in a small grove of pines. Notwithstanding careful search by expert plant pathologists, it was found impossible to cut out all infections, and new ones were found regularly after each successive visit. In this case the best proceeding would have been the destruction of all the pines, whether affected or not, in this small wood, when this centre of infection would have been wiped out forever.

We have learned that the spores from the pine infect wild and cultivated currants and gooseberries. These spores are mainly windborne, and speculation is rife as to how far these spores can be carried. This is one of the most difficult problems to solve, and has never been solvedother than hypothetically. Insects, no doubt, also play a part in the dispersal of spores. For our purposes the distance spores may be carried from an infected pine is of some importance. For, without currants, or similar hosts, within the radius covered by spore dispersal, the blister rust would eventually die out with the pines originally attacked, and no new pine infection could occur.

Carried Two Miles.

Observations made in the Fonthill case of Pine Rust already referred to indicate that the matter of spore dispersal. or rather the distance spores may originally be carried, is of less importance than the fact of the spreading of the disease from currant to currant throughout the summer. As early as June 3rd the first infections on currants near the Fonthill pines were observed. On July 6th the rust on the currants had been spread to, approximately, two miles from the original source. In this connection it may be noted that each infected currant or gooseberry bush serves as a source for the dispersal of spores. And the most widespread dispersal is without doubt, due to the currants. This spreading of the disease in the stage of Currant Rust takes place throughout the summer, from mid-June to October: whereas, from the pine, dispersal only tzakes place for about eight weeks or possibly less, during April, May and up to mid-June.

For the practical purpose of locating the spread of the disease we look upon the *Ribes* bushes as welcome indicators. Thus, during the whole summer, inspection of all wild and cultivated *Ribes* may clearly indicate the limitations of the present danger zone.

Pines or Currants?

We notice, then, that the currants are largely instrumental in the dissemination of the disease within an infected locality. The Niagara Peninsula is singularly subjected to the spread of this rust. On the one hand there exist uncountable numbers of wild Ribes,-on the other hand is the importance of the district as a fruitgrowing centre with many hundreds of large and small plantations of currants,-particularly of that most dangerous carrier, the black currant. Hence, in this area, either the one or the other host plant should be exterminated. Here it would certainly seem that all pine trees should be sacrificed.

This sounds more serious than it really is. Of course, on looking over the district there may be found numerous pines, but few are of economic value; even were it so, well, they are worth good money now, and the losses would be inconsiderable. Yet there are many trees of sentimental value. These latter will prove a great obstacle to the control of this disease. But the exemption of these trees from destruction would add thousands of dollars every year to the cost of fighting the disease; since experienced inspectors would have to inspect every single remaining tree most carefully, and cut out all infected parts. And eventually the inspector is sure to be blamed for the destruction of the trees, if he be, as most assuredly he must be, authorized ' to cut out infections. Yet to leave these trees alone, even if only soli-tary or few, would, as experience has shown, merely result in perpetuating the disease in a region so productive of secondary hosts.

(To be concluded in March issue of the Journal.)