German investigations show that vegetables make better use of the constituents of farmyard manure than fruit crops. Experiments carried out at the Diemitz Experiment Station, and at Strassfurt in Germany, seem to clearly indicate that in the case of fruits, and especially with apples, fertilizers containing nitrogen, potash and phosphoric wid can be used with profit, and that potash affects the results more than any other one constituent. On the other hand, stone fruits were more influenced by phosphoric acid and nitrogen.

Recently considerable prominence has been given to the fact that apples may he successfully grown without the use of any manure. Some form of cover crop is essential to the proper cultivation of orchards, and obviously it is to the advantage of the owner to grow a grop that will gather nitrogen from the practically limitless supply in the atmosphere. It is possible that under many soil conditions enough of this expensive element may be gathered in this way. And, further, as the roots of the apple tree extend deeply and over a wide area and the tree has nearly the full season to mature its fruit, it may be able ? gather all the food required. However, soil conditions vary so widely that it is impossible to draw definite conclusions from one experiment. Many fruit growers will bear out the statement that manures have increased their crop. Last year we placed a number of fertilizer experiments on apple and peach orchards, which we hope to continue for some years in order that we may precure reliable results.

In 1908 the writer visited a German Provincial Fruit Experiment Station at Diemitz, near Halle, Germany, where an apple orchard had been under experiment for sixteen years. The orchard received a small amount of stable manure and good cultivation. The illustrations in the March number, pages 59 and to, indicate fairly well the marked effect of the fertilizers.

Many of the small fruits respond readily to an increased supply of plant food applied in the form of fertilizers and they are comparatively easily experimented with.

In closing let me urge those who are inclined to use fertilizers to experiment in a small way before applying these materials freely. Further, do not expect them to take the place of cultivation; nothing can do that, for it is only when the good cultivation is given that the soil is in a condition to allow the plant to make the best use of the plant food available.

The ideal location for geraniums is a light sunny house with a temperature of forty-live to fifty degrees at night.

Spring Planting

Wm. Hunt, O.A.C., Guelph, Ont.

The months of April and May and the early part of June are busy times in the flower garden. The pruning, trimming, and the clearing up of all garden rubbish should be all finished and the ground dug and prepared for planting operations by the middle of April, if at all pessible.

The earlier rose bushes, shrubs, and trees are planted now the better. Most of the hardier kinds are best planted as early in April as possible. Where the plants have been lifted earlier, and heeled in temporarily, it is not too late to plant them during May. Always try and plant just before a showery time if possible. Never plant trees in heavy soil when the ground is very muddy and sticky. It is better to wait a day or two for the soil to dry a little. In sandy or very light, well drained loamy soil, this matter is not of so much importance.

PREPARATIONS FOR PLANTING

Dig the ground well first. If barnyard manure is dug in now it should be well rotted. A spading or digging fork is the best implement for digging the ground whether in the spring or fall. The ground is easier worked and pulverized than with a spade, unless the ground is of a very sandy nature. łf manure is dug into the ground now, dig it in so that it does not come into direct contact with the roots of the tree or plant. After digging, the surface of the ground should be roughly graded so as to get it of the proper contour or shape, whether quite level or rounding on the surface. Raking the surface very fine is not necessary or desirable when planting trees, shrubs, or bushes.

When the ground is properly prepar-

ed put a stake where each plant is to be set. In placing the stakes make sure that you are giving each plant the amount of room it will require when it reaches maturity. Try and picture to yourself what the plant or plants will look like when they have reached maturity, then set the stakes accordingly. For roses and shrubs, the extreme height the plant will grow to is a fairly good guide for the distance apart they are to be set. Take, for instance, the average height of a well cared for rose bush as being from two to three feet: About three feet is the proper distance apart to set these. Climbing roses will grow sometimes fifteen or twenty feet in length from the roots. Ten to fifteen feet apart is a very good distance for these, as they can be pruned in oltentimes to suit the space they are to occupy. Give the bush type of rose an open, sunny position. In planting climbing roser, do not plant them close to a building or fence, especially on the south side. This is the position often selected for climbing roses and tender climbers generally, but it is a huge mistake. One has only to stop and think of the conditions that exist during the winter and early spring on a building or fence facing directly south. In the day time, on sunny days, the thermometer will register away up into the eighties on the wall of a building. At night possibly the temperature will fall to ten or twelve degrees above zero, thus roasting the plant in the day time and freezing it at night. The conditions mentioned are the most trying out of door conditions it is possible to give plants. There is also another objection to a direct southerly



Early Tulip Bed in Major Hill Park, Ottawa