

Knowledge on Some Insect Pests Attacking Different Parts of Teak

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SUMMARY

Teak is one of the most important timber crop grown commercially and having high quality timber. Teak is attacked by many insect pests which were belonging to the order Lepidoptera, Coleoptera, Orthoptera, Hemiptera, and Diptera which are seed borers, root feeders, defoliators and timber feeders. By knowing the insects pest causing damage to the teak the management of that particular pest would become easier and leads to the substantial economic gain in tree improvement programme due to high value of timber and large area under teak.

INTRODUCTION

Teak (*Tectona grandis*) is a tropical hardwood tree species belongs to the family Verbenaceae. It is one of the highly prized constructional and multipurpose timber species. Teak is native to India (Tewari, 1992). The major teak growing states are Kerala, Karnataka, Tamil Nadu, Andhra Pradesh, and Telangana. It is the extensively studied timber species due to its high rich complex of insect fauna. Nearly about 300 insect's species observed attacking teak i.e., belongs to order Coleoptera, Lepidoptera, Orthoptera, Hemiptera, Isoptera, Diptera and Hymenoptera. This insects species attack the teak from the growth of the seeds until mature. Around 196 species of insects were found attacking different parts of living teak, comprising mainly defoliators, sap suckers, stem borers, root feeders, seed feeders and gall formers (Shukla *et al.*, 2001).

Insect's species attacking different parts of Teak:

Seed Pests

Insect species causing damage to the seeds and planting stocks leads to low productivity. Due to the attack of the reproductive parts of the teak poor seed setting occur mostly in seed production areas. The seed boring insects attacking teak are *Dichorocis punctiferalis* (Lepidoptera: Pyralidae) *Pagyda salvalis* (Lepidoptera: Pyralidae), *Hemithea* sp. (Geometridae: Lepidoptera), *Lasioderma serricorne* (Anobiidae: Coleoptera), *Leptocentrus vicarious* (Membracidae: Hemiptera) were causing heavy damage to the seeds of the teak. They not only feed on seeds but also on the flowers.

Nursery Pests

Teak is mostly caused damage in the nursery due to its succulence nature, nutritive and tender shoots at its younger stage. The insect's species attacking the nursery are Grass hoppers, Crickets *Gryllus campestris* (Gryllidae: orthoptera), Bihar hairy caterpillar *Diacrisia oblique* (Arctiidae: Lepidoptera), Cut worms *Spodoptera litura* (Noctuidae: Lepidoptera), Red borer *Zeuzera coffeae* (Cossidae: Lepidoptera) and White grubs *Holotrichia serrata* (Scarabidae: Coleoptera) most of the damage is caused by white grubs which feeds on the roots that causes high mortality rates.

Defoliators

In nurseries, plantations and natural forest the defoliation is the major problem caused by the defoliators. Among the defoliators attacking the teak *Hyblaea puera* (Hyblaeidae: Lepidoptera) popularly called as Teak defoliator and *Eutectona machaerails* (Crambidae: Lepidoptera) called as Teak skeletonizer were considered as the major economic insect pests.

Stem Pests

The insects species causing damage to the stem by boring are *Indarbela quadrinotata* (Indarbelidae: Lepidoptera), *Dihammus cervinus* (Cerambycidae: Coleoptera) and *Alcterogystia cadambae* (Cossidae:

Lepidoptera). The timber of the teak is resistant to the borer's attacks due to the presence of the phenolic compounds such as Tectoquinone and lapachol (Sandermann and simatupang, 1966).

Gall Formers

Young plantations are most adversely affected by the gall insect, *Asphondylia tectonae* (Itonididae: Diptera).

Timber Pests

A considerable amount of degradation of teak wood takes place due to insects attack at the time of storage of logs and fresh felled trees. The fresh felled timber is attacked by pin hole borer *Platypus* spp. and *Crossotarus* spp. (Platypodidae: Coleoptera), *Xylebours* spp. (Scolytidae: Coleoptera). Most dangerous species attacking sap wood of converted timber of teak wood is *Lyctus africanus* (Lytidae: Coleoptera) which is generally known as powder post beetle.

CONCLUSION

Insects are one of the major determinants affecting the quality of seeds, timber production and productivity. Thus by knowing the particular pest attacking particular part, the management of that pest can be done easily which leads to the substantial economic gain in tree improvement programme due to high value of timber and large area under teak.

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