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Article ID: SIMM0410 Popular Article Destruction of Mango Stem Borer, Batocera rufomaculata

I. Rabeena^{1*} and A. Subash Chandra Bose²

¹Kalasalingam School of Agriculture and Horticulture, Krishnankoil, (626126), India ²S. Thangapazham Agriculture College, Vasudevanallur, Tenkasi (627760), India

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Introduction

Batocera rufomaculata is a long-horn beetle in the family of Cerambycidae order Coleoptera. It was first described during 1775 by Charles De Geer. This pest is highly destructive to the mango trees. It feeds on variety of host plants like Mango, rubber, jack-fruit, fig, papaya, apple, eucalyptus and mulberry, moringa, cashew, casuarina and silk cotton. This stem borer widely distributed in the mango growing areas. The grubs make tunnels in the trunk region and feeds on internal tissues. Affected trees slowly lose their vigor and drying of branches.

Damage symptoms

The grub bore in to trunk and makes tunnel or burrow on the mango tree and feeds on internal tissue pith region. The symptoms such as small holes on the trunk exuding resinous or gummy substances and the presence of frass material on entry point like chewed up fibres, scrapes of bark, castings indicate the presence of mango stem borer in the tree. Yellowing and defoliation follow the infestation. The borer causes the branches and stems to die. The pest can also tunnel the roots.





Resinous exudate from affected trunk



Drying of branches

Rabeena and Bose (2024)

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Bionomics

Adult beetle lay eggs singly on the bark or cracks and crevices on the tree trunk or branches. Incubation period: 1-2 weeks. Grubs are dirty yellow in colour, grub period six months and pupation occurs within the tunnels, pupal period is 19-36 days. Adults are grey in colour with two pink dots and lateral spine on the thorax with a longevity of 6 months.



Grub

Adult

Management

- ✓ Grow less susceptible mango varieties like Neelam, Humayudin and Panchayarnam
- Remove and destroy dead and severely affected branches of the tree
- ✓ Avoid injury at the base of trunk while pruning, because the exudates from tree attract the adult.
- ✓ Remove alternative hosts like moringa, silk cotton in the near vicinity.
- ✓ Apply pathogenic fungi Lecanicillium lecanii and Mucor spinocens infect the grubs.
- ✓ Practice padding with monocrotophos 36 WSC soaked in absorbent cotton @ 10 ml in 25 cm² per tree may get rid of the

infestation. This should be done when the trees are not in the bearing stage.

- \checkmark Use a needle or long wire to pull out the grubs from the bore holes. The bore holes may be filled with DDVP **(***a*) 5 ml or monocrotophos 36 WSC 2 @ ml/hole ml or one celphos tablet (3
 - g aluminum phosphide) or apply carbofuran 3G 5 g per hole and plug with clay + copper oxychloride paste.
- ✓ Swab Coal tar + Kerosene @ 1:2 or Carbaryl 50 WP 20 g / L (basal portion of the trunk - 3 feet height) after scraping the loose bark to prevent oviposition by adult beetles.
- Prune and destroy affected branches and paste the cut ends with 5% copper oxychloride (50 g / liter of water).
- ✓ Two sprays on the trunk portion with 0.04% chlorpyriphos 20 EC (2 ml / liter of water) at fortnightly intervals with the onset of monsoon.
 Conclusion

The above-mentioned management measures can be successfully imposed wherever applicable for the management of mango stem borer. The yield loss caused by this pest can even be avoided.







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