GARDEN AND ORCHARD.

MUSHROOMS.

The Mushroom is a very accommodating plant. We have seen them growing in old tubs, in out-of-the-way corners of sheds, in abandoned greenhouses, on shelves in stables, and in every case giving apparently a good and healthful crop.

All that is needed for success is a temperature from fifty to sixty degrees, some fresh horse manure, and a little spawn. Having procured what fresh horse manure is needed, mix it well with about one-third of its bulk of good loam, and you are prepared to make your beds in whatever place you prefer. If you determine to form beds, make them narrow—certainly not more than five feet in length and about fifteen inches in breadth. The material must be made compact by beating down, as evenly as possible. If under cover, the beds may be made flat on the top; but if in the open air, they should be rounded to shed the rain. After the beds have been made a week, there will be considerable heat produced by the fermentation of the manure.

Bricks of spawn should have been secured previously, and they can be sent anywhere, postage or expressage free, at about thirty cents a pound. Break them into pieces as large as walnuts, and insert in the beds just below the surface, about ten inches apart. One pound of spawn is sufficient for a space two by six feet. If there seems to be much heat, do nothing for a week or ten days, until it somewhat subsides. Then cover the bed with an inch or more of good earth, pressing it down with the back of a spade. It is not likely in a large bed water will be needed at all; but, if the material should appear very dry, water lightly with warm water. In small beds or pails, or anything of the kind, it is probable water will be needed once or twice.

Mushrooms will begin to appear in about six weeks after planting the spawn and can be gathered for three or four weeks. In gathering take up the mushroom entire, leaving no stem in the bed, and placing a little earth in the hole made by its removal. When the crop is gathered, cover the bed with a little more earth, beat it down gently, and give a pretty good moistening with tepid water, and in about a month more another crop will be produced.—*Vick's Illustrated.*

EXPERIMENTS IN CROSSING APPLES.

Prof. W. J. Beal writes as follows upon crossing apples, in the *American Agriculturist.* Will the pollen, or flower-dust, from one variety of apple change the appearance of another variety? It is not uncommon to see apples of a variety which is usually smooth, bearing strips of russet from the stem to the blossom end. These russet strips have often, even by good botanists, been considered evidence of a cross, or a partial cross, by pollen from a russet variety. On examining several such apples, I can not now remember to have seen a single one where the russet stripe corresponded to a cell or carpel of the fruit. This we should expect in case the russet stripe was due to the russet pollen. A few years ago, I crossed some smooth variety with pollen from a russet tree. No effect was produced on any of the apples. In 1881, the experiment was repeated, using the pollen of a Golden Russet on the stigmas of the Northern Spy. In no case was there any indication of russet on the skin of the Spy apples. I think the russet stripes found on apples, which are usually smooth, are to be attributed to what we call a "sport." I have seen a white pæony and a pink one coming from the same root; a yellow sweet potato coming from a stalk which bore the rest of the crop of a red colour. It is not very uncommon to find a similar change in colour in common potatoes. These are slight changes, or sports, the cause of which is not known.

FLORICULTURE IN SOUTHERN FRANCE.

Back of Cannes and for miles about the peasants are engaged in the culture of roses and violets and olives. Winter and summer the roses bloom on the rocky parterres of the Estrells, sheltered by the thick, gray satin foliage of the olives. Besides supplying the 100,000 pleasure-seekers all along the coast, from Marseilles to St. Remo, San Carlo, Monaco, Nice, Mentone, these exquisite products are packed in cotton with some innocuous chemical preservative and sent to Parisian, London and even Viennese florists. Never was an unpromising soil made to produce more abundant treasure. A species of red sandstone, apparently as susceptible of fertility as a bed of granite, this soil gives abundant support to plenteous crops of grapes, olives, roses, violets, pansies and other hardy flowers. Besides sending them to all the European capitals, the thrifty Provençales—for Provence embraces all the shore of the Mediterranean nearly—preserve them and carry on an enormous trade in candied violets and roses glace. Just at the foot of the second range of the Estrells, in a well-protected valley, is the town of Grasse, the seat of a hive of manufactories, principally perfumes, candies and pottery. The perfumes of Grasse are known the world over. In fact, all French perfumery is made at this modest little Mediterranean retreat. Of a summer day the exquisite country roads leading thither from Nice and Cannes are filled with visitors in all manner of vehicles, sampling pottery, violets and perfumery.—*Philadelphia Times.*

MANURING FRUIT TREES.

A rule adopted by old writers, says the *Pacific Rural Spirit*, gave the length of the roots as equal to that of the branches above. It is safe to say this rule does not indicate generally more than a tenth of the ground which the entire roots really occupy. Many years ago I made an experiment on a row of peach trees planted in grass and within a few feet of each other. They had been set three or four years, and were eight or nine feet high. Within a few feet of one end of the row the ground was very rich with a heap of manure. Its stimulating effect on the nearest trees was such that the shoots made in one season were two feet and a half long. The tree, which stood seven feet from the manured ground, made shoots fifteen inches long, and at eleven feet distance the shoots grew seven or eight inches. At fifteen feet no perceptible effect of the manure was visible, the growth not exceeding three inches. The experiment showed that a decided benefit was gained to the tree at eleven feet distance through the few roots on the one side, and that the roots formed a radiating circle at least twenty-two feet in diameter. The absurdity of the practice of applying a small heap of manure at the base of the trunk of the tree is obvious.

TO RAISE GOOD POTATOES.

I have not been growing potatoes of late years, but as so much was said about the deterioration of the early rose, and the market seemed to confirm it, I planted some the last spring as a test. The soil, an old sod, was prepared last fall, and an early working given in the spring when the planting was done. Selecting the soundest seed I could find, I planted some in the usual way, covering two or three inches deep, others six and eight inches. The first were a failure—a few small potatoes in a hill and of poor quality. This agreed with the general crop of the neighbourhood. It was a matter of gratification—and to the neighbours a surprise—to see the fine, bright tubers that came up when the deep-planted were dug—which was the middle of June—those covered six inches ripening earlier, as they also came up earlier after planting. They were clean and sound, and when cooked were white, mealy and sweet, with no rank, unhealthy odour. The objection to deep planting, that it is more expensive to harvest the crop, holds good so far as the digging is concerned, but it is in no way an offset to the other advantages of a larger, sounder and more uniform crop to take one season with another, drouth having much less effect. The greater freedom from disease, which results, is a point that can hardly be overestimated in view of the widespread unsound condition of the tubers, for there is less chance for deep planting in well drained soil, the tubers being further down and better protected—at least there is greater success. —*Exchange.*

THE KITCHEN GARDEN.

A good kitchen garden well stocked with different vegetables means a bountiful supply of healthful food for the table. If the farmer lives near a village, especially one with large factories, he may dispose of cabbage, green corn, peas, roots, etc., with profit. It will pay to look closely to this matter, and see if a small plot of ground in garden vegetables will not yield larger returns than a whole field in farm crops. There is but little out-of-door work in the garden in mid-winter. Whenever the soil will permit it may be worked in mild weather, and thus facilitate the spring operations. Implements should be put in order, and new ones sought out and procured for spring operations; even a plough point or cultivator tooth put in stock now, may save a half-day in the busy season. Now is the time for overhauling the seeds, testing them as to their vitality, that there may be no serious losses, later on. Any stakes or labels that may be needed should be provided beforehand.

Roses need very rich soil to bring them to perfection, thriving best in a mixture of well-rotted manure, sand and garden loam, and to stint them of nourishment is indeed poor economy.—*Exchange.*

A Pennsylvania fruit-grower, when he plants a strawberry bed, applies manure at the rate of thirty to forty tons per acre, and dresses it annually afterward with a fall mulch of twenty-five tons more. He raises 5,000 quarts to the acre, and they are big berries.

Candytufts are now produced of almost every shade, from pure white to deep carmine. The varieties come true from seed. The seed of the darker varieties does not seem to germinate so well as that of the white, and it might be well to sow it more thickly on this account.

In a recent French work on the philosophy of pruning the following rule is given: "The system is based on the fact that, as wood is formed by descending sap alone, a wound made on a tree can only become covered with healthy new wood when its entire surface is brought into connection with the leaves by means of the layer of young and growing cells formed between the wood and the bark. To make this connection it is necessary to prune in such a manner that no portion of the amputated or dead branch shall be left on the trunk. The cut should always be made close to and perfectly even with the outline of the trunk, without regard to the size of the wound thus made. This is the essential rule in all pruning and on its observance the success of the operation depends."