

in. By covering this manure another trench is formed and filled, and so on. I have no doubt that the manure can be ploughed in. I have always had the largest crop of raspberries from Shaffer and Columbia when they are mulched. The roots of these two varieties are so near the surface that the soil can scarcely be stirred without injuring them and letting in the drouth, or rather letting out the water.

I have never covered my strawberries and always have a good crop of berries.

Ferns and Insects.

1277. SIR,—I am sending you leaves of two ferns that are infested with some small insect; can you tell me the best treatment to use? The larger of the two I have had for many years; it has grown a large handsome plant and I have had no trouble till now. It did not look well and on examining it with a magnifying glass I found tiny insects all round each leaf on the under side. For some weeks I have been dipping it in strong soap suds, once or twice a week, and about a week ago repotted it, but so far it does not look much better. Would you recommend me to cut off all the leaves and let it spring up again from the root?

The asparagus fern has had a few scaly insects which I have picked off, but something smaller seems to attack the very ends of the fronds and spoil its beauty. I have given it also the soap suds bath. What would you advise for it?

Will you kindly tell me the name of the larger one, and if you can, the cause of the trouble?

Port Dover. (MISS) E. P. BATTERSBY.

ANSWERED BY PROF. H. L. HUTT, O. A. C.

GUELPH.

The name of the Fern enclosed is *Pteris longifolia*. This is a vigorous growing fern which does well in ordinary dwelling houses. The other, frequently called *Asparagus Fern*, is not a fern at all, but is a plumose variety of the common vegetable *Asparagus*. Its proper name is *Asparagus plumosus*. The leaves were somewhat dry when they arrived here, so I could find no trace of insects upon the fern; but I judge the trouble was caused by the Red Spider, a very common pest upon house plants, especially where the air is dry and temperature runs high.

Your plan of dipping the plants in strong soap suds is probably the best that could be

adopted to keep plants free of this pest; but if the fronds are already much injured by it, it would probably be just as well to cut them off close to the ground and allow fresh ones to come up. Care should then be taken that the new ones are kept free from the spider.

The few scale insects found on the *Asparagus* would hardly account for the dying of the tips. The scales should, of course, be picked off whenever noticed; but the dead tips may be due to the age of the shoots. It would be better to cut off all unsightly shoots and allow fresh ones to come up to take their place.

Club Root in Cabbage.

In your January number, Mr. E. Millihen, Port Colborne, Ont., asks to "Kindly give cause of club root in cabbage and what will prevent or stop it." Prof. Hutt mentions that no reliable data has been obtained, but that lime has been effective in destroying the spores of club root in the soil.

We have market gardeners in the vicinity of Montreal who have grown cauliflowers and cabbage for over ten years in succession on the same land, but always with a liberal application of lime. For over twenty years we have used ashes as well as lime with equal success. A few years ago we had not enough ashes to finish a row, leaving about ten rows without, and we lost nearly all the cauliflowers in these ten rows with club root. Next season we planted the same land with cabbages, with ashes in abundance, and did not find a plant affected with club root.

A very good way to find if the land is affected with club root is as follows: In pulling out the plants of wild mustard, if you find them with club root, then don't spare the lime for the cabbage or cauliflower. You will find Dr. Fletcher, Entomologist of the Experimental Farm, Ottawa, will substantiate what I say.

R. BRODIE.

"Westmount," Montreal.