

insect, according to my observations, works on the outside, and not near the trunk. The terminal twigs will often curl from the effects of the unequal growth. In my experience also the limbs do not readily die for some time as far in as the trunk. With regard to treatment of the gall-louse, the infested twigs may be cut and burned about the first week in May, when there is a woolly secretion on the twigs containing many eggs. About ten days later a soap solution may be applied if the cutting has been neglected. These remedies can be used when the number of trees affected is small, and the size also small. When the trees are both numerous and large much can be done by spraying, but nature will often come to our assistance by sending along parasites, which will do more to keep the lice in subjection than all the sprays. We should be pleased to get samples of the dead twigs from Mr. M., for it may be that the gall-louse is not the cause of the trouble in his case.

#### WOOD ASHES FOR STRAWBERRIES.

SIR.—After clearing up my old strawberry plot would it be advisable to sprinkle unleached wood ashes over it?

G. S. W.

Hawkesbury, Ont.

Answered by Prof. H. L. Hutt, O. A. C., Guelph.

You can seldom go astray in applying plenty of unleached wood ashes upon a strawberry plantation, or in fact upon any of the small fruits. The ashes furnish a large amount of potash and a lesser amount of phosphoric acid. The extent to which the soil requires these can only be determined by making experiments, but usually sandy soils are more or less deficient in potash, and it is upon such soils that ashes give the best results.

#### THE COTTONY MAPLE SCALE.

SIR.—I send you a sample of something that is rapidly covering our maples. I, among others,

would be pleased to learn the name and history of the pest.  
J. M. M.  
Waterloo.

Answered by Prof. Wm. Lochhead, O. A. C., Guelph.

For some years this pest has not been destructive, but this season it seems to have gathered force, and is proving quite serious in some sections. Alarming reports come from Woodstock, and Waterloo is becoming anxious as to the effect this pest will have upon the maples.

This insect is quite conspicuous in early June on infested trees with its cottony secretion. This waxy substance is secreted by the female at the time the eggs are being deposited, and forms a protective covering for the eggs. At one end will be noticed the oval, brown scale, the remnant of the mother insect, for the insect belongs to the family of scale insects (Coccidæ), to which also belongs the terrible San Jose scale, about which much has been said, done, and written during the last few years.

The eggs laid by a single scale are very numerous, and begin to hatch about the end of June or the beginning of July. At this time swarms of minute lice may be seen crawling on the infested twigs. They soon fix themselves to the bark by inserting their beaks, and begin to suck the sap of the tree. In a short time the young begin to form scales of their own by secreting a waxy substance through certain pores on their body. In September they become adult. The males die before winter, but the females migrate from the leaves to the twigs, where they remain all winter. In spring the females grow rapidly, and the eggs are laid, as already described, in the cottony sack in June.

With regard to remedies, it may be said that whenever a few of the cottony sacs appear the best plan is to cut off and burn the infested twigs, for by doing so the thousands of eggs will be destroyed.