

THE VEGETABLE GARDEN.

A Paris Market Gardener on Sewage Manure.

Every time that we visited the ground of the sewage garden at Clichy we were struck with the difference between the crops there, and similar crops in market gardens. The vegetables appeared to be only half the size of ours. It was the same in the case of field crops, and especially with the beet-root and maize. The season was moist, and, from the nature of the experiment, the manure was moist; we did not, therefore, form any opinion with respect to the value of the sewage. In 1868 the engineer-cultivators of Clichy were favored by an exceptional summer. In that year they could compete with the best market-gardens in pumpkins and cardoons. But is there anything surprising in that? What these plants require is plenty of sunshine above, and plenty of water at their roots. Their salads, although apparently flourishing when young, had almost all damped off when gathering time came. The cabbages were only a very moderate crop. The leeks and carrots the same. The tomatoes were a short crop; the fruit was tolerably good, but ripened very late. The melons planted out perished to the extent of three-fourths, and the remaining fourth was only saved by the exceptional heat of the summer. The white celery was satisfactory, but the celeriac was not. There was a very fine field crop of maize; but the year was unusually favorable for this crop. The beetroot was very inferior to that grown in the plain. The potatoes were for the most part lost, but then it was a bad season for them nearly everywhere else. The badly-formed and strange-looking tubers, and numerous deformities of growth proved that the mode of culture employed had been unfavorable to them. The following are some of the most important of our observations:—On a space of 42½ square feet, we counted twenty tufts of French beans—in a market-garden there would be forty to forty-five tufts in the same area. On a similar area were eighteen plants of celeriac—in a market-garden there would be forty-eight plants, double the size. On a similar area were twenty plants of white celery—in a market-garden there would be fifty-six plants, certainly finer. On a similar area twenty-four plants of endive—in a market-garden there would be forty-eight. On a similar area eight heads of cabbage—in a market-garden there would be thirty-six; and so on with all the other crops. The half of the ground is lost in the channels. It is impossible to make sowings and interplantings among the plants grown in this way, and yet the produce is only very indifferent in size and development. It is only at the distance of 15 or 20 leagues from Paris that these sewage crops could compete with those of the market-gardeners at Amiens. As for the Parisian market-gardeners, these experiments have taught them nothing worth knowing, unless it be the fact that they are still the most advanced men in their business, and that in this so much extolled sewage manure they will find nothing worth adopting. The field crops at Clichy did not offer a more encouraging prospect; on an area of 91 square feet we reckoned eighteen plants of maize where there should have been double the number. On a similar area we counted twenty-one very middling plants of beet-root. In the plain this space would be occupied by, at the least sixty-three, and at the most eighty-one plants, with finer roots and of better quality. All the other crops there called for similar remarks. Supposing for a moment that the plants grew as well at Clichy as they do with the market-gardeners, would the latter be able to draw any profits from their land, rented at from £24 to £30 an acre, if they grow their plants with such spaces between them? Assuredly not. Since the engineers have done so badly in an exceptionally good soil and an unusually fine season, the market-gardeners will, for a long time to come, stick to their good horse-manure.—*The Garden.*

Drainage.

About three-fourths of the complaints that reach us of the misbehaviour of fruit-trees, and the failure of vegetable crops, and the unsatisfactory blooming of roses and many other things, have one common origin—the want of drainage. We see people laboring away at the surface, raising the level by additions of soil, manuring liberally, removing plants that have not prospered, and planting others in hope of better luck; and we can tell them, when all is done, that until they secure the first essential of success—a rapid removal of surplus water—there can be no success to their efforts, manure and plant as they may. At this time of year you have but to open a hole one spade deep, and in less than ten minutes that hole

will be filled with water, which proves that the whole surface soil is saturated, and that any cavity, tunnel, or opening would immediately draw off the surplus water, according to the capacity of the opening, and that therefore very simple and inexpensive means would suffice to enable the soil to get rid of the water which is in excess of its power of absorption. A two or three inch pipe, laid at a regular fall at about three feet beneath the surface, will effectually drain a breadth of from 20 to 100 feet in width, according to the nature of the soil and its relative level. Generally speaking, the drains should be three feet deep and twenty-four feet apart; but in a wet clay they will not be too close at twelve feet apart. In districts where there is any apprehension of the disturbance of the drains by moles, one-inch pipe should be used. On very flat land a fall of one in fifty will suffice to keep the water moving; but a rapid fall is preferable if the outlet is low enough to admit of it, as in times of sudden heavy rainfall a quick removal is very desirable. Of course we cannot here enter into the details of the subject; but as this is a good time to drain land that requires it, we again remind our readers that good drainage promotes the warmth and fertility of the soil; and, on the other hand, a water-logged soil is almost poisonous to every kind of plants that come under the care of gardeners.—*Gardener's Magazine.*

SPINAGE.—In the spring, when anything green is something of a luxury, few things come more acceptable to most tastes than a dish of spinage. It is a vegetable that requires for its best development a rich soil; as rich indeed as is asked for by any garden crop. The seeds may be sown either broadcast or in rows about fifteen inches apart. Some growers sow radishes among the spinage plants in early spring, but this is only where the ground is very rich, so as to force on the radishes fast, and get them large enough to be drawn off and sold before the spinage has grown much in their way.

THE FLOWER GARDEN.

My Flower Bed.

A lady correspondent of the *Fruit Recorder* gives that paper her experiences of flower culture under difficulties in the following words:

I determined to have a flower bed, but I thought I had scant materials for making it. I, a woman, with two almost babies to care for and housekeeping to attend to, seemed a very unlikely person to make flower beds, with no very available materials, but I went to work. First, by dint of perseverance I gathered together a pile of stones from various places on the premises, and with them described a circle on the tough clover sod, about six feet in diameter. The sod was not cut up within the circle but was left for drainage. Then with an old wheelbarrow I hauled three or four loads of lime from an old mortar bed and dumped down within the circle of stones. Then I brought two loads of sand that had been thrown to the surface when the well was dug. There was no manure available but fresh horse manure, but of this I brought three loads, and then mixed thoroughly the sand, lime and manure with enough surface earth from our new garden to make the pile high enough for a flower bed. Then I made another circle of stones, three feet in diameter, on top of the pile, and filled this with manure, earth, &c.

We had chickens; from their domicile I obtained enough hen manure to cover thinly the pile of dirt. This all happened in the spring. I let matters rest now till September; when I sent to one of our prominent seedsmen for mixed tulips at 50c. per dozen. I sent for single early parrots, double and late show tulips. When I set them out I put a handful of pulverized charcoal (from the kitchen stove) around each bulb. The next spring I had the most beautiful array of tulips I had ever seen. If tulips are hoed every day (like onions) they will be wonders of beauty; try it. As soon as done blooming I plucked off the seed pods so that the whole strength of the plant would go to the bulb for the next season's blooming. When in bloom I had taken clap boards split to the width of two inches and driven them into the ground around the bed 18 inches apart, and twined other split boards among them. I thus formed a fence two feet high that was useful in keeping out chickens, dogs and mischievous babies. This I did not consider ornamental at the time. I now had an opportunity of procuring leaf mould from the woods; this I spread over the bed two inches deep and I hope to see the good effects of it next spring. But I wanted flowers through the summer, and I hope scientific florists will not turn

up their noses when I say that I planted petunias and morning glories in my tulip bed. These don't need to be sown in a hot bed, and transplanted with great care, but can be sown just where they are to grow and will renew themselves each year if you do not feel disposed to gather the seed. An arch formed of old barrel hoops makes a very good handle to our large flower basket; for such it seems to the beholder. The effect is truly pleasing in the morning, to see the wealth of morning glories—purple, blue and pink overflowing the basket on all sides, creeping in the grass and twining around the handle with petunias peeping between. This is a simple flower bed and does not take much time or money; but everybody that sees it admires it. And now I have told you how I made something out of almost nothing.

Edgings for Garden Walks.

It is generally desirable that we should endeavor to preserve the shape of our flower beds and borders from year to year, so that the plants shall not interfere with the walks. Where flower beds are cut out in the turf on the lawn, an edging with the spade is all that is necessary to keep them in shape for all time. It has been the custom for years to use a dwarf-growing box for edgings; still this is used only by a few, and as it does not flower, there are many who would prefer to use flowering plants for this purpose.

The double-flowering sweet violet is a capital plant for edging to beds, borders and walks. The best time to plant them is in the spring, when the beds are spaded up and got into shape for the season. Draw a line where it is desirable to form the edging, and after separating the plants into small pieces, plant them firmly about six inches apart, along after the line. In a short time they will present an unbroken line or edge, and the next season they will give an abundance of their acceptable fragrant flowers. The double Russian is the variety best adapted for this purpose. The annuals and other flowering plants can be planted quite close to the violets, as some shade will be found to be beneficial to them.

The double daisy makes one of the best of floral edgings, and should be planted quite thickly for fine effect. We have seen edgings of this pretty and popular flower that were vastly superior to anything else in the line of edgings.

The *Sedums Sibboldi* and *Variegatum* are excellent, used for this purpose, being both perfectly hardy, besides standing perfectly well through the hottest summers, becoming denser each succeeding year, as well as being loaded with rosy purple flowers in the autumn.

The dwarf, fine-growing varieties of *Sempervivum* (Live-for-ever), may be used with capital effect and results, and will please all who try them for this purpose. For edgings to walks and beds in the kitchen garden, there is nothing to equal or compare with the double-curved parsley; and as this can be procured cheaply and with so little trouble, as well as being of service in the kitchen, we advise all who care for trimness and neatness in their garden walks to give it a trial.—*B. B. in the Farmer.*

NEW ORCHID.—One of the most striking and elegant orchids we have lately seen, and one quite new to us, is *phajus bicolor*. It has the habit of *P. Wallichii*, but the flowers are smaller, more elegant in form, the sepals and petals lanceolate, brownish, the lip pinkish. We saw it lately in bloom at the Jardin des Plantes, and were much struck with its beauty.—*Gardener's Chronicle*

ON THE COLORING POWER OF WATER.—It is a curious fact—and I am not aware that it has been noticed by scientists—that pure water develops the coloring of such leaves as alternantheras, golden and silver tricolor pelargoniums, resines, crotons, &c. Drought takes the color out, water either puts or keeps it in. There is no doubt about the fact; as I have seen thousands of alternantheras almost colorless during the past season of drought, and others that have been soaked with water once or twice a week beautifully colored. Frequent overhead waterings is also the surest method of fixing the color in, and bringing more color out, of golden tricolor pelargoniums. Under glass water is equally effective in keeping such leaves in full color. Resines and amaranthuses become dingy during growth, and color up anew after rains or artificial waterings. And even the greenness of grass and of the foliage of trees is largely dependent on the amount of moisture that falls upon them. Many roses again, especially pinks and reds, are so much finer and more delicate in color after heavy rains or artificial waterings; Marie Beaumaris for instance, is a sight to see after a heavy rain.—*D. T. F. in The Garden.*