

*Symptoms.*\*—"The most prominent indication of the presence of the disease, at most times in the year, is the dead arm which gives the trouble its name; but another striking symptom, visibly only in June and early July is the peculiar yellow coloration of the foliage and the dwarfing, crimping and curling of the leaves that mark affected portions of the vine. The yellowing should attract the attention of every grower during cultivation, and the diseased arm or vine should be removed at once or marked for such treatment at pruning time. There are several other less prominent signs of the disease which enable the expert to distinguish it from other troubles, but which would not be so quickly noticed by the ordinary vineyardist. These are peculiar, longitudinal, ribbed excrescences on the trunk or arm, dry rot in the heart of the trunk and usually extending to the margin, small reddish brown or black spots on the green shoots, petioles, peduncles and leaf veins, and spotting and rotting of the berries very similar to those produced by black rot."

*Remedy.*—"The diseased vines should be marked in early summer, when they are easily recognizable from the yellow leaves, and all affected wood removed and burned. By carrying a piece of old cotton or linen cloth when cultivating the vineyard, it is but the work of seconds to attach to the diseased vine a strip of cloth to direct attention to it when trimming. Often the removal of a single arm eradicates the disease, but in other cases the whole trunk will be found affected. If the characteristic discoloration or dry rot of the wood of the main trunk is apparent, the whole vine should be sawed off at a point below the last indications of rot. In many cases it will be best to cut off the vine close to the ground so that renewals will come from below the surface. If all sources of infection are removed, such renewals are sure to be healthy and to develop rapidly into strong vines. In some years it might be safe to leave infected wood to bear fruit while the renewal canes are growing, but when conditions are favorable for infection such a procedure would be very unwise. In any case each renewal should be inspected carefully some time during late summer to see that it has not been infected; for if it has been attacked by the fungus, even slightly, it should be rejected. To insure one healthy renewal it is well to leave two or three suckers at the base of the stump from which to select when tying up. At the regular trimming time precaution should be made not to leave for bearing wood any canes that show lesions of the disease. Detection of these is easy with a little care, as they are usually conspicuous at this time, being reddish in color and slightly elevated."

#### CONCLUSION.

Practically all the serious diseases of the grape in Ontario can be prevented from causing loss by spraying with Bordeaux mixture as recommended for Black Rot, with the addition of flowers of sulphur later in the season if Powdery Mildew appears. Except in localities which experience has shown to be practically immune to disease, spraying should be done every year as an insurance against outbreaks.