretty much the same principle; only, instead of shelves, the beds were made on the floor against the back walls of sheds, where the flues ran along, or in ridge beds in the centre, according to convenience and with general success.

In the summer, beds were similarly made in an underground cellar, and in ridge beds out of doors, with good results. Indeed, we were at that time con-