

Watering the Garden.

Although for some weeks past rain has been abundant, most places suffered during the early part of the summer from drought, and those who had gardens to cultivate were meditating upon watering-cans, and tubs, and sprinklers.

Much can be done when preparing the ground for planting to mitigate the severity of dry weather, by deep loosening of the soil, thoroughly breaking it up and pulverizing it, and applying to it a liberal dressing of well-rotted manures. Indeed, when this is well done before planting, and the surface of the ground is kept loose and friable by cultivation after, it will seldom be necessary to water the garden, even in the driest season. As a rule, much more can be done to prevent plants from suffering from drought, by the use of the hoe and the rake, than by the application of water. When the surface of the ground is kept loose and well pulverized, the evaporation of the moisture from the soil below is greatly retarded, but when the surface becomes hard, the whole soil bakes and dries out.

But sometimes it becomes necessary to water our gardens, and yet oftentimes more injury is done by the improper use of water than would have resulted without it. It is in the hope of giving some reasonable hints that will be of service to our readers, that we now write.

Do not use *cold* water, such as it is when taken fresh from a well, or spring, or covered cistern. Let it be exposed to the sun and air, at least one day, in some open barrel or tub, or other, reservoir.

Do not water plants in the morning, or during the day, while the sun is shining hot, but just at evening after the sun has declined so far as to lose its scorching power, and the coming night will give time for the water to soak into the ground, and evaporate gradually from the leaves and be absorbed by them.

Do not give the plants a mere sprinkling, barely wetting the leaves and the surface of the soil; but give the ground a thorough soaking, so that the water will penetrate to a good depth. It is far more beneficial to the plants to receive one thorough watering that penetrates down to the lower roots, than a dozen mere surface sprinklings. Indeed, one such thorough watering will usually carry the plants through our most protracted droughts, if followed by the surface stirring mentioned below. The reason of this is very simple. The dry weather has compelled the plants to send their roots deep into the soil in search of moisture, and in order to give immediate benefit to the plants the water should go where the roots are. If, on the contrary, the water is only just sufficient to moisten the surface, it will dry up before the roots find it, or if it is kept moist long enough to induce the plant to send out surface roots, which it will do to get it, then the plant ceases to send out roots below,

and depends upon getting moisture through these surface roots. If then the supply be not daily kept up, and the surface be allowed to dry up, the hot sun soon causes these surface roots to perish, and the plant, deprived of its moisture, flags, and often dies.

In the morning, after watering the previous evening, stir well the surface of the soil, so that it shall be quite loose. This will prevent the surface from baking, and keep the soil below cool and moist.

Do not water often. Water thoroughly, as has been already directed, and pulverize the surface well on the following morning, before the sun is hot, and let that suffice for a week at least. In this way by taking one bed, or two, at a time, the whole garden can be gone over, and the plants benefitted. Better not to water the garden at all than to give it the mere surface sprinkling so commonly practised, and that without any subsequent stirring of the soil.

Hamilton Horticultural Society.

The second exhibition of this Society took place July 1st in the Drill Shed, Hamilton. The show in many respects was much behind what we have seen in former years; there being not nearly so large a display of cut flowers and floral gems from the greenhouses. We did not observe any novelties amongst the floral beauties. Of early vegetables there was a very fair, though not large, show, and the articles appeared to be well grown and well arranged. We noticed sixteen pecks of new potatoes, of which five were Early Rose. The best, however, seemed to be the Kidneys, which were very fine, appearing more ripe and attractive than the Early Rose.

Of fruit there was a most excellent exhibition in strawberries, cherries, currants and gooseberries. There were twenty-two plates of strawberries, mostly different varieties; of which the Dr. Nicaise were extraordinarily large and fine, while Jucunda, Russell's Proflific, and Triomphe de Gand showed off to great advantage. Of cherries there were sixty-seven plates, the Black Tartarian and Napoleon Bigarreau being very fine and large. Some ten new seedlings, not yet named, were shown, of which two or three light sorts appeared to be of first-rate excellence as regards size and appearance. It was too early for currants, gooseberries and raspberries to be ripe, although those shown did not lack for size; the gooseberries especially were very large.

Preserving Fruit by Carbonic Acid Gas.

To the Editor.

SIR,—In your report of the winter meeting of the Fruit Growers' Association of Ontario, it appears mention was made by some of the members of experiments which they had made in keeping fruit in cans charged with sulphurous acid gas; and it was thought to be advisable to make experiments with carbonic acid gas with the same end in view.

Being desirous of making the experiments above mentioned, I should feel greatly obliged if you, or some of your numerous correspondents, would kindly inform me as to how the gas is generated; how the cans are charged; and when charged how the atmosphere is excluded, or any other necessary knowledge on the subject.

JAMES MCINTOSH.

Colborne.

REPLY.—Carbonic acid gas may be readily obtained by pouring sulphuric acid, diluted with two or three times its weight of water, on small fragments of chalk or marble. A wide-mouth bottle with a nicely fitting cork, a few pieces of glass tubing, and a piece of India-rubber tubing about the same diameter, is all the apparatus required. One piece of glass tube should be made to pass through the cork down nearly to the bottom of the bottle, so as to be under the liquid when the gas is being given off. Through this, fresh acid may be added from time to time as required—we will call this No. 1. A second tube, No. 2, should be made to pass through the cork, and to the upper end of this a short piece of rubber tube should be attached, having a third of piece glass tubing at its upper extremity. The object of having the rubber tubing between the two pieces of glass tube is to enable the operator by its flexibility to convey the gas into any sort of vessel he may desire.

Having put some pieces of chalk or marble in the bottle, pour in through tube No. 1 some of the acid, when a brisk effervescence will immediately take place, the gas being given off rapidly. Carbonic acid gas being heavier than atmospheric air, it first displaces the air in the bottle, driving it out through tube No. 2, after which the gas comes over in comparative purity. Place the exit tube into the bottle, or other vessel you may wish to fill, having its extremity near the bottom, when the gas will gradually displace the air as it enters, in precisely the same manner as water would. To ascertain when the bottle is filled, light a small piece of twine or other combustible, and introduce it slowly into the bottle. As soon as it reaches the gas, the flame will be immediately extinguished. The fruit to be preserved may be put into the bottles before they are filled with the gas; then fill to overflowing, and cork and seal with wax in the usual way.

SALTING CABBAGE PLANTS.—A writer in the *American Agriculturist* thinks that salt is an excellent fertilizer for cabbage in places remote from the sea. He sprinkles a pinch of salt on the centre of each plant when they are wet with the rain or dew, a few days after they have been set out. When the plants begin to form heads, he sprinkles another pinch of salt upon them, using in the whole a quart of salt to five hundred plants. He thinks that it improves their vigour, and promotes their heading. Will some of our readers try the experiment, and send the results to the FARMER?