

GARDEN AND ORCHARD.

MANURES FOR THE GARDEN.

It is almost folly to try to raise fine vegetables without a heavy application of manure, and the gardener should use every sensible means to accumulate it from every source. Stable manure, of course, is his main reliance, but is often held so high in some markets that it must be handled economically and applied judiciously to make it profitable to purchase it. Commercial fertilizers are valuable, but by the time the purchased price and freightage is paid, it is doubtful whether they are profitable to purchase. As the gardener's outlay is heavy, and he often meets with losses and difficulties, it is very important that he use economy at every point to make his business profitable. Great care should be used in saving manure, or else you may have a great amount and of but little value. The fall and winter is the main time for collecting manure. Manure, in its broadest sense of the word, is anything which added to the soil, either directly or indirectly, promotes the growth of plants.

In view of the above facts, and as I have had considerable experience in composting manures, I will give a few hints by which the gardener may acquire a fine chance of excellent manure, independent of risking too much on high-priced fertilizers.

Forest leaves, when well rotted, seem to be especially adapted to the gardener's wants. Two-thirds leaf-mould to one of stable manure, composed together, kept moist and well covered, forked over occasionally to make it fine and to regulate the moisture, will be found rich in plant food, and well adapted for any crop.

To form a compost of the following materials, which are a nuisance to any place after they are well decomposed, makes an excellent fertilizer for vegetables. For a base, rake forest mould and leaves all up together, and put at a convenient place. Upon this throw all the animal matter found about the premises. The carcasses of small animals, offal of every kind, woollen rags, bones, old boots, old shoes, waste leather of every description, the droppings of the hens, soap suds, salt brine, slops from the sink, ashes, chamber lye, night soils, in fact any thing that will decompose. Green weeds and grass of every description will aid in giving moisture, which it must have. As often as needed, to keep down the bad odour and hold escaping gases, grass sod, soil from the woods, and sides of fences should be trown over the compost heap. When thoroughly rotted, this will be a fertilizer of excellent quality.

ROSES IN POTS.

The ever-blooming roses are the best for house culture in pots, because they bloom quicker and more continuously than any of the others; and, besides this, their style and habit of growth are more bushy and better adapted to the purpose. They could be kept nicely with other growing plants, and with proper attention to their requirements will bloom freely. (1) Do not use too large pots. If possible, not more than three or four inches. The rule is one size larger than the plants have been growing in. The smaller the pot (provided, of course, it is large enough to contain the plant) the quicker and stronger the plant will start. It is very difficult to get a small plant to live and grow in a large pot. A rose will not bloom much till the pot is well filled with roots. Therefore, small pots facilitate quick bloom. If the pots are old they should first be thoroughly washed. If new they should first be thoroughly soaked in water; otherwise they will absorb the moisture from the plant. (2) Have good rich

soil, mellow and friable. That made from old, decomposed sods is the best. If manure is used, it should be old and thoroughly composted. Fresh manure is injurious. (3) Put some bits of broken crockery, charcoal, or other similar material in the bottom of each pot, to facilitate drainage; then enough fine earth to raise the plant to a proper height. It should not be much deeper than it was before. Next put in the plant and spread out its roots as near their natural position as possible; then fill in earth and press firmly down with the hand. When done, the pot should not be quite full; a little space is needed for water. (4) When first potted water thoroughly, and if the sun is strong shade for a few days; then give full light and air. Though the plant should not be allowed to wither for want of water, the earth should get moderately dry before watering again. Too much water is worse than not enough. Very little water is needed until the plant starts to grow.—*Guide to Rose Culture.*

FRUIT NOTES.

Quinces.—The quince is a fruit that has but few enemies, and as they are always in demand, we hope to see them more extensively cultivated. There is no fruit crop that pays better with the same proportion of labour.

Diseased Branches.—Fire is the best remedy for many evils that beset fruit trees. Diseased limbs are just as dangerous in the operation of infesting an orchard as direct contact, for spores and parasites are tenacious, and propagate in any place, or on any kind of material that is suitable.

Dead Wood.—Old vines and canes are of no use to the new ones, nor to the ground, and they should be cut out at any time after the cold weather sets in. Most agricultural journals are recommending that such be cut away low, but the best time for so doing is when the earth is frozen hard and stiff. You will then also have more time for so doing.

The Yield of Strawberries.—If a person should be informed that an acre will produce five or six times as many strawberries, in bushels, as wheat, it would scarcely be credited, and yet such is the fact. Nor is this all, for the price per bushel is more than twice that of wheat, the crop being thus equivalent to at least ten crops of wheat. Or, put in another shape, an acre of strawberries will produce as much as ten acres of wheat in money. But, in order to do this, labour must be expended, and no reluctance should be given to anything that pertains to the crop. It is the labour that pays, and not altogether the strawberries, and every farmer and fruit-grower should endeavour to familiarize himself with the methods that permit him to do as much with one acre as he formerly did with a larger area.

THE COLOURS OF FLOWERS.

Hitherto it has been supposed that the colours of flowers were due to so many different materials, each colour being a combination having no relation with the others. But now, however, Professor Schenztler, in a communication to the Vaudois Society of Natural Sciences, shows that, when the colour of a flower is extracted by placing the latter in alcohol, the addition of an acid or alkali will give all the colours that plants exhibit. Flowers of peony, for example, give, when put in alcohol, a violet-red liquid. If to this solution binocalate of potassia (salt of sorrel) be added, the colour becomes pure red. Soda causes it to change, according to quantity used, to violet, blue, or green. In the latter case the green liquid appears red by transmitted light, just as a solution of chlorophyll (the green colouring matter of leaves) does. The sepals of peony, which are

green, bordered with red, become entirely red when put into a solution of binocalate of potassia. These changes of colour, which may be obtained at will, may well be produced in plants by the same causes, since in all plants there are always acid or alkaline matters. Moreover, it is quite certain that the change from green to red observed in leaves in autumn is due to the action of the tannin which they contain on the chlorophyll. Consequently, without wishing to affirm it absolutely, Professor Schenztler believes that *a priori* there is in all plants but one colouring matter—chlorophyll—which, becoming modified by certain agents, gives all the tints that flowers and leaves exhibit. As for white flowers, it is well known that their want of colour is due to the fact that their cells are filled with a colourless fluid, and that their opacity proceeds from the air contained in the interspaces. When such flowers are placed under the receiver of an air pump they are seen to lose their opacity, and become transparent as the air is exhausted.

FRUIT TREE CULTURE.

Instead of "trimming up" trees according to the old fashion, to make them long-legged and long-armed, trim them down, so as to make them even, snug and symmetrical.

Instead of manuring heavily in a small circle at the foot of the tree, spread the manure, if needed at all, broadcast over the whole surface, especially where the ends of the roots can get it.

Instead of spading a circle about the stem, cultivate the whole surface broadcast.

Prefer a well pulverized, clean surface in an orchard, with a moderately rich soil, to heavy manuring and a surface covered with a hard crust and weeds and grass.

Remember that it is better to set out ten trees with all the necessary care to make them live and flourish, than to set out a hundred trees and have them all die from carelessness.

Remember that tobacco is a poison, and will kill insects rapidly if properly applied to them, and is one of the best drugs for freeing fruit trees rapidly of small vermin.—*National City Record.*

The currant requires, for best results, depth of soil, moisture and fertility. It succeeds best when treated to composts in which muck, leaf-mould and barn-yard manure abound. Bonedust and wood-ashes are also good, and the fruit will be all the better if the bush occupies a cool, half-shady exposure.

SEEDS of many kinds of plants are best collected by cutting off the stems and letting them dry. The seeds meantime have matured and are saved, while if left upon the plants longer they would in part be scattered over the ground. This is the case with such flowers as columbine hardy, geraniums, portulaca, phlox, etc. For this reason such weeds as purslane should be carried from the ground and never thrown upon the manure.

A HINT to some reader of the RURAL CANADIAN may be found in the following: "On one occasion I shipped twenty barrels of apples to a customer, during the holidays. The weather was mild when I shipped, but fearing it might turn cold, I lined each barrel with two thicknesses of paper. They were detained by mismanagement in transit, for over two days and nights on the track, and the second day the mercury went down to twelve degrees below zero. There was no fire in the car, but they went through safe. The dealer acknowledged receipt, with draft, and wrote: 'I have been dealing in apples for years, but never knew how to pack apples until I saw this lot.' This was my first shipment to him, and he has continued to buy of me ever since, when I have any to sell."