



NEEM TREES INFESTED BY STEM BORERS

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Abstract: Neem is a native tree of India, found in every part in India especially in semi-arid conditions. The Neem Tree is an incredible plant that has been declared the "Tree of the 21st century" by the United Nations. It may grow up to 50 feet (15 m) tall and live for 200 years. During present investigation emphasis is made to find out the Neem trees affected by stem borers from Beed District. It is found that Neem trees are many in number from this region as compared to the other large trees. During this study it is observed that many of the Neem plants are deadly infested by the Stem borers.

Key Words: Neem Tree, Beed District, Stem Borers, Infestation.

INTRODUCTION:

Study Area: Beed District is situated in the Deccan black basalt stone at the Central West of the Aurangabad. It is between 18.28 and 19.28 longitudinally and between 74.54 and 76.57 longitudinally [1,2]. It is surrounded by Aurangabad and Jalna in the North, Parbhani and Latur in the East, Ahmednagar and Osmanabad in the South and Ahmednagar in the West. Godavari is the most significant river that flows on the borderline of Georai and Majalgaon Tehsils[3,4].

Neem, a member of the Meliaceae family, is a botanical cousin of mahogany. Meliaceae is a small family consisting of near about 50 genera and 800 species. The members of this family are found to be distributed in tropical regions. In India the family is represented by *Azadirachta indica* Juss and some other plants[5,6,7]. The plants are mostly trees or shrubs. The wood of this family emits a characteristic smell. Spreading branches with dark green leaves form a dense, round canopy, up to 20 metres across. Neem is an evergreen, tall, fast-growing tree, which can reach a height of 25m and 2.5m in girth. Its trunk usually straight is 30-80 cm in diameter. The bark is hard, rough and scaly, fissured even in young trees. It's often brown, but in older trees it can be pale or grayish-black. From India the tree and the knowledge about its many uses and benefits have spread[8].

According to report of an ad hoc panel of the Board on Science and Technology for International Development, "this plant may usher in a new era in pest control, provide millions with inexpensive medicines, cut down the rate of human population growth and even reduce erosion, deforestation, and the excessive temperature of an overheated globe." Neem's other descriptions, such as "nature's gift to mankind," "the tree for many an occasion," "the tree that purifies," "the wonder tree," "the tree of the 21st century," and "a tree for solving global problems," are a recognition of its versatility[9,10].

It is believed that generally the Neem plants are never been infested by the insects or by stem borers. On the other hand it is the fact that the Neem trees from Beed District are affected by stem borers in large quantity. In this respect the study is undertaken, from this study it is cleared that the Neem trees are infested by stem borers[11,12].

MATERIAL AND METHODS:

For the experiment ten different sites were selected randomly. The places selected for study are Beed, Wadwani, Dharur, Telgaon, Majalgaon, Georai, Naigaon, Pali, Chausala, Neknoor For experimental work from these places one hector of land is selected for observation/survey and the number of Neem trees present in that area is counted as total number of plants during the year 2013. The

plants infested by the stem borers are counted as infested and the normal plants. These observations are made purely on the basis of external morphological characters such as wilting of leaves, Yellowing of leaves, stem and branches portion becomes leafless, leaves dries & fall down, stem becomes hard tough and dry, in some cases leaves dries and remains attached to the tree trunk even though they are dry.

RESULT AND DISCUSSION:

The plants are mostly trees or shrubs and are having spreading branches with dark green leaves form a dense, round canopy, up to 20 meters across. It is an evergreen, tall, fast-growing tree, which can reach a height of 25m and 2.5m in girth. Its trunk usually straight is 30-80 cm in diameter. The bark is hard, rough and scaly, fissured even in young trees. It's often brown, but in older trees it can be pale or grayish-black. Ten different sites were selected for study randomly. These places were Beed, Wadwani, Dharur, Telgaon, Majalgaon, Georai, Naigaon, Pali, Chausala & Neknoor. Observation made by survey method is placed in the table-1. Table- 1 shows that Infected trees were maximum in pali (47.36 %) where as minimum infected plants were found from Dharur (33.87%). Neem tree population is highest in Pali region at the same time number of trees affected by stem borers attack is also greater as compared to the other places which were studied. These infected Neem trees shows variation in external morphology. In severe infection cases root, stem, braches and all the part are infested. Stem borer's forms hole on the stem which is generally of oval shaped. Total survey study reveals that highest infection (47.36%) is reported from Pali region which is very high.

Table-1: Infested neem trees from Beed District.

Sr. No.	Place Name	% of trees affected by Stem Borers
01	Beed,	46.42
02	Wadwani	34.37
03	Dharur	33.87
09	Telgaon	46.42
10	Majalgaon	38.88
12	Georai	35.48
14	Naigaon,	35.41
15	Pali,	47.36
16	Chausala	42.85
17	Neknoor,	38.09

CONCLUSIONS:

Neem trees are in maximum quantity in Beed district. Number of trees is many in hilly area as compared to the other places. Neem trees are growing on road sides, in the fields, along the river side's etc. Neem trees are growing naturally. Neem trees are infested by stem borers from Beed district. Stem borers are attacking Neem plants throughout the year.

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