



A Well Sprayed and Cultivated Orchard

Formerly the property of Mr. A. E. Sherrington, Walkerton Ont., the well-known Institute speaker.

The Peach Tree Borer---Methods of Control*

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THE following are the chief insects attacking the peach in Ontario:—Peach-borer, Lesser Peach-Borer, Plum Curculio, Fruit-tree Bark-beetle or Shot-hole Borer, and San Jose Scale. There are a number of minor insects sometimes found but doing very little damage, such as Green Peach Aphis, Black Peach Aphis, Peach Twig-borer, Tarnished Plant Bug, and Red Spider.

The Peach Borer when full grown is a rather stout, cream colored or yellowish larva about an inch long. It nearly always attacks the trees just at or slightly beneath the ground. Frequently it is necessary to remove the earth a little around the trunk to be sure whether one of these insects is present or not, but usually its presence can be ascertained by seeing the dirty gum mass that exudes from the part where it feeds. The injury is caused by the borer or borers (there may be several to a tree), working just beneath the bark and girdling or partly girdling the tree. A tree thus affected becomes sickly in appearance somewhat as if attacked by Yellows, and may die the same season or be killed by the succeeding winter. Young and old trees are alike attacked. Fortunately in a great many orchards this insect is very scarce, but this is not true of all districts, and in some it is far the most destructive and difficult enemy the peach grower has to contend with. It often seems to be worst in districts where there are comparatively few peach orchards.

PLANTS ATTACKED

In addition to the peach it attacks to some extent the plum, cherry and apricot,

but the peach is the favorite. To intelligently understand the methods of combating the pest it is necessary to give briefly its life history:

The winter is passed as a partly grown (usually about half grown) larva beneath the bark. In the spring, with the return of warmth, this larva begins to feed ravenously and increase rapidly in size. By the end of June it is usually full grown, and then leaves its tunnel or burrow to form a brown cocoon on the outside of the bark or on the ground close to the trunk.

About the end of July this pupa changes into a pretty little steel-blue moth, about an inch long, looking to most people more like a wasp than a moth. The female has around her abdomen a broad orange band that makes her conspicuous. Moths may be found from about August first to the end of September. They soon lay their eggs, placing them on the trunks, branches, leaves and even weeds growing close to the trees. In about ten days these hatch and the tiny borers drop to the ground, and work their way into the soft inner bark through crevices. Here they feed on the inner bark against the sap wood. At first little brownish saw-dust-like castings are thrown out where they feed, but after a time gum exudes. Large masses of this may sometimes be seen. Gum, of course, in peach trees, tends to be produced by any wound especially in the early part of the summer. There is but one brood a year.

MEANS OF CONTROL

There is no easy means of control and many that are advocated are useless or dangerous to the tree. The best method I know of is to combine the practice of

digging out the borers by means of a knife or wire with mounding up the earth around a tree or wrapping the base of the trunk with paper. The digging out with a knife should be done twice a year, first about the end of May, so that as few borers as possible may escape to transform into moths and lay eggs, and again about the end of October to destroy the new larvae. Mounding up the trees with earth to a height of about ten inches has been found very useful. Such trees are freer from injury than unmounded trees. The mounding also causes the borers to attack nearer the top of the mound instead of down at the crown so that when the earth is removed their presence can be easily seen, and they can be readily killed with a knife.

The mounding to be of value must be done about the end of July and left on until about the middle of October, that is during the period when the moths are flying around and eggs being laid and hatched. Wrapping with paper may be substituted for mounding. Two or three ply of common newspaper placed around the tree to a height of about eighteen inches is very satisfactory. This should be tightly fastened with a cord at the top and loosely the rest of the way down. To secure against larvae getting in below it, a little of the earth should first be removed to let the paper lower down and then this earth heaped up about four inches around the base of the paper. Common building paper is good and is more durable. Tar paper is often used, but may do some damage to the trees. The mounds should be replaced to avoid danger of winter injury.

VARIOUS WASHES

Many kinds of washes have been tried to keep out the borers. Most of these are either useless or dangerous. The only two that have given fair satisfaction are first ordinary gas tar, and asphaltum. The former of these has been known in some cases to injure the trees. The latter is highly recommended by a California entomologist, who says that in four years it has done no damage whatever and has given excellent results. I have not had an opportunity to test asphaltum. It is a cheap substance costing, I think, from two to five cents a pound and should be procurable through any of the wholesale drug stores. It is applied warm with an old paint brush. In applying, remove the soil to a depth of about four or five inches, then cover this to a height of about six inches above ground. It is better to put a light coat on first. This dries or hardens almost at once, then put on another coat so that there will be a good unbroken coat all around. It is necessary to re-touch the part each year. Some sort of heater is necessary to melt the asphaltum or keep it liquid when melted.

*Extract from an address delivered at the recent annual convention of the Ontario Fruit Growers' Association.