

a little more so, and then advertise it extensively. It is well known that the quality of our fruits, and the apple in particular, cannot be excelled anywhere. What need we fear then from competition if we meet that competition not by higher duties, but by the finest quality fruit, properly put up and displayed and advertised?

We should be more enthusiastic over our own fruits and take a greater pride in them than we do. If we did there would not be such a big demand throughout the entire year for California fruits. Canadian fruits of the same standard or grade are in every case, with the exception of the grape, superior to the California fruits of the same kind.

### Black Rot Fungus

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

This disease appears on the leaves in the form of brownish spots, appearing somewhat like the burning from using too strong a mixture of paris green. The black rot fungus, *Sphaeropsis malorum*, attacks the fruit usually when nearly mature. Apples attacked decay quickly, becoming brown at first with blackish discolorations under the skin, and as the disease progresses, the whole fruit becomes blackened. The apple remains firm at first, but gradually dries out and becomes wrinkled and shrunk. Under the skin of such apples small black dots or pustules may be seen, which are the spore-producing bodies of the fungus, and from these the spores escape. The fungus may gain an entrance through cracks or wounds, and generally attacks the larger branches or trunk, producing canker spots in the bark. Spore-producing bodies may form also in these diseased areas.

All diseased fruit should be destroyed, and Bordeaux mixture as applied for apple scab fungus will do good in controlling the black rot. The diseased spots should be carefully cut around to good healthy bark and washed out with a copper sulphate solution, using one pound to five or ten gallons of water. After this has dried, cover the wound with a thick white lead paint. I do not think the corrosive sublimate is advisable. Copper sulphate solution as above can be applied to the bark at any time, but it will of course injure the foliage. Double strength Bordeaux will not injure the bark.—W. S. Blair.

### Common Foes

Tent and forest caterpillars have been very numerous this year in parts of Ontario and have caused much damage. They are two different species of hairy caterpillars, and are found on fruit and shade trees. If a grower is spraying his fruit trees faithfully with arsenate of lead in any shape, this of itself will pre-

vent injury from tent caterpillars, since any internal poison is fatal to them.

The tents may be crushed with the gloved hand, when they can be reached at a time when the caterpillars are inside; or they can be burned by a torch on the end of a pole; or they can be twisted out of their reach by means of a wire brush made for the purpose attached to the end of a long pole. These remedies are effectual only when the caterpillars are in their tents, early in the morning, or in stormy, wet weather. Even on trees which are not ordinarily sprayed, a single spraying of arsenate of lead, when caterpillars are observed, would probably stop their depredations.

When full grown, these caterpillars spin cocoons, whitish or yellowish in color, from which emerge brownish moths that lay their eggs in a ring around the small twigs of fruit and shade trees. These eggs go through the winter, and frequently in pruning a farmer or orchardist will observe them, and can prune off the twig holding the eggs, and destroy the same.

### OUTWORMS

Cutworms have been very injurious this year. Poisoned bait, made of bran mash, sweetened with cheap sugar, or molasses, and made decidedly green with a liberal application of Paris green, is a very good remedy in a garden. A tablespoonful of this should be put at frequent intervals among the plants subject to attack, not, however, nearer than twelve inches to the plant; for, in case of rain, the Paris green might be washed

against the roots, and would injure or kill the plant. Thorough cultivation is an aid.

Pieces of shingle or board, placed at intervals over the garden, serve as traps under which the cutworms hide toward morning, and where they can be found and killed. Frequently the depredator will be found within an inch or so of the plant cut, buried an inch under the soil.

### THE GREEN CABBAGE-WORM

Give children a few cents to make nets of mosquito bar and catch the white butterflies flitting over your cabbage and cauliflower fields, since the female butterflies deposit the eggs from which the cabbage-worm comes. Children might well be paid, also, for picking off the green worms before they have done much injury.

Spraying with Paris green is quite commonly practised, and cabbage will stand a strong application. A spray as strong as five pounds of Paris green in a fifty-gallon barrel of water has been used with success. Cabbage may be sprayed up to within a week or so of being gathered, when necessary, without any damage whatever, or any danger.

To carry on co-operation successfully, it is absolutely necessary that you have good officers, men who are willing to devote themselves to the interests of the company. To my mind co-operation is the only solution of the fruit growing problem.—A. E. Dewar, Charlottetown, P. E. I.



A Peach Orchard in Lambton County, Ont., where it was thought Peaches could not be Grown.

The peach orchard here shown is that of Johnson Bros., Frest, Lambton Co., Ont. The trees shown are three years old. Year by year it is being discovered that the tender fruit districts of Ontario are much more extensive than was formerly supposed. Mr. D. Johnson may be seen in the foreground. An experiment will be tried this year of marketing the peaches from this orchard direct to the consumer.