through the flesh of the apple. It may wander near the skin and work just beneath the cuticle, giving rise to those external grooves so commonly seen on infested Spy apples. It is very interesting to know that the rate of growth of the larva keeps pace with the maturing of the fruit. When the maggot is full grown, the apple is almost invariably in an over-ripe to a rotten condition, and is usually, of course, on the ground. The full grown larva leaves its apple abode and works its way into the soil to a depth ranging from one-half to two inches, and pupates there. A few larvæ may go deeper than this and others may pupate immediately beneath the decaying fruit. The insect then remains at this stage in the soil over winter, and emerges as a fly the following summer.

SPREAD

The sluggish nature and stay-at-home tendencies of the fly make it a very poor immigrant—it spreads very slowly on its own initiative. It may confine its attack to a single tree in an orchard for a few years before spreading to the neighboring trees. As to how the insect has extended its range in Ontario, I can only offer theories. A considerable amount of Apple Maggot infested fruit is barrelled and shipped every year. Maggots emerging from such fruit naturally pupate in the barrels and so most probably the pest has been disseminated to a very large extent as pupæ in barrels.

Housewives may be held responsible for the introduction of the Railroad Worm in some orchards in the following way: Infested apples are bought at the market, taken home, many of them on account of their "woody" nature prove to be worthless and are thrown into the back yard and there they become a source of infection to the trees in the neighborhood. Strong winds may be instrumental in the spread of this pest, but I can only base this belief on purely circumstantial evidence, which I have not time to give now.

METHODS OF CONTROL

The most reliable remedial measure is the gathering and destroying of the fallen fruit. This does not mean that drops have to be picked up every day. If the summer apples are picked up twice every week, the fall apples every week, and the later varieties once every two or three weeks an infested orchard will be freed from this pest. I have found that a very high percentage of the larvæ in early apples mature and leave the fruit, and also that an exceedingly high percentage of them in the winter varieties perish in the fruit, so my advice to all who are troubled with this pest is to attend very carefully to the destruction of summer and fall "drops." In the eastern counties this work need not be commenced until about the second last week of July.

Lambton's Great Exhibit at the Ontario Horticultural Exhibition

The fruit growers of Lambton County, Ontario, proved their claim that Lambton is one of the best fruit growing counties in the province by the display of fruit they made last month at the Horticultural Exhibition in Toronto. The fruit, which was of excellent quality, was arranged to show the map of the county. The exhibit attracted general attention, and was highly praised by all who saw it. It contained 350 boxes of fruit.

This control work can, of course, be done by keeping hogs, sheep or other stock in the orchard, but now, when evaporators are paying as much as forty to sixty cents per hundred for "drops," even fallen apples are too valuable to be given to stock—pick them up and take them to the evaporator. In this connection I might say that I believe that the owners of evaporators are unconsciously doing a magnificent work in the control of this pest. Fruit growers are finding that the trade in "drops" and "culls" is sufficiently remunerative to more than pay for the time and labor expended in picking up apples. The result is that thousands of infested apples, which otherwise would have propagated and spread the trouble are being destroyed every year. I have on different occasions gone into evaporators in Durham and Hastings counties and have found "railroad" apples.

USE OF POULTRY

Chickens are remarkably fond of Railroad Worm pupæ. In the case of a small infested orchard, it would be an excellent plan to cultivate the orchard and convert it into a poultry run.

Shallow cultivation has often been recommended as a remedial measure. It was given a trial this year, but did not yield very satisfactory results. However, I shall give it another trial before I lose faith in it altogether.

SPRAYING

A certain investigator in the United States puts forward the claim that he has had splendid success in controlling this pest with a sweetened poisonous spray mixture; however, I do not want to advocate spraying until it has been thoroughly tested. The department hopes to try several spray mixtures next year, and its success or failure in this connection will be found in the Railroad Worm Bulletin which Mr. Caesar hopes to publish next season.

In regard to the varieties attacked and their degree of infestation, I would say that Harvests, Tolman Sweet, September, Snows and Spies are probably the worst attacked in Ontario. I have listed over thirty varieties which I have found pest-ridden, and I am inclined to think that no variety is exempt from attack. Any insect that would feed on Ben Davis, as this one does, is liable to