

Mr. G. E. Fisher, fruit grower, Burlington: His experience corresponded to Mr. Peart's. We are very generally dependent upon insects for the fertilization of our orchards. To destroy them to any extent would be very injurious to fruit growers. He thought this Bill is just what fruit growers require. If a man does not know enough not to spray while his trees are in full bloom there should be an act to prevent him from doing so. He had had no experience as to bees being injured by Paris green. A gentleman in Burlington told him that one of his neighbors used Paris green on his trees while in full bloom and while it was going on he noticed that many of the bees died.

Mr. Theo. Woodruff, fruit grower, Niagara Falls, thought that trees, especially the plum tree and the cherry tree, should be sprayed when the blossom is going off, but not when it is in full bloom. His experience is that he did not get perfect fruit by spraying after the blossoms had gone. He believed that as soon as the fruit is formed it got too hard for curculio to work in. He thought that the bees robbed his orchard every year, and was certain they carry "the yellows" from one section to another. Fruit growers should oppose that Act. He did not believe you could draw the line as to when trees are in full bloom.

Mr. E. Morden, fruit grower, Niagara Falls, had never yet heard a speaker who advocated spraying in full bloom. The codling moth and curculio do not deposit eggs on the blossom, but on the calyx of the embryo fruit. The curculios do not appear until about a week after the blossoms fall; then they are very numerous for about ten days, after which they become comparatively rare. It is during these ten days that we ought to spray. As to the canker-worm, spraying should be done before full bloom. Articles were produced, written by fruit men, advocating spraying only after full bloom.

Mr. Kew, fruit grower of Beamsville, thought that sufficient evidence had been given to show that the bees would be injured by the use of poisonous substances at an improper time. There would be a difficulty as to peaches, which he preferred to spray while the bloom is on. He thought fruit growers should be allowed to use their own experience.

Prof. Jas. Fletcher, Dominion Entomologist Ottawa, stated that the pistil of the blossom is very sensitive, and a very weak solution of Paris green would destroy it and prevent the formation of fruit. Bees are much more easily killed than other insects. There is no accurately recorded experiment as to whether or not bees have been killed by spraying. An experiment has been

arranged. He did not believe the honey is at all affected. The poison taken by the bees is in the nectar that comes from the flowers and before the bee can deposit it the bee is dead, so that the honey in question is never deposited. Even if the bee did not die before depositing it this honey is used not for surplus, but for feeding the young. As to spraying, if you wait until the flowers are all gone you will cover the canker-worm and all the insects that he knew of except the bud-worm, and in the case of the bud-worm he thought it would be necessary to spray before the flower is open. As to the codling-moth and the curculio there is no possible use in spraying for them while the fruit is in flower. In California the insects injure the fruit right up to the time that it is full grown. He did not think there would be any use of spraying the cherry until it is the size of an ordinary pea. Apple trees remain in flower about a week. The eggs are not laid until the flowers are in full bloom. Wait till they all drop before spraying. Bees do not visit fruit in dull weather, and then we get little fruit in consequence. As to bees injuring fruit there is no direct evidence. Wasps may start the work, and then bees continue it. We have never been able to find a case of primary injury by bees. As to their carrying "the yellows," that is a point requiring serious consideration, as we do not even know what "the yellows" are. He drew attention to the false statements of the English press that our apples are poisoned from their absorbing arsenic. The statement is absurd. The physiology of the plant renders such a thing impossible. The pistle of the apple cannot absorb arsenic or any other poison. If we could only get our farmers to spray more we would have better fruit crops. He thought there was nothing in this Bill but advantage to the fruit grower.

Prof. J. H. Panton, Entomologist, Agricultural College, Guelph: He could not imagine that anyone was doing what this Bill prohibits. In all cases of spraying that had come under his observation it was invariably the rule not to spray during bloom. But if there are people who will persist in doing such a thing he should certainly think it necessary to have a bill to prevent it, and to protect others. This Bill is in accordance with the teachings of all science.

MISCELLANEOUS EXTRACTS.

THE CODLING-MOTH. The eggs are laid on the young fruit at the blossom end, in the cup left by the fallen flower, and in about a week or ten days the larvæ hatch. Egg-laying continues about two weeks, so that the danger period for codling-moth is from three to four weeks after the blossoms fall. As soon as all the blossoms