

## WNRF Technical Bulletin : 02

### Surveillance of insect pests of *Morinda citrifolia* L. and *Morinda pubescens* J.E. Sm. in West Coast of Kerala and Karnataka

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Published by	Edited by	Authors	Year of Publication
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#### Citation :

Malarvannan, S., Shantha Kumar, S. P., Prabavathy, V.R., Sudha Nair and Peter, P.I. 2010. *Surveillance of insect pests of Morinda citrifolia L. and Morinda pubescens J.E. Sm. in West Coast of Kerala and Karnataka, WNRF Technical Bulletin 02, World Noni Research Foundation and M.S. Swaminathan Research Foundation, Chennai, India, p. 28.*

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### Summary and Conclusion

- Based on the two years of intensive pest surveillance on Noni in the West Coast of Kerala and Karnataka, the major groups of insect pests observed were sap feeders/sucking pests, leaf feeders/defoliators and non-insect pests.
- Seventy five field visits were made during May, 2008 to April, 2010. Two species viz., *M. citrifolia* and *M. pubescens* were included in the pest surveillance.
- Six districts of coastal belt of Kerala and six districts of Karnataka were covered during the study period. Natural vegetation as well as the trees raised in the farms was selected for the pest surveillance during different seasons.
- Kasargod, Kannur, Alleppey, Kozhikode, Ernakulam and Thrissur of Kerala and Bangalore, Mysore, Hassan, Mandya, Kolar and Mangalore of Karnataka were visited during different seasons.
- From the surveillance, association of insects on Noni in natural vegetation was less intensive compared to the commercial farms.

- From the findings, the insect pests associated in the *Morinda* habitat during different periods were White fly, *Dialeurodes kirkaldyi*, Thrips, *Heliothrips sp.*, Green hopper, *Flata ocellata* and *Hylamorpha hyala* (May to July, 2008); Membracid bugs, *Leptocentrus tarus*, Short horned grass hopper, *Orthacris maindroni*, White fly, *Dialeurodes kirkaldyi*, Green plant bug, *Nezara viridula*, Fruit fly, *Drosophila melanogaster* and Black fly, *Aleurocanthus woglumi* (August, 2008 to January, 2009); Membracid bugs, *Leptocentrus tarus*, Short horned grass hopper, *Orthacris maindroni*, White fly, *Dialeurodes kirkaldyi*, Black fly, *Aleurocanthus woglumi*, Green plant bug, *Nezara viridula*, Epilachna beetle, *Henosepilachna vigintioctopunctata*, Fruit fly, *Drosophila melanogaster* and scale, *Coccus viridis* (February to July, 2009); Membracid bugs, *Leptocentrus tarus*, Short horned grass hopper, *Orthacris maindroni*, White fly, *Dialeurodes kirkaldyi*, Black fly, *Aleurocanthus woglumi*, Epilachna beetle, *Henosepilachna vigintioctopunctata*, mealybug, *Maconellicoccus hirsutus* and scale, *Coccus viridis* (August, 2009 to April, 2010).
- The predators and pollinators (beneficial insects) observed were Weaver ants, *Oecophylla smaragdina* (May to July, 2008); Predatory bug, *Alcaeorrhynchus grandis*, Ladybird beetle, *Cheilomenes sexmaculatus* and Valley carpenter bee, *Xylocopa varipuncta* (August, 2008 to January, 2009); ladybird beetle, *Chilomenes sexmaculatus*, black ant, *Camponotus compressus*, weaver ants, *Oecophylla smaragdina*, valley carpenter bee, *Xylocopa varipuncta*, *Anegleis cardoni*, *Myrmicaria brunnea* and *Phanoptera gracilis* (February to July, 2009); ladybird beetle, *Chilomenes sexmaculatus*, black ant, *Camponotus compressus*, weaver ants, *Oecophylla smaragdina*, valley carpenter bee, *Xylocopa varipuncta*, *Anegleis cardoni*, *Myrmicaria brunnea* and *Phanoptera gracilis* (August, 2009 to April, 2010).
- The distribution of *M. citrifolia* was more confined naturally along the coastal belt of Kerala and Karnataka and very limited to mainland, which is an interesting phenomenon. It may be mainly due to the environmental factors and soil parameters.
- The plants distributed in natural vegetation were less infested with insect pests when compared to plants in farms.
- Association of insects on *M. citrifolia* is specific. Neighbouring natural vegetations were severely infested with insect pests, while *M. citrifolia* was free from the pests.

- The predominant insect pests observed were *B. tabaci*, *C. viridis*, *L. taurus*, *M. hirsutus*, *O. maindroni* and *T. albipes*.
- The less predominant pests observed during the surveillance were *A. woglumi*, *H. vigintioctopunctata*, *M. gyrans* and *H. hyala*.
- The predominant predators noticed during the two-year surveillance were *C. sexmaculatus* and *O. smaragdina*.
- The less predominant beneficial insects seen during the project period were *A. cardoni*, *M. brunnea* and *C. compressus*.
- The experimental findings shared in this bulletin are only a preliminary observation. Consequent and consistent visits in the future can provide information on insect diversity, which may help us to draw some conclusions.

-----End of statement-----