INTEGRATED MANAGEMENT OF MAJOR COCONUT PESTS IN THAILAND

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Abstract

In Thailand, major coconut pests are Rhinoceros beetle, Red palm weevil, Coconut hispine beetle, and Black headed caterpillar. Rhinoceros beetle is native to South-east Asia and outbreak of this insect pest rhinoceros beetle is often associated with plenty of available breeding sites in the coconut plantations. The adult beetle bores into the unopened fronds and spathes. Attacked fronds when fully opened show characteristic geometric cuts Identification of rhinoceros beetles breeding sites in the areas, removal of adult insects/larvae to reduce the number of insects, cleaning the breeding sites and removal of old tree/palm stumps are equally important to bring down the insect population.

The coconut hispine beetle Brontispa longissima is native to Indonesia and PNG. An exotic pest of Brontispa was first reported in Narathiwat in 2002. Heavy infestation was recorded in February 2004 in Thailand.

Red Palm Weevil damage the specially the young coconut plants by making holes on the stem, ooze out of viscous brown fluid and extrusion of chewed up fibres through the hole. In the advanced stage of infestation yellowing of the inner whorl of leaves occur. The crown falls down or dries up later when palm is dead.

The infestation of an invasive species of coconut black headed catterpillar Opisina arenosella (Lepidoptera: Oecophoridae) remove causes all the green matter of the leaves by feeding on the lower leaf surface, remaining within silk and frass gallaries. This catterpiler occurred since 2008 in Thailand and found on banana plants, toddy palms, and ornamental palms. Bacillus thurengensis is very effective biological control agent of this black headed caterpillar.

The population of biological control agents increase in the coconut plantations by implementing the farmer/private sector awareness campaigns on simple mass rearing techniques, by developing new techniques to release the biological agents into the field and regularly monitor the progress. Field sanitation and trapping of these insects are recommended as controlling measures of Rhinoceros beetle and red palm weevil. Asecodes hispinarum and Tetrastichus brontispae are recommended as biological control agent of hispine beetle. Removal of infested coconut leaves and spray of Bacillus thurengencis are recommended to control black headed caterpillars.

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