



BARTLETT TREE

RESEARCH LABORATORIES

U.K. AND IRELAND



Plant Health Care Program



Canker Glynn C. Percival

INTRODUCTION

Cankers develop after trees are attacked by a wide range of fungi from the Ascomycetes, Deuteromycetes, Basidiomycetes, and, less commonly, Oomycetes. Generally, stem cankers are caused by Ascomycetes, Deuteromycetes, and Oomycetes, whereas canker rots are caused by Basidiomycetes. Most fungi that cause stem cankers are restricted to bark and xylem tissues that breakdown due to the effects of toxins or secreted enzymes. Such fungi include Nectria galligena, Cryphonectria parasitica, Leucostoma persoonii). Many stem canker pathogens invade and colonize xylem tissues in the vicinity of the canker without causing decay. Basidiomycetous fungi that cause cankers and which also extensively invade the xylem, simultaneously causing wood decay, are termed canker rot pathogens (e.g. Cerrena unicolor).

Most fungi causing stem cankers and canker rots colonize the host plant via open wounds inflicted by pruning, frost injury, breakage caused by ice and snow, dead branches, branch stubs, twigs, leaf scars or, less commonly, through leaves and/or insect attack. In addition plants weakened by environmental stress (drought, waterlogging, salt damage) are more susceptible to attack).

The fungus can initially grow in the sap wood causing twig and branch die-back, stem canker girdling, disfiguring growth, dieback and eventually death (Figure 1).



Figure 1. Symptoms of canker on trees

- CONTROL:**
- 1) Prune out diseased branches and excise cankers when detected.
 - 2) Spring or autumn-fertilise to improve plant vitality.
 - 3) Summer-mulch and irrigate.
 - 4) Winter-prune (clean) thin and reduce as needed.
 - 5) Winter wash with liquid copper (100:1 dilution)
 - 6) Apply the fungicidal paint Bezel over the pruning wounds immediately after cutting. Work the paste into crevices applying once per year.