Mulch.

Too many are apparently quite ignorant of the value of mulch. Indeed we have met with parties making some pretensions to be gardeners, who did not know the meaning of the term. As a protection and help to newly planted trees, there is nothing like it. Few transplanted trees would fail, if this precaution were taken. A good mulching of straw, litter, leaves, newly mown grass, weeds, spent tan bark, or saw-dust, keeps the ground loose, friable, moist, and in the best state generally for securing steady and thrifty growth. A correspondent of the *Rural New Yorker*, writing on this subject, urges the use of all manner of material for the purpose, that may happen to be within reach, and says that shavings, brush, cut short, chips, and even cobble-stones will make a mulch, if nothing better is at hand. He also gives an interesting account of "the philosophy of mulching," a point on which little has been written. He observes: Downing says, "by preventing evaporation it keeps the soil from becoming dry." This is the general theory, right as far as it goes, but is far from expressing the whole truth. Mulching is actually watering. It is providing a constant and ample supply of moisture. It does more than this; it provides a constant supply of fertilizing matter. Some years since, observing the remarkable effects of mulch, the writer tried some experiments, which, to his mind, tended to throw some light upon the mode of its action. Perceiving that a heavy mulching of saw-dust produced all the apparent effects of heavy manuring, and kept the ground moist in the driest season, the bulb of a thermometer was sunk to the bottom of the mulch, and the mercury fell ten degrees. This demonstrates to my mind the cause of the moisture and fertilizing. The mulch being always porous, permits the free circulation of the air, and being ten degrees cooler than the general atmosphere the moisture of the air is condensed. This accounts for the constant moisture of the earth under it, even in the driest season. The fertilizing matter of the air consisting of the ammonia and carbonic acid, are deposited by the condensation of moisture under the mulch. We are all familiar with the fact that frequent stirring of the soil, in a dry time, will prevent injury to a crop for want of rain. This acts on the same principle as the mulch. The soil being kept porous receives its moisture by condensation from the air. Nitre is often gathered from the earth in damp, dark cellars, and from under rubbish which has been long undisturbed, and it was deposited there in the same manner as under the mulch.

Mulch has another remarkable quality. It will render the hardest and most compact earth loose and porous in a few months. The benefit of summer-fallow is based upon the free circulation of air through the soil, caused by many ploughings. If the soil is left unused, but without stirring, it becomes compact and little or no benefit arises from a year's rest. If the ground were mulched, it would need no ploughing to produce the same benefit. It is recommended by some horticulturists to remove the mulch in September, for a time, to prevent too much water from being taken up between the bark and sap-wood, which, it is said, will freeze in winter, and cause the frozen sap-blight; the mulch may be returned at the commencement of the cold weather. This may be done by those who believe the winter-blight thus produced. But let no one neglect to mulch who has anything to do it with.

——"Hyacinths, Tulips, and Daffodils
That come before the swallow dares, and take
The winds of March with beauty; Violets bright,
But sweeter than the lids of Juno's eyes,
Pale Primroses that die unmarried;
The Crown Imperial, Lilies of all kinds,
The Flower-de-Luce being one,
To make you garlands of"—*Shakespeare.*

The Orange Tree.

As an ornamental plant the orange has been greatly undervalued. In the estimation of the fairer sex, at least, its delicate, white and deliciously fragrant blossoms are Flora's gems; and every cultivator of this plant knows that, however fragrant and beautiful the flowers of a bouquet may be, when it contains "a sprig of orange blossom" it is all the more prized. It is singular that so little attention is bestowed upon its cultivation, considering the preference of those whose taste it is the interest of gardeners to study.

For general pot culture, the more delicate growing varieties—as nobilis, japonica, myrtifolia, &c.—should be preferred, as to keep these varieties in moderate bounds it is not necessary to resort to means injurious to the health of the plants; and if these are propagated by cuttings instead of budding or grafting, there is little danger of over-luxuriant growth.

In selecting cuttings, choose half-ripened wood, and insert them in light, sandy soil, plunging them in a bottom heat of about 65° or 70° (they will require attention in regard to shading from strong sunshine, &c.), where they will root with certainty; but if the operation is deferred till October, and the cuttings placed in a temperature of 55° to 60°, and in the spring removed to a sharp bottom heat, hardly one will fail. As soon as they are sufficiently rooted, they should be potted off singly into four-inch pots, and, if at command, placed in a gentle bottom heat, where they will grow rapidly if kept close and moist, and shaded from the mid-day sun. Keep the plants growing on rapidly till the month of October, shifting them on as they require it, when they should be gradually hardened off by a free circulation of air and a drier atmosphere to ripen the wood. They should then be removed to a light dry part of the greenhouse for the winter months, where they should be kept all but dormant.

When grown in heat, the orange is very liable to the attacks of brown scale; and as soon as it makes its appearance, advantage should be taken of the firm state of the foliage to remove every vestige of this. In spring, the plants should be removed to a pit, and plunged in a bottom heat of from about 65° to 70°, treating them in the same manner as recommended before, only using less shade, but stopping all gross shoots, so as to secure nice bushy plants. By the end of the second year's growth the plants will be handsome little specimens; and if the wood is properly ripened, will flower profusely in spring.

As soon as their flowering season is over, the plants should be pruned, all weakly shoots removed, and the stronger ones shortened; and see that the foliage is perfectly clean. Insects will now be got much more easily rid of, than when the plants are covered with tender foliage. The most effectual way to proceed in this matter is to lay the plants on a clean mat, syringing them with water at a temperature of about 150°. This, however, will neither kill nor remove the brown scale, which must be brushed off with a dry brush afterwards. Such plants as require a shift should be attended to: others which may not require it should be surface-dressed with a rich compost.

To secure a succession of flowering plants is a very easy matter, requiring no further care than to grow the stock at two or three seasons of the year, slightly forcing some and retarding the others. There is no plant more accommodating in this respect, or that is more easily had in bloom all the year round.—W. F. W., *in Scottish Farmer.*

A Day-Labourer's Garden and Home.

G. W. Lawrence, of Oswego, N. Y., writes to the Utica *Herald* that, in 1850, he bought a lot of land in the outskirts of Oswego, 66 by 198 feet, one end of which was a ledge of rocks, the other a pond of water. Putting up a rough shanty, he went to work evenings, after labouring for his employer all day, making ditches and digging rocks. The next spring it began to look a little more like life, and he set out a few trees that he dug from the woods, and borrowing Downing's fruit book, went to grafting on his own book. No other time than "odd spells" when he had no other employment, has been devoted to his land or buildings. He says:

"Fourteen years have passed away, and now we behold on the lot 66 by 198, a snug house, barn and other out-houses, a good well of water, and all done by my own hands—shingled my house, dug and stoned my cellar by candle light. The fruit is as follows: eight apple trees, bearing thirty-five varieties, choice kinds, ripening in succession, from earliest to latest; sixteen cherry trees, all choice varieties; nineteen plum trees, bearing twenty-five different varieties; forty pear trees. All the above are standards; I cultivate no dwarf trees; all the pear, and a portion of the plums are on trellises, the trees now bearing being from seven to fifteen feet high. The number of varieties of pears I cannot give, as some of the buds are not yet in bearing, but will venture at least from sixty to seventy-five different kinds, ripening in succession, from the earliest to the latest varieties. One of my largest and best trees is on a thorn. The tree has seven varieties, and has borne a full crop for five years. The tree grafted on mountain ash, bore more pears than I ever saw on a standard of the same size. The third crop it was exhausted and died. In addition to the above, on the same lot, we find the Lawrence seedling grape. This grape was found ten years ago by my wife, while picking blackberries. The grapes resemble the Isabella, but the bunches grow more compact, and they ripen from ten to fifteen days earlier. As to productiveness, I challenge any other variety to beat it. I sell these vines readily to our citizens, who saw them in bearing, at $3 a piece. I will venture to challenge any man in the State, under the same circumstances, and with the same means, to produce equal results. I have taken five first prizes at four different State Fairs, two first prizes at Provincial Fairs in Canada, and at County Fairs for the last seven years."

Glazing Greenhouses without Putty.

In compliance with your requst for information respecting the above mode of glazing, I have to state that I saw one greenhouse so glazed in the neighbourhood of Boston, U. S. It had a neat, clean appearance, and was most favourably reported of as a secure house. My informant stated, that the glazing was not so liable to be injudiciously influenced by the weather, as when done with putty, which one can readily believe, as most of the leaks in our houses are caused by defects in the putty or puttying.

The way in which the house alluded to was glazed was this—after the priming coat the glass was laid on in the usual way, but without bedding; the panes were securely pegged in, and then three or four coats of white lead given, which proved quite capable of resisting the great extremes of heat and cold in that country, and I should imagine would prove fully as efficient in this. At all events it would be worth trying whether putty cannot be dispensed with, for it is a source of annoyance in more ways than one. I should think that if the glass were laid in a fresh coat of white lead, and three coats over it, it would be still more secure than the above mode.

I have learned that white zinc is a better paint for out-door work than white lead. Can you, or any of your readers, confirm the report? - *J. K., Arch Hall Gardens.*

The Petunia.

The Petunia is a well-known and favourite bedding-plant, though more generally, perhaps, treated as a hardy annual. Plants in pots may be obtained at most of the nurseries, though, as they can be grown easily from seed, and flower easily the first season, this course is the most common way of obtaining plants. Perhaps no flower has been more improved within the past ten years than the Petunia. We now have flowers of extraordinary size, striped, blotched, veined and mottled, single and double. Double flowers can only be obtained by procuring plants, as there is no certainty that seeds will produce double blossoms. For a brilliant, showy bed, the single varieties are the best. If seeds are sown in a hot-bed or cold frame, in April, or in the open ground about the first of May, the plants will begin to flower by the last of June. If planted about eighteen inches apart, by the middle of July, the whole bed will be covered, and exhibit a mass of brilliant yet delicate flowers, until hard frosts make an end of their glory.

The following are some of the best varieties I have ever grown, and they are exceedingly fine:

Kermisena Grandiflora, a very large flower, ranging from crimson to scarlet. There is one variety in other respects the same, with a white throat, and it is elegant.

Maculata Grandiflora, has white ground, spotted, striped and marbled with red or purple. It is a large and magnificent flower, somewhat of the character of Buchanan's Blotched, but larger, and of more robust growth.

Marginata, is mottled and veined with green. More singular than brilliant, and not always true.

Rosea Grandiflora, a very fine, large, deep rose-coloured flower, with white throat. This is a truly beautiful flower.

Venosa Grandiflora, is of a variety of good colours finely veined, with a delicate net-work of a deeper colour than the ground of the flower.

Countess of Ellesmere, is a smallish rose-coloured flower, with a white throat, always comes true from seed, and makes a most magnificent bed.—*J. V. in Rural New Yorker.*