

ites for the crop and the evident condition of the soil to supply them.

Thorough cultivation is practised until the crop is well filled out, then it is totally discontinued except in an extremely dry season when a brush with the straight-tooth harrow may be necessary for a proper retention of moisture for finishing up the sample. This permits of the wood becoming ripe and hard as it should be to withstand the cold of winter.

Peaches are given only one spraying and this of lime-sulphur so thoroughly applied that every particle of wood left on the trees after pruning is completely coated. Mr. Rittenhouse aims at doing this during March.

Of course, one obvious condition is always understood to form a part in all the requirements for profitable peach culture—one must have peach-producing soil on which to plant in a peach-producing climate, the two being inseparable if best results are to be realized.

One may have the right soil in the right climate, plant only the very best varieties for profit, thoroughly feed, prune, thin, cultivate, etc., and yet lose his total remuneration therefor because of just one neglect or failure—that of leaving out the thorough spraying.

### The Raspberry Twig Girdler

Prof. C.J.S. Bethune, O.A.C., Guelph Ont.

"I am sending you a beetle that has attacked our raspberry plants. I never saw it before this year or saw the plants injured in this way. About five or six inches from the end of the sucker are two girdles and then the end dies. So far I can discover no further damage, and in every case it is the suckers which are attacked, not the fruit-bearing canes. These beetles do not seem to work very quickly, nor are there great numbers of them, though they are difficult to find and capture unless actually at work. Can you tell me what they are, and if there is any remedy?—H. I. G. Ferguson.

The insect referred to is called the Raspberry Twig Girdler and has been a familiar insect for a long time. The beetle which is long and slender, with black wing covers and yellow thorax, is called the *Oberca bipunctata*. It bites a girdle around the twig six inches or so from the extremity, and then it turns around and bites another girdle at the distance of its own length from the first. Between the two it makes a little hole and inserts in it an egg; from this there soon hatches out a yellowish maggot, which bores down through the stem and feeds on the pith. The effect of the girdles is to cause an almost immediate wilting of the twig so that the injury is readily observed.

The only effective remedy is to cut off the affected twigs two or three inches below the lower girdle and then to burn them at once so as to prevent the maggots attaining to maturity and providing for an attack next year. Like many

other insects, it has its periods of abundance. Last year was a very favorable one for it, its attacks having been noticed in many widely scattered parts of Ontario.

### Orange Rust

E.M. Straight, MacDonald College, Que.

Some sections have been badly struck with orange rust this year. Where prevalent it is the worst enemy of the blackberry and raspberry. It is widely distributed and is known in localities all over the continent.

In early spring the under sides of the leaves of blackberries and raspberries often present a red or orange color. In

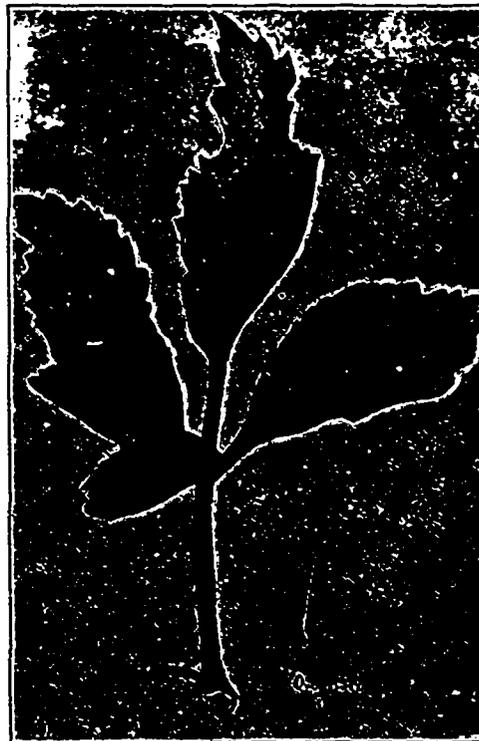
### Cannot Do Without It

We do not know what we would do without The Canadian Horticulturist, and it gets better with every issue.—W. P. Powe & Son, Sunnyside Gardens, Cainsville, Ont.

every case it will be found that plants so attacked are much retarded in growth. The leaves are distorted, tend to curl, and take on a languid appearance.

Another stage of the same disease is often overlooked by the casual observer. It precedes the red rust by some weeks, and appears on the upper side of the leaves, and may be found about the time the leaves unfold.

When a plant is once attacked nothing may be done to save it. The mycelium is within the tissue, and lives there from year to year during the life



Blackberry Leaf, underside covered with rust.

of the plant. Spraying is useless. Remove and burn all affected plants. They are of no value, and a great nuisance to all healthy plants.

### Reasons for Pruning

To give proper form to the tree.

To remove all dead branches and limbs that cross each other.

To thin out the top, so that the tree can be readily sprayed, and the fruit easily picked.

Prune when the tree is dormant to increase wood growth and thus renovate the tree by inducing it to bud and new wood growth.

### Pruning Cedars and Raspberries

Prof. W.S. Blair, Macdonald College, Quebec

When is the proper time for pruning or clipping a cedar hedge, and the proper time for cutting back red and black raspberries? Last year after the berries were all picked I took out all old wood and all new except four or five canes. The canes were cut back to about four feet. I cleaned the ground up generally. This was done about August 15th. Several of the hills later showed dead canes turned dark as if blighted. Was it caused by the pruning, or should I have left them alone until spring? Several of my black cap berries are completely gone—no life left. What is the cause?—H. W., Whitby, Ont.

My experience goes to show that it matters little when cedar hedge is pruned in so far as vigor of the hedge is concerned. The aim should be to have a good looking well trimmed hedge for the longest possible time and in order to accomplish this I have followed trimming about the middle to the last of June and again the last of July or early in August. The June pruning is made principally to shorten shoots that are making excessive growth.

The killing of the raspberry canes may have been due to sun injury, Anthracnose, or to root-gall. Where a thick growth has surrounded canes during the early season the canes are as a result susceptible to injury from exposure to direct sunlight. Bright sun for a day or so following the pruning out may cause the injury, on the other hand a few days dark weather following the pruning may result in a gradual hardening of the tissue and no injury result.

The pruning out has a tendency to lessen liability to Anthracnose, although it may have been well established by the date mentioned, and the thinning out has resulted in a more rapid drying out of the cane; the Anthracnose checking the sap flow through the plant. Whether or not Anthracnose is present would be indicated by irregular black blotches along the cane in some cases completely encircling them.

Whether or not root gall is the cause of the trouble with your black cap berries could be determined by digging up the dead plants. If it is it will be indicated by knotty growths on the root.