

cannot be practised owing to the spreading branches, I find that spreading swamp muck at the rate of about a load to four trees gives good results, as it keeps the ground cool and retains the moisture.

Of the insect enemies that trouble us most, I wish to speak particularly of the Cigar-shaped Case Bearer (*Coleophora Fletcherella*) that has infested our orchards of late years, causing immense damage to both trees and fruit.

In the spring of 1894 I first noticed this insect, and realizing the serious nature of the case, I devoted considerable time in carefully spraying that portion of my orchard most seriously affected. In August of that year I paid a visit to Mr. James Fletcher, Central Experimental Farm, Ottawa, and through his kindness and attention I have been able to learn the life history of the insect, and after working carefully under his wise guidance for seasons, I may say that on the whole I have made satisfactory progress in destroying it. Although this insect is not known in some parts of Ontario, it is surely working west, and it would be wise for every orchardist to read Mr. Fletcher's report on pages 201 to 206 in the Central Experimental Farm report for 1894, and be ready to battle with the first appearance of the worm. I have found the following plan of spraying to prove the most satisfactory when fighting the Case Bearer and fungi at the same time, viz :

- 1st. Spray copper sulphate, one to twenty-five gallons water, before buds open.
- 2nd. Spray Bordeaux mixture and Paris green just before blossom.
- 3rd. Spray kerosene emulsion, one to nine of water, immediately after spraying No. 2.
- 4th. Spray Bordeaux mixture and Paris green when blossom falls.
- 5th. Spray Bordeaux mixture and Paris green when fruit is half an inch in diameter.
- 6th. Spray kerosene emulsion, one to five of water about the first of October, or just about the time that young Case Bearers begin to leave the foliage and attach themselves to the twigs for winter.

I find this last spraying to prove of great advantage in reducing the number of insects that attach themselves to the twigs for winter, as I have observed in many cases that the insects do not leave the leaf, but fall with it to the ground and perish.

In the raising of plums, pears and cherries in this section there has been very little done, mostly owing to want of knowledge in varieties to plant, but I am confident from those planted that there are great possibilities before us, and in the near future I hope to be able to make a satisfactory report on these varieties.

Mr. JONES, in the course of reading his paper, said : I have had good results from spreading the barn-yard manure in February on the snow, then every year or two mulching the ground with swamp muck, about one wagon load to four trees or so, which keeps the orchard in a fine, healthy, cool condition, gives the apples a chance to attain very full size under severe drouth and keeps the sod so that you can lift it at any time with the manure fork and turn it over—in fact, the sod is half rotten all the time under this plan.

Mr. BOULTER asked for a description of the Cigar-shaped Case Bearer.

Mr. JONES : It appears the latter part of August and is then less than one-sixteenth of an inch in length. This small insect pierces the leaf, and passing in between the upper and lower surface, cuts that portion of the leaf on both sides of it and comes out with a little case on it. It leaves an oblong hole in the leaf one-sixteenth of an inch in length. Then it lifts itself on its head, as it were, right up like a little cigar, and it lives upon the leaf for the balance of the season while the leaf is green, and then in the fall of the year it crawls from the leaf to the twig of the plant and attaches itself to the twig and hibernates until the following spring, when it does the damage. In the spring it works up towards the blossom bud and the leaf bud of the twig, and as soon as the growth opens the insect pierces the stem of the blossom, and that is the most serious damage to the whole crop. Then, if they are very bad, they will

nip the foliage
insects pass
their own case
under covering
attack a very
they eat along
when they ap
again.

Professor
done in the m
that it is thro
carried on exp
for this insect
memorandum
ground that M
spraying with
the rate of one
you use it be
that. The or
recommends o

Mr. JONES
remarks that I
of six, because
before the blos
have to spray
merely.

Professor

Mr. JONES

Professor

Mr. JONES
served its funct
any injury to t
function by the

Mr. ORR :

Mr. JONES
Mr. Fletcher's a

The SECRE
In destroying t
periment on I s
shuffled off entir

Mr. MCNE
the fact that Pr
to the Case Bear
to make some no
that there was s
same way as th
necessity of fruit

Professor C