

Ottawa some experiments have been tried with coal oil. The plan is to take a cupful of coal oil and mix it with a pailful of sand. This gives off a strong odor, and a handful scattered around a cabbage plant retains its odor for some time. Insects are deterred from visiting plants where there is an objectionable odor, and they are also apt to go where the odor is inviting. It is believed that insects have some power similar to that of scent, and by strewing around this mixture and causing a foreign odor it is said to be an effectual preventive of the fly. As to club root, I have not had any experience with it, while I have hundreds of times seen this fly and watched its work on the roots. If this were the cause club root would be associated with the work of the fly. The history of the fly was worked out many years ago I think, by Mr. Curtis, an English entomologist, and his observations have been confirmed by others. It is very important that we should have brought before us all the measures that are likely to lessen a trouble of this sort, as it has caused a great loss, not only of labour, but of money. The crops which have been destroyed would, if they could have been sold, represent a great deal of money.

Mr. GOLDIE.—The true club root makes the cabbage look very much like the black knot on the plum tree before it gets into that black state. It is probably more of a fungus growth, than the result of insects, and this changing around is the best remedy under those circumstances.

Mr. LITTLE.—Where I lived in the old country when a boy, every plant taken from the bed was examined for this fly.

Mr. MORTON (of Wingham).—Mr. Goldie's description of the action of club root in the old country, does not agree with the action of the maggot on the cabbage here. I have grown cabbages for my own use, and have watched the operations. I have not witnessed any swelling of the roots, but simply a stripping of the outside and then they have worked down and attacked the inside. I corresponded with Prof. Cook, of Michigan, for remedies, and one of them that he sent me was an emulsion of coal oil with soap. He found it a perfect remedy. I have tried it faithfully. He said that two applications during the season was not only sufficient to prevent it, but would kill the worm. I have not, however, found it to be one particle of use. I thought that my formula might not be the same as his; but I wrote to him and got it again. I can say that it was no good whatever.

Mr. YOHILL.—I might state that I also cover my plants when they are in the bed with a net. I am convinced that the fly comes during the latter part of May or the first part of June.

The PRESIDENT.—I think that, Mr. Youhill, is a wise precaution, putting a net over the plants while they are in the beds.

### THE CABBAGE BUTTERFLY.

QUESTION.—“What is the best plan of destroying the cabbage butterfly?”

The PRESIDENT.—What is meant here is the worm that is laid by the white cabbage butterfly, for which we are indebted to the old country. It has spread over the entire country, and is a very troublesome insect.

Mr. HILBORN (of Arkona).—It seems to be growing less and less where they have had it, and it is thought it will leave altogether. I have seen some of our market gardeners' plantations this year and very little damage is being done. They do not know the cause unless it is some parasite destroying them.

Mr. MORTON.—Hot water I find to be the best and cleanest remedy. Paris green, I think is dangerous. Coal oil has the objection that it is apt to taint the cabbage. Water heated to 160 Fahrenheit and sprinkled over the plant from a watering can, will effectually kill the worm, without destroying the vitality of the cabbage. I think Prof. Riley gives ice cold water in the middle of the day as a remedy; but I tried it without success. I have read in the *Rural New Yorker* that others have had the same experience; but I think that hot water will be a satisfactory remedy.

The PRESIDENT.—Hot water is safe and good, provided you keep the heat within the limit given. Two other remedies are being brought into use now. One is Pyrethrum, which is imported chiefly from Austria. The flowers of the plant are powdered, and when