

THE VEGETABLE GARDEN.

Peppermint The Proper Mode of Cultivation.

Last month we directed the attention of Canadians to the growing of the profitable crop of peppermint. Since our article was written, the Farmers' Club of the American Institute have been talking peppermint; and as supplementary to what we have already said, we reprint the proceedings:

Mr. E. Sylvester, M.D., Lyons, N.Y., read a paper as follows:—

On the 28th of February, 1871, I read before the Farmers' Club of the American Institute a paper on this subject, which was published in the volume of transactions. It is the desire of the present paper not to reproduce the facts before stated, but to give additional instruction in regard to growing this important crop. I say important crop, for in Wayne County we raise about \$300,000 worth annually. Let not the unsophisticated for a moment suppose that we thereby increase enormously the consumption of mint juleps—for it is with great pleasure that I mention that mint juleps are made from spearmint and not from peppermint. Since 1871, the price of peppermint oil has fluctuated from two to six dollars per pound in our market at Lyons. In 1874, I planted five acres, which yielded thirty pounds per acre, and sold for \$5.11 per pound, amounting to \$765.50, or over \$150 per acre. The late quotation in village papers was \$5 per pound.

Since the publication of my paper on the cultivation of mint, I have received from numerous persons these questions: Where can I procure the seed? Do you plant the root, the stem, or the seed? It is these questions which I now propose to answer. I have no doubt that peppermint may be grown either from the root, stem, or seed, but the most desirable portion to plant is the rooted runner from last year's growth. Perhaps you will be enabled to understand me better if I detail the production of this "rooted runner." For instance, in the spring I plant an acre of mint-roots. These grow, are kept free from weeds, and in July or August the tops have grown from one to two feet high, and when in blossom, the tops have been mowed off and converted into peppermint by distillation. About this time small sprouts or runners are seen growing from the neck or collar of the mint, and remaining on the surface of the ground. These runners take root, and each for himself becomes a living plant, though still clinging to his mother's breast. It is these plants, full of life and vigor, which you must plant, if you would grow mint successfully.

I once planted seven acres with the runners in November, and the mint was as productive as other mint in the same field planted in the spring; but the general practice is to plant the runners in the spring. Just at this juncture comes the important question, How shall we protect the infant runners during our cold and often inclement winters so that they shall possess sufficient vitality to be separated from the parents, and commence a vigorous, productive existence in the new field to which they are removed? If snow falls on the ground before it is much frozen, and remains on until spring, covering the runners with a white, soft blanket, they will come out of the winter as bright and smiling as a tottering infant; but if, as too often happens, we have severe weather without snows, and the ground is frozen a foot or more in depth, fierce winds sweep across your mint fields, and in the spring they look brown or black, their young rootlets are dead, and they are unfit for planting.

How shall we obviate the effects of the winter and have fresh, healthy runners? I answer by relating my own experiments. Last autumn, I divided my new mint fields into three unequal sections, which I numbered 1, 2, and 3. Section 1 was plowed in November very carefully about five inches deep, the surface laid flat and not lapped, so that the runners were by this process covered with soil about five inches deep. Section No. 2 was covered to the depth of five or six inches with buckwheat straw early in December; the straw was spread evenly from a wagon driven over the field, and was not pressed down or rolled. Section No. 3 was left unprotected in any way; just as the runners grew so they were left to care for themselves during the very severe winter which has just passed. The result was that the runners on the section covered with straw came out in the spring bright

and healthy; those left without any attention were the next best, and many of them used in planting, while Section No. 1, which was ploughed over, was very much injured by the winter, and none of the runners were used in planting, but they have come up through the soil to some extent and now promise a fair crop of oil this season.

The method of ploughing over is not always so unsuccessful. In some seasons the very best results are obtained by this plan. It depends much upon the nature of the soil and the vagaries of the winter. I am of the opinion that a light covering of straw is the best method, and that wheat or rye straw will answer as well as buckwheat. What is wanted is some light application on the surface of the ground to hold the light snows, if there are any, and practically protect the young rootlets from the severe cold. But, the novice asks, Why this anxiety about roots? After you have planted a field, can you not mow the mint year after year as we do meadows? I answer, No; the mint is usually cut for two years and then replanted—in very rare instances three crops are gathered. How many roots do you plant to the acre? This is a fair question, and I should much prefer to answer it than count the runners we plant on an acre. When the runners are numerous and well-rooted, and all alive, from ten to twenty square rods will afford sufficient for one acre; hence, you perceive then, one acre of runners will plant from eight to sixteen acres of new mint. But if I were so situated that I had to transport my roots to a great distance, then I would mark off an acre in furrows, three feet each way, and plant in the crossings; this would require about 5,000 plants to the acre; and then the next year would plant my new field, using the runners from twenty square rods in each acre. There is money to be made by growing peppermint when the oil brings in the market over \$3 per pound, if every detail is well managed; and it has this positive advantage—it does well on and utilizes soil that is too wet for the successful cultivation of corn or wheat.

In answer to questions by members of the club, Dr. Sylvester said that a rotation of crops was as necessary in the cultivation of mint as for other crops. About 5,000 plants could be raised, by careful cultivation, to the acre. The process of distilling the oil was the same as that adopted in the distillation of whiskey. It costs usually about forty cents per barrel to distill the oil, but the price was sometimes increased to fifty cents. The demand for peppermint was limited, and if it was cultivated very largely the crop would not be profitable.

Growing Asparagus.

The trouble and expense of excavating the site for asparagus beds and filling up with new soil and manure, prevent many persons from growing this excellent vegetable. A correspondent of the English *Horticultural Magazine* says, he accidentally discovered a cheap way of growing the plants which he has been practising for several years with the most satisfactory results. He raised a number of seedlings for sale, and sold the greater part of them. A considerable number were, however, carelessly, and unintentionally left in the bed, which was made up of very rich soil, and they consequently grew very strong. They were so evenly distributed over the bed that he let them stand, expecting to sell them for three year old plants the next season. They remained in the bed without being earthed up, or anything else but weeded.

In due course of time these came up fine buds, tempting to cut, and the only disadvantage was, that some of the crowns were all but above ground, so that there was no length of white, and therefore he let them grow three or four inches of green, and cut them, so that every morsel could be eaten. The next year all he did was to raise the bed, by throwing about two inches of soil over it. The crowns were just covered, and that was all. The next year they came up so strong and good that he determined in future to grow his asparagus in the most simple way.

He first digs a trench about eighteen inches broad and as deep. He then fills the trench with manure well trodden in, and returns the soil that was taken out until the surface is level with the original surface of the ground.

The level surface of the trench sinks in a few days, and he draws in more soil from the bank which remains alongside, and again makes it level. It is best to do all this in the Summer. Along the ridge which covers the trench, he plants in the Fall, two-year-old asparagus roots, nine inches apart, in a single row, and draws the bank of spare soil down upon them, in a sort of rounding form, and lets them bide their time of coming up, which they will in pretty good strength in April or May. He keeps them clear from weeds, and the second season, without any other trouble than throwing a little earth on the crowns in the Fall, and raking it off again in the Spring, he grows the finest asparagus in his country.

He has no more difficulty in preparing land for asparagus than for celery. His object was to see whether asparagus could not be grown, like other crops, on the level ground, so as to admit of another crop of a different kind being raised between the rows. According to this plan there are no alleys, no breaking down of edges, but simply plants growing like cabbages or any other crop, the crowns within two inches of the surface, and the shoots cut without any white handle. He allows the shoots to grow five or six inches high for the purpose of increasing the eatable portion. He likes growing crops on the level ground, for many reasons; first, because the plants have more nourishment in rains; secondly, the manure is not washed into the alleys; thirdly, because other crops can be grown between without affecting them at all. He has also grown asparagus on a still plainer system. He manures the ground highly and gets it into fine condition. About March or April he marks drills, three feet apart, and sows the seed thinly along them, covering lightly. When the plants come up, he thins them to about nine inches apart. Here they are allowed to grow until the third season, when just before they come up, he draws the earth over them so as to cover the crowns about ten inches. When managed in this way he has the finest crop that can be desired, and between the rows he raises cabbage, broccoli or any other crop that will come off before Winter.

Vitality of the Potato.

Potato tuber possesses such astonishing vitality that it will not only make a strong growth, but will also yield young tubers, very small it must be granted, but of perfect form and with the organs of reproduction perfectly developed, without any extraneous assistance other than is afforded by atmospheric moisture. This fact is undoubtedly of little value in itself, but is sufficiently remarkable to lead one to inquire if the economy of the potato was capable of nothing more than this, for the phenomenon which I have described is in reality precisely that which takes place in a living plant. For example, a grapevine will produce strong shoots clothed with foliage and bearing incipient fruit-bunches entirely from stored up sap, without any assistance from its roots.

Nor does the analogy cease here, for both potato and grapevine fail to make further progress without the assistance of new roots fed by a nutritious soil. By careful examination it was found that immediately after a tuber had ceased to grow it might be separated from the haulm, without any interference with the process of ripening or deterioration in quality. The only blemish is in the somewhat unsightly and ragged appearance of the skin, which becomes broken from contact with others when taken up in its immature condition. The action of nature to remedy this rubbing of the skin is wonderfully prompt, a fresh skin of considerable thickness being formed within 24 hours after the storing of the potatoes. Here is a question involving other questions for physiologists. One can understand something of how a ripening process can take place by oxidation, and by the combination of crude matter to form the starch or meal substance so much appreciated in a good potato after the tubers are taken up, just as of apples and pears after they are gathered from sugar.

It has been well said that "Nature knows no limits in her great laboratory, having combinations to play upon such as we are only just beginning to understand," and I should be glad to know more of her action in this instance. How is the second skin formed? Of course the substance is derived from the juices of the tuber; am I to suppose, then, that the juice which flows from the wound becomes hardened and converted into a substance resembling the skin by the action of the air? Or is there circulation, or rather a movement of its juices among its tissues, taking place after it is separated from the haulm? It may be said that the fact of the subsequent ripening process would imply something of the kind. Ripening, however, is simply one of a series of chemical changes. Many fruits ripen after they are gathered, but if the skin sustains any damage, decay invariably follows.—*London Journal of Horticulture*.

THE COLORADO BEETLE'S FOOD.—According to observations made in various parts of the country, the "Colorado Potato-beetle" has been seen to feed on potatoes, tomatoes, eggplants, night shade, corn leaves, lamb's-quarter, amaranthus, lettuce, cabbage, thistles, strawberry, currant and raspberry leaves, plantain, potato tubers, and sundry other vegetable substances, but its preference is the potato.

HEADING UP CABBAGES.—The great drawback in growing these successfully and to profit is in failing to have a large proportion of head. To make them head uniformly and well, hoe often, especially in dry weather, and as soon as the surface dries after rains. Don't allow a crust to form around them. A thimble full of salt scattered over them occasionally will be found very beneficial.—*Prairie Farmer*.