



WALNUT NOTES

Canker Disease

Most cankers in black walnut are caused by fungi that enter the tree through unprotected wounds, small injuries, or leaf scars. Cankers may damage trees by allowing decay-causing organisms to enter the tree, by degrading the wood, and by weakening or girdling the stem. They can be either annual or perennial, depending on how long the canker-causing fungus operates.

Annual Cankers

Annual cankers, active for one season only, generally affect young, smooth-barked walnut trees. They often occur near the ground on the stem. The tree may develop basal sprouts below the canker, particularly if one-half or more of the stem has been girdled by the canker (fig. 1). Annual cankers affecting less than one-fourth of the stem often heal, but affected trees may later develop weak seams at the former canker locations.



Figure 1.-Girdling annual canker on black walnut. Note basal sprouts.



Figure 2.-Two open-faced perennial Nectria cankers.

Perennial Cankers

Perennial cankers caused by a Nectria fungus, are much more destructive than annual cankers (fig. 2). Nectria cankers may remain active for many years. In response to the Nectria infection, the tree creates folds of callus at the canker site. After a few

years, the canker begins to look like an open, target-like face. Nectria cankers, in addition to creating a wood defect, weaken stems and make them susceptible to wind breakage.

Control

Annual cankers.-If stems are girdled and sprouting occurs, remove girdled stem and all sprouts but the most vigorous one. Burn or remove all dead stems from the area.

Perennial cankers.-Nectria cankers usually develop around old branch stubs on the stem. In areas with a high incidence of Nectria cankers, prune lower branches to remove this source of infection. Encourage vigorous tree growth so that wounds will heal quickly. Release trees as required to prevent stagnation.

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