

## Root Rot of Some Tree Species in Strip Plantations of Bangladesh

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In 1990, a serious root rot disease was observed in different strip plantations of Court Chandpur-Subdalpur railroad, Jessore-Benapole highway and Jessore-Satkhira road of greater Jessore district. These plantations were covered with trees such as *Cassia siamea*, *Acacia auriculiformis*, *A. nilotica*, *Albizia procera*, *Leucena leucocephala* and *Dalbergia sissoo*. The affected trees died in patches showing wilting symptoms. *C. siamea*, *A. auriculiformis* and *A. procera* were affected most, whereas *A. nilotica*, *L. leucocephala* and *D. sissoo* were least affected. The leaves of the diseased trees became brown, dried up and remained attached to the dead branches. After excavation of roots, whitish mats of mycelia were observed on the branch and anchor roots of the trees. Typical fruit bodies were seen on the collar region, exposed roots and on *Clerodendrum viscosum* and *Glycosmis pentaphylla* situated at the vicinity of the infected trees (Figs. 1 and 2). The bark of roots were rotted and, in most cases, the rotting was extended up to the collar region. The fungus responsible for the disease was isolated and identified as *Fomes lignosus* (Klotzsch) Bres. Heavily infected trees were removed from the sites. Basal area covering one metre radius of each diseased tree was drenched with 2% commercial formalin. The second spray was given 15 days after the first. The sprays, however, could not save the diseased trees but further spread of the disease symptom was checked.



Figure 1. Fruit bodies of *Fomes lignosus* on the collar of *Cassia siamea*.



Figure 2. Fruit bodies of *Fomes lignosus* on the root of *Clerodendrum viscosum*.

Occurrence of root rot due to *F. lignosus* in strip plantations is perhaps the first in Bangladesh. All root-infecting fungi including *F. lignosus* are saprophytic in nature, and the fungi which remain in tree stumps and roots infect them during their parasitic stage (Bakshi 1976). The mycelium of *F. lignosus* can travel independently through the soil unattached to any root or dead wood except at starting point (Petch 1921). The symptom of root rot is not recognized until a large number of roots are infected.

Root rot fungi possess a wide range of hosts. *F. lignosus* was reported to cause root rot on

*Artocarpus integrifolia* in Sri Lanka (Spaulding 1961, Browne 1968), white root rot of rubber in Sri Lanka, Indonesia, Malaysia, Philippines, Ghana, Ivory Coast, Zaire, Costa Rica, Mexico and Brazil (Bakshi 1976) and root rot on *Bombax ceiba* in Malaysia (Spaulding 1961, Browne 1968). Control of root rot of forest trees is very difficult because of long rotation of their hosts. Chemical control seems to be very costly and difficult to apply in the strip plantations. However, Rahman (1994) claimed that the root rot of pyinkado (*Xylia kerrii*) caused by *Ganoderma lucidum* was controlled with the use of 2% formalin as a soil drench.

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