CERATOCYSTIS WILT OF *ACACIA MEARNSII*

Causal agent: *Ceratocystis albifundus*
Hosts: *Acacia mearnsii, A. decurrens, Protea* spp., several indigenous South African tree species
Geographic distribution: South Africa, Uganda, Kenya, Tanzania, Zambia.
Relative importance: Results in stem cankers and rapid wilt and death of susceptible plantation grown *A. mearnsii* trees. Can result in death of trees within six weeks after artificial inoculation.
Symptoms and signs: In cases where highly susceptible trees are infected the leaves of trees will wilt, followed shortly thereafter by the death of the entire tree (Fig. 1). These symptoms may or may not be accompanied by stem and branch cankers. Internal symptoms of infection by C. *albifundus* is the presence of light to dark brown vascular streaks in the xylem of trees (Figs. 2,4). More tolerant trees often develop stem cankers, characterised by gum pockets (blisters) below the bark of trees, black/red lesions on the bark of trees and the exudation of gum from the lesions and ruptured blisters (Fig. 3).
Biology: *Ceratocystis* species are wound infecting, insect associated pathogens. In South Africa, infection and disease caused by *C. albifundus* (Fig. 5) is especially common after hail damage to trees. Infection also occurs after wounds inflicted during mechanical weeding and thinning operations, and wind damage. The fungus prefers temperatures of ~ 25°C and some humidity. Successful infection is thus most common in summer, when the insect vectors (nitidulid beetles and other insects) are also more active.
Management: Selection of disease tolerant planting material is possible. Great variation in susceptibility of different *A. mearnsii* families has been shown in artificial inoculation experiments. Wounds should be prevented/minimized as much as possible, especially during summer months. Thinning and weeding operations which may result in wounds should be restricted to cooler, drier periods of the year.

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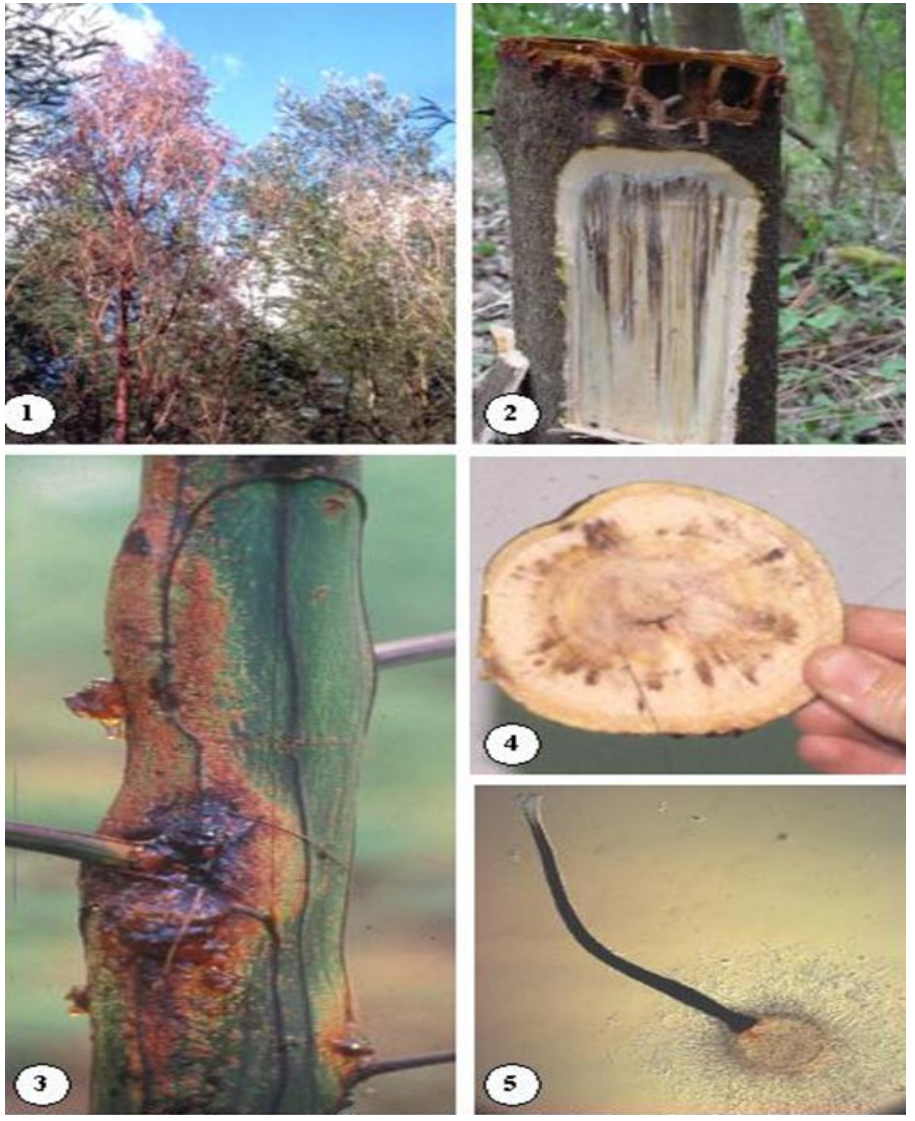

(1) Wilting and dead *A. mearnsii* trees, (2) streaks in the xylem of a *C. albifundus* infected tree, (3) bark discolouration, gummosis and blister lesions, (4) cross cut through infected tree showing brown discolouration of xylem caused by *C. albifundus*, (5) light microscope photo of sexual state of *C. albifundus*.