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Evaluation of Several Chemical Control Approaches against Bagworm, *Metisa plana* Walker (Lepidopterea: Psychidae) in FELDAOil Palm Plantations

HASBER SALIM

School of Biological Science, Universiti Sains Malaysia, 11800 Minden, Penang, Malaysia

AND

NOOR HISHAM HAMID

Crop Protection Unit, Felda Agricultural Services Sdn. Bhd., Pusat Penyelidikan Pertanian Tun Razak, 26400 Bandar Jengka, Pahang, Malaysia

A series of field trials investigating the efficacy of several application techniques for insecticides against bagworm, Metisa plana*, were carried out in oil palm plantations. The efficacy of the ground spraying technique applying four common insecticides was investigated on 5 year-old palms. In general, all the four insecticides provided satisfactory control against* M. plana*, and pest populations were reduced to below the economic threshold level. However, the ground spraying technique was estimated to be low in productivity and took a longer time. The second study evaluated efficacy of trunk injection by using systemic insecticides methamidophos and monocrotophos in mature palms. The results showed that both insecticides were highly effective ($P<0.05$) against* M. plana*, with the pest populations eradicated following a single application. The efficacies of both insecticides were further evaluated on young palms using root absorption. Results from this study showed that both insecticides were effective against pest populations using this technique ($P<0.05$), reducing them to below the economic threshold level. The trunk injection technique has proven to be the most suitable technique to control large-scale bagworm outbreaks in mature oil palm plantations.*

Keywords*:* Metisa plana*, chemical control, spraying, trunk injection, root absorption*