Tea Mosquito Bug: A New Introduced pest in Guava

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Guava (Psidium guajava L.) has become a most important fruit crop in India. Several insect pests, however, have been recorded on guava and a new pest introduce in guava crop. The adults and nymphs of tea mosquito bug damage caused 35 to 55% yield loss. Most damaging symptoms typical feeding by Helopeltis spp. appears as a discoloured necrotic area. The infestation of inflorescence results in “blossom blight”. Hence, they management of tea mosquito bug as major pest of cashew need to know a new pest of guava fruits. Present study that the through article nature of damage, management measure, life history etc.

Guava (Psidium guajava L.) is an evergreen fruit tree. It is pollinated mainly by the common honey bee, Apis mellifera. Guava is native to tropical America where it occurs wild. It was introduced in India in the seventeen century. The guava fruit is a true berry. In botany, a berry is a fleshy or pulpy indehiscent fruit in which the entire ovary wall ripens into a relatively soft pericarp, the seeds are embedded in the common flesh of the ovary, and typically there is more than one seed. Guava has a slender trunk with smooth green to red-brown bark. The trunk may be branched at the base and the branches droop low to the ground. The fruit is oval in shape and green to yellow in colour. Consumption of guava is its rich Vitamin C.

Tea mosquito bug: Scientific name: Helopeltis antonii S. Family: Miridae or Capsidae

Order: Hemiptera.

Host Plants & Economic Importance: Polyphagous - cashewnut, tea, apple and grapevine. Over 100 species of plants have been reported as hosts for Helopeltis spp., including neem, guava, cocoa, mahogany, cinchona, cotton, apples, grapes, drumstick, black pepper and jamun causing considerable damage.

Marks of Identification:

Adult bug: Small (7-9 mm), active, reddish brown having peculiar pin-like knobbed process, arising vertically from the thorax & have long legs and antennae Bugs having a mixture of red, black and white coloration. The bug resembles mosquito in sitting position and hence this pest is known as ‘mosquito bug’.

Nymph: Ant like, hairy and amber coloured. Nearly 60 per cent nymphs survive and moult as adults. The nymphs are wingless and smaller, but otherwise resemble the adults. The young nymphs are orange coloured and ant like (Makawana et al., 2017).

Nature of Damage: Affected shoots show long black lesions and may cause die-back in severe cases. Feeding on tender leaves causes crinkling (Makawana et al., 2017). 35 to 55 per cent yield losses their insect. Both nymphs and adults suck cell sap form the tender leaves, shoots and fruits. As a result leaves, shoots turn dark brown and then black, white blisters and scales appear on fruit. Infested inflorescence usually turns black and die, immature nuts may drop off. In case of severe
infestation shoots dries up, nuts shrivel and fall prematurely. Severely affected branches may lead to the secondary infection by fungus (\textit{Botrydiplodia theobromae}) causing die back disease. Both the nymph and adult life time damages at least three tender shoots and panicles (Roy \textit{et al.}, 2015). Nymphs and adults of this mirid bug suck sap from the leaves, young shoots, inflorescence, developing young nuts and apples. The injury made by the suctorial mouth parts of the insect results in exudation of a resinous gummy substance from the feeding punctures.

Life History: Eggs: 500 in tissues of tender shoots, buds, midribs and petioles of leaves. Each female bug lays, on an average, 50 eggs (Makawana \textit{et al.}, 2017). I.P.: 1-4 weeks. The incubation period of the egg is on an average 5-7 days (Makawana \textit{et al.}, 2017). Nymph: N.P.3-6 weeks. Adult female bug live for 6-10 weeks. S.O.: Pest is active in rainy season (Srikumar and Bhat 2012, Kalita \textit{et al.}, 2018). Heavy & continuous rains with no sunshine is favourable for its rapid multiplication.

Management practices:

Cultural control:
- Remove alternate hosts like cotton, guava, neem, cinchona, grapes, cocoa, apples, black pepper, drumstick, jamun, mahogany etc.
- Remove the volunteer (self-sown) neem plants in and around guava orchard.
- Monitor crop regularly.
- Avoid interplanting like cotton.

Mechanical control:
- Remove the communist weed around the guava orchards in \textit{Kharif} season.

Biological control:
Natural enemies of tea mosquito bug:
- Fungus \textit{Baeuveria bassiana} are pathogenic to both nymphs as well as adults of TMB. Field application during flushing and flowering period with concentration of \(10^7\) spores/ml is a potential approach for the management of TMB.

Chemical control:
- First Spray (pre-flowering) Monocrotophos 36 SL OR Lamda cyhalothrin 14 ml OR 6 ml/10 lit. water + (ii.) Second spray (flowering) Profenophos 50 EC 10 ml/10 lit. water + Third spray (fruition) Carbaryl 50% WP OR Lamda cyhalothrin 20 ml OR 6 ml/10 lit. water with 500 lit. water per hac.
Conclusion:

“Tea Mosquito bug” is considered to be the most new introduced serious pest of guava crop losses sometimes reaching 35 to 55 %. Very important task a control of “Tea Mosquito Bug”. All attempts preventing as well as protective should be followed properly in time to save the crop.

References:

