MR. JAMES FLETCHER.

was this: 'Is there any practical or scientific reason why this Act to prevent the spraying of trees while in blossom should not pass?" I could not think of any reasonable objection; for, spraying when the trees are in flower is quite unnecessary and is very unadvisable; because, if, as apiarists claim, their bees are poisoned if Paris green be applied when the trees are in bloom, and I maintain you may do more harm than good by destroying the pistils of the flowers. Why do bees visit flowers? To get honey, and nature provides this so as to attract insects at the time when they can be of most use in fertilizing the flowers. Directly the pistil is fertilized, no more honey is developed; it is no more use to the plants. If we wait for spraying until the flowers drop off, there is no danger of poisoning the bees, because they do not then visit the trees. There is nothing to take them there; but by spraying the trees after the flowers drop, we do destroy the little caterpillar which hatches from an egg laid by the codling moth in the calyx, and the small quantity of Paris green which we recommend—one pound in two hundred gallons of water—is sufficient to kill the larve, and as a consequence we get a return for our labour in 75 per cent more fruit than we should otherwise have had.

By the Chairman :

Q. You must put that on by spraying ?-A. Yes.

By Mr. McNeill:

Q. What quantity of that poison destroys human life ?—A. I think two and a half grains of arsenic is a fatal dose, and Paris green contains about 45 per cent of arsenic in chemical combination.

Q. How much of that mixture would it require to poison a man?—A. Well a pound of Paris green in 200 gallons of water is the strongest we evor use. I suppose a cupful might make a man feel uncomfortable.

Q. The particle that would fall upon the fruit would have on a person no effect whatever ?—A. No. I would not at all mind eating fruit which had been sprayed. Think of the small size of the apple at the time; it is only just forming, and it is raised up in such a way that the calyx would cover the whole fruit, and most of the spray would fall inside the calyx. The egg does not hatch for a week or so after the flower drops off. The moth flies to a flower directly it has opened, and lays a little egg inside it. In time the egg hatches, but not for a week or ten days. At the provincial committee at Toronto there was some discussion on the effects of spraying for the Plum Curculio; but this insect is not at all attracted to the plum trees by the nectar of the flowers. It lays its eggs just beneath the surface of the plum when the latter is about as big as a large pea.

FUNGOUS DISEASES OF PLANTS.

Allow me now, Sir, to turn to another part of my work: the study and treatment of the diseases of plants due to the attacks of parasitic fungi. During the last four or five years most satisfactory results have been secured by cryptogamic botanists in the treatment of these plant diseases. Remedies have been discovered by which some of the most destructive of these may be controlled with comparative ease. The black spot of the apple, the mildew of the grape, and particularly the rot or blight of the potato, are notable instances where a large amount may be saved by preventive treatment.

POTATO ROT AND ITS REMEDY.

The last named of these diseases, the potato rot, causes a great diminution of the crop every year throughout the length and breadth of Canada—porhaps, year in and year out, 50 per cent of the whole crop grown. The life history of the fungus which causes this disease has been worked out and is well understood. It passes the winter inside the potato tuber. When growth begins in spring it germinates, and throws out its vegetative sys⁺m, and creeps up through the tissues of the potato

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