

application is made with care—one application will usually do if the vineyard has been well treated in the past, and this should be made when the grapes are of a fair size. Though some specialists advocate at least three, I have found these additional sprayings unnecessary. Poison may be added, preferably in the form of lead arsenate, and the spray must be applied, not only to both sides of the vines, but also through the interior. Such application can only be given by hand. Driving a power machine between the rows is not good business, though more

speedy. Speed, however desirable, is not everything. Thoroughness and care in the work, combined with timeliness, is the essence of success.

It must be borne in mind that some varieties of grapes are more susceptible to disease than others, that the location of some vineyards invite disease to the vines in a greater measure than in other localities. Accordingly the treatment found effective in one vineyard may require modification in another. It therefore devolves upon the vine-dresser to use judgment for his own salvation.

Orchard Observations

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INTEREST in fruit growing has been greatly aroused in this district bordering Lake Ontario. The practice of scraping and pruning has been much more general than heretofore. While the most of this work has been performed to good advantage, a few comments on improper methods might be of value to the readers of The Canadian Horticulturist. One of the chief mistakes noticed has been the pruning of large trees so as to leave the limbs to some extent bare of branches and fruit spurs, leaving simply a small bunch of branches at the ends of the limbs. In this case what fruit is produced is borne on the ends of the limbs, which renders picking and spraying difficult and expensive, and where high winds occur much of the most valuable fruit is readily blown off. Such trees should be headed back severely, in order to produce new branches or suckers, which may be trained into new bearing wood, and in order to lower the tree so that spraying and picking of the fruit may be done more economically.

In many places fruit growers have a mistaken idea of the purpose of scraping of trees. Their efforts seem to be directed to getting off as many of the scales of the oyster bark louse as possible.

SCRAPING TREES

In waging war against these unnumbered foes the combattant effects many wounds which not only injure the vitality of the tree, but subjects it to the attacks of fungous diseases, chiefly the Black Rot or Canker. Trees should only be scraped sufficiently to remove the outside rough bark, which will prevent insects obtaining protection under the bark and allow the various spray mixtures to completely cover all of the trunk and branches, so that no part of their surface will be left open to the attack of disease, and that not a single scale of the bark louse will miss being covered with the application.

During the spring and early summer both young and old orchards should receive thorough cultivation. For the first two or three years in young orchards a single cultivator strip, worked up fre-

quently on each side of the row is sufficient. The width cultivated should of course widen as the branches of the trees extend. It is as a result of this practice, together with more liberal applications of fertilizers that British Columbia and Nova Scotia growers are able to get a much more rapid growth in their young trees.

A further observation is the finding of young trees in uncultivated orchards badly infested with the Buffalo Tree Hopper. In many cases is the injury so serious that the trees have been almost ruined. These insects do little or no harm by direct feeding but utilize the twigs and branches of the young trees as places of deposit for their eggs in such a way as to kill or severely stunt its growth. The work of this pest can be identified by the

appearance of small crescent shaped cuts which are made by the female hopper in depositing her eggs.

CULTIVATION THE REMEDY

One of the best methods for its control is the practice of clean cultivation. The insect does not feed upon the leaves of the trees. Its only means of sustenance is the grass and weeds found in and about the orchard. The logical remedy, therefore, is to deprive the insect of its food supply by keeping down weeds and grass in the early part of the season. Where this is done, attacks seldom occur. The cultivating need not be continued so late as to prevent the practice of cover cropping.

In cold climates the cover crop should be sown much earlier than in southern latitudes, so as to ensure the proper ripening of the wood. While it is probable that the latter part of July or the first of August would be early enough for southern Ontario, in northern Ontario and Quebec, the land should be plowed as early as possible in the spring and the cover crop sown at least a month earlier, by the end of May or the middle of June.

I have had excellent results from two sprayings with lime-sulphur, one with the strong solution, when the trees are dormant, the other dilute, when the blossoms have fallen. I obtained ninety per cent. perfect fruit, when other years the apples were largely unmarketable.—L. Wolverton, Grimsby.



An Orchard Meeting in a Nova Scotia Orchard

The system of instruction that is proving so successful in other provinces, that of holding meetings in orchards for the consideration of matters relating to fruit growing and where they can best be illustrated, has been followed with much success in Nova Scotia. The illustration shows those who attended an orchard meeting in the orchard of Mr. Frank Fowler, near Bridgetown, N.S. Mr. Fowler and his children may be seen in the centre. Now that an increased interest in the growing of fruit is manifest throughout Canada, more of these meetings might well be held.