

Insect Pests of *Casuarina equisetifolia* in Tamil Nadu, India and their Eco-friendly Management

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Abstract

Casuarina equisetifolia is almost free from major insect pest problems in its native land but infested by many insects in countries where it has been introduced. Over 60 species of insects have been reported to feed on live *C. equisetifolia* in India and about 40 species from Tamil Nadu State in India. These include three species of stem borers, two species of bark feeders, 23 species of needle feeders, 11 species of sap suckers and a seed feeder. The infestation of the bark eating caterpillar, *Indarbela quadrinotata* attained serious proportions in two agro-climatic zones of Tamil Nadu. The bagworm, *Eumeta crameri*, a needle feeding pest was found to affect active growth of seedlings and saplings. Among the sap sucking pests, *Nipaecoccus vastator* and *Icerya purchasi* (Cottony Cushion Scale) caused moderate wilting of seedlings. So far only a single species of Tormid – *Bootanellus orientalis* was recorded on seeds of *C. equisetifolia*. The bark eating caterpillar, *I. quadrinotata* is reckoned as the most serious pest of casuarina in Tamil Nadu and its infestation caused 2 to 5 percent mortality of trees in grown up plantations. The pest attack resulted in 6.66 percent loss in diameter increment and 7.31 percent loss in height increment annually. Since the bark eating caterpillar remains well fortified in the borer holes, it has only a very few natural enemies. Our studies have revealed that this pest can be managed by adopting eco-friendly measures. As some of the seed sources of *C. equisetifolia* exhibit remarkable level of tolerance to the pest, there is also scope for selection and breeding of *C. equisetifolia* for bark eating caterpillar resistance. Considering the adverse impact of hazardous chemical insecticides, the new paradigm of bark eating caterpillar management in casuarina plantations need to be based on environmental management, with thrust on biological methods.