

Tree dieback in Punjab, Pakistan

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Abstract

Survey of 10 districts of Punjab viz. Sialkot, Gujranwala, Lahore, Faisalabad, Sheikhpura, Gujrat, Jehlem, Rawalpindi, Sargodha, and Hafizabad were undertaken from March 2003 to March 2004 to study the present status of tree dieback incidence in these areas. A total of 21 tree species were found victim of the dieback disease. The disease incidence, however, varied in different tree species. Furthermore, there was also difference in disease severity in different surveyed districts of the province. *Dalbergia sissoo* Roxb. and *Acacia nilotica* (Lam) Willd. ex Delile., were found to be the most affected species in all the districts. Among the commonly grown trees *Mangifera indica* L., *Eucalyptus citriodora* Hook., *E. camal-dulensis* Dehnh., *Populus hybrida* M. Bieb., *Ficus religiosa* L., *F. bengalensis* L., *Bombax ceiba* L., *Syzygium cumini* (L.) Skeels., *Psidium guajava* L., and *Albizia lebeck* Benth. were found affected with dieback. The less commonly cultivated species like *Toona ciliata* (Roxb.) M. Roemer, *Heterophragma adenophyllum* Seem. ex Benth. & Hook., *Ficus glomerata* Roxb., *Mimosup elengi*, *Terminalia arjuna* Wight & Arn., *Grevillea robusta* Cunn., *Ehretia acuminata* R. Br., *Platanus orientalis* L. and *Barringtonia acutangula* (L.) Gaertn. were also found victims of the dieback. Termites and fungi were found to be the most common biotic factors responsible for the disease. Among the abiotic factors generally drought and environmental pollution seemed to be the main causes for dieback initiation and severity.