

not top-grafted yet, some time planted. They give good crops and all stocks are sound and healthy whether grafted or not."

These are interesting records. Before grafting time, let us hear from others who have had experience with top-grafting Northern Spy. The longer the experience the better, as sometimes

grafts do well at first but afterwards become top heavy.

The information growers want is: What stocks are the best? How long does it take Northern Spy to come into bearing when top-grafted on bearing trees? How long does it take Spy to come into bearing when grafted on young trees?

Pointers on Growing Strawberries

At a recent meeting of the Toronto branch of the Ontario Vegetable Growers' Association, two valuable addresses were given on growing strawberries. Many practical hints were given, not only by the speakers, but also by others who took part in the discussion. Mr. J. C. Bell, of Cooksville, Ont., spoke in part as follows:

"Although strawberries will grow on almost any kind of soil, they do best on a rich, heavy sand, with a quicksand bottom. This type of soil furnishes plenty of moisture, not only for the growth of the plants, but also for giving size to the fruit. The land should be prepared during the previous fall by plowing in about sixty tons of manure an acre. In the following spring, it should be worked up and fertilized again with about twenty-five loads of well-rotted manure an acre.

"The land is marked three and one-half feet apart for the rows and two feet for planting in the rows. By means of a scuffler, a shallow drill is made along the row markings. The whole area is then rolled and the drills are once more opened. Planting is done with a spade. Well-grown plants are selected from rows of stock plants. A small portion of both tops and roots are trimmed off. The plants are placed in small holes made by the spade and planted firmly. In about a week after planting, a Breed's weeder is run over the patch, then about 500 pounds an acre of a bone and potash fertilizer are applied and worked in. Scuffling and hoeing are continued all summer. It costs at least \$150 an acre to produce a crop of strawberries.

"It is difficult to recommend varieties that will do well in all localities. Those that have done best with me are, practically in the order of ripening, Excelsior, Michel's Early, Auguste Luther, Lovett, Tennessee Prolific, Clyde, Wm. Belt and Williams. For home use, three varieties that will cover the season nicely are, Auguste Luther, Wm. Belt and Brandywine."

Mr. Edward Eagle, of Weston, Ont., supported most of the recommendations of the foregoing speaker, and gave a few additional hints. As Mr. Eagle's land is low and flat, rather than high and comparatively dry, such as Mr. Bell's, he practises a somewhat different sys-

tem of culture. He grows his strawberries on a black, sandy loam, which is manured in the spring with thirty tons an acre of well-rotted horse manure. The land is plowed four or five inches deep, harrowed and marked. Planting is done as soon as the ground is ready. The plants are placed one and one-half to two feet apart in rows that are four feet apart. For planting, a round-mouth draining spade is used. The spade is inserted in the ground and moved backwards and forwards. Into the opening thus made, the roots of the plants are spread and planted firmly by pressure of the foot. Cultivation is started at once, so as to produce a dust mulch as early as possible. To produce strong growth the first season, the blossom stalks are removed from the mother plants.

"On the old patch," said Mr. Eagle, "picking is done in the morning so that the fruit can be taken to the market as early as possible. The berries are kept shaded and as clean as possible and the boxes are picked full. As soon as picking is concluded for the season, the patch is plowed down and sown with oats. These are cut and used for mulching the new patch that is coming on."

Spraying Apple Trees

On the front cover of this issue of THE CANADIAN HORTICULTURIST is illustrated the spraying outfit used by the Norfolk Fruit Growers' Association, Simcoe, Ont. This organization has been in existence only a short time and has done excellent work in a cooperative way for the fruit growers and farmers of that locality. One of the requirements of membership in the association is that thorough spraying must be done in the orchards of the members. To aid in having the work done properly, the executive of the association distributes the following information; the advice given is valuable for fruit growers everywhere:

"Apply the first spraying when the buds begin to swell. Use twenty pounds of blue vitriol, sixty pounds of lime, and 200 gallons of water. Always estimate ten pounds of water to the gallon.

"The second spraying should be done just before the buds break open and the third spraying just as soon as the blos-

soms fall, with twelve pounds of blue vitriol, twelve ounces of Paris green, twelve ounces of white arsenic, two and one-half pounds of sal soda, fifty pounds of lime, and 200 gallons of water.

"Always prepare the arsenic by boiling twelve ounces of arsenic with two and one-half pounds of sal soda in two gallons of water for forty-five minutes; if you have a kettle large enough, you can make up a stock solution. Keep this kettle away from live stock as it is poison.

"To make 200 gallons for the second spraying: Put twelve pounds of vitriol in a hopper with burlap bottom, which place over the hole in your tank. Pump or pour 150 gallons of water on this vitriol, straining in the tank. Then slack fifty pounds of good lime (none air-slacked) in fifty gallons of water and strain through a hopper with a wire bottom into the 150 gallons already in the tank. Then, of your boiled arsenic solution, add an amount equivalent to twelve ounces of white arsenic and two and one-half pounds of sal soda. Then add twelve ounces of Paris green by dissolving in a small pail of water. Each time in adding lime, arsenic and Paris green, agitate thoroughly. Now you are ready for the orchard; keep well agitated and a good pressure.

"Always clean out the lime box with water every time after using. Pump some clean water through your pump nozzles, and so forth, every night when in use and keep the tank well cleaned.

THE CANADIAN HORTICULTURIST would like to receive for publication letters from its readers on their experiences in spraying for San Jose scale, oyster-shell scale, codling moth, apple and pear scab, and for other orchard pests. Have one or two photographs taken.

In strawberry culture, runners that reach beyond a reasonable limit should be cut off. The plants should be cultivated at least once a week and after each rain, and utter extermination of weeds is necessary to success. If the ground has been kept free from weeds the previous year the weed killing will be a much easier job. Rows must not be ridged up too high when cultivated.

"Oyster-shell scale can be exterminated by spraying, in exactly the same manner as when using the lime and sulphur wash for San Jose scale. A double spraying is necessary. It is most important to give a re-touching spray. The trees should be gone over in the customary way and repeated a few days later, so as to make sure of bringing the mixture in contact with every portion of twig and branch.—H. A. Surface, M. Sc., Harrisburg, Penn.