conferenceseries.com

14th International Conference on

Agriculture & Horticulture

August 15-16, 2019 | Rome, Italy

Sustainable control of oil palm insect pests in Malaysia

Norman Kamarudin¹ and Mohd Mazmira Mohd Masri ² ¹Malaysian Palm Oil Board, Malaysia ²Bandar Baru Bangi, Malaysia

The oil palm environment in Malaysia is rich in many ecosystem services which can be benefited to control pests and diseases. Some examples are the soil microbes which consist of entomopathogenic fungi and bacteria which can be exploited for insect control, especially bagworms, rhinoceros beetle and termites. The bagworms (Lepidoptera: Psychidae) are currently severely infesting oil palm plantations in Malaysia. The Integrated Pest Management (IPM) of bagworms includes aerial spraying of Bacillus thuringiensis (Bt), cultivation of beneficial plants and fixing of natural pheromone traps. The rhinoceros beetle (Coleoptera: Scarabaeidae), can be managed with the soil fungus *Metarhizium* and the Oryctes nudivirus (OrNV). The subterranean termite (Isoptera: Rhinotermitidae) can be controlled with two entomopathogenic fungi, *Beauveria bassiana* and *Metarhizium anisopliae* with perform similarly as an insecticide. Birds are also examples of ecosystem services which can be further exploited for the control of rodents and also insect pests. There are several endemic nocturnal and diurnal bird species inhabiting the oil palm plantation which have the potential to control pests, especially bagworms. This paper deliberates on some of the endemic ecosystem services in Malaysia which have been exploited towards the management of major insect pests in oil palm. The enhancement of existing and introduced ecosystem services would ensure better management of insect pests for the sustainable cultivation of oil palm.

norman@mpob.gov.my