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TREATMENT OF WINTER-INJURED WALNUT TREES
INFECTED WITH WOOD-DECAYING FUNGI
by
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Low temperatures of October 1935 which came before the trees were dormant, produced enormous losses in walnut trees in western Oregon. Some trees were a total loss; others are so severely injured that they should be discarded, while many with considerable dead wood may be salvaged. This circular deals with the latter.

These trees which are partially injured show the most damage in the crotches, bases of branches, and in some cases low down on the trunk, i.e. in those portions of the tree in which dormancy is usually most delayed.

In those portions of winter-injured branches or trunks where injury was slight or immediately above healthy wood the bark and wood remained succulent for several months after the freeze. This succulent dead or partially dead tissue has proved to be a very exceptional culture medium for the growth of wood-decaying fungi. The fungus known to science as Schizophyllum commune is one of these fungi.

Nearly all of the younger walnut trees showing winter injury are infected by this fungus. The fungus appears on the surface of the wood or bark in the form of small, woolly, dirty white brackets with radiating gills underneath. These white brackets are merely the "fruits", so to speak, of the vegetative part of the fungus which has permeated and ramified most of the dead bark and outer injured wood just above the healthy wood.

This fungus is not considered to be a virulent parasite which will very actively devitalize healthy wood especially if the latter is vigorously growing. Accordingly there is some question as to how much damage the fungus might do in affected walnut trees where wood vitality is probably rather low, not only because of last winter, but also due to unfavorable weather this winter. Other wood decaying fungi may be potentially as severe as Schizophyllum. The only safe measure, therefore, is to remove by pruning and surgery methods all dead wood from trees the grower hopes to salvage.

Pruning outs should be made back of the dead wood leaving nothing but healthy living tissues. Usually therefore, it is necessary and advisable to cut away some healthy wood rather than to run the risk of leaving some infected wood as a source of future trouble. In many walnut trees there are strips of dead wood and bark lengthwise of branches. If these involve a third or more of the cross section of the branch, the whole limb should be pruned out. Remember always that stubs are a menace--they cannot heal and they become places for decay organisms, such as Schizophyllum, to enter.

In cases where a part of the main trunk of the tree is removed, where possible the out should be slanted for good drainage.

For the treatment of tree wounds and wound dressings to prevent infection, reference is made to Oregon State College Extension Bulletin No. 485. The present circular is merely a supplement to circular No. 485 with special reference to the present situation in walnut trees. The information in the above-mentioned circular is applicable to all kinds of orchard and ornamental trees.