INTEGRATED PEST MANAGEMENT FOR ORNAMENTAL AND LANDSCAPE PLANTS

BY

SHIMAA KHAMIS USIFF
B. Sc. Agric. Sc. (Pesticides), Ain Shams University, 2000

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ABSTRACT

Shimaa Khamis Usiff – Integrated pest management for ornamental and landscape plants – Unpublished M.Sc. Thesis, Ain Shams University, Faculty of Agriculture, Department of Plant Protection, 2005.

The present investigation was carried out to evaluate the role of integration of pesticide products (Azadirachtin, Natural soybean oil and Dibel 2x) with cultural tactics (i.e. watering, fertilizing, mowing, trimming and topdressing) in IPM program to manage insect pests i.e. *Aphis nerii, Maconellicoccus hirsutus ,Gynaikothrips ficorum* and *Agrotis ipsilon* witch attack *Nerium oleander, Hibiscus rosa-sinensis, Ficus nitida* and turfgrass as tifway, tifgreen and paspalum (Husk and Sea-Shore) respectively under field conditions. Experiments of monitoring the insect and the efficiency of pesticides in controlling such pest were carried out on ornamental and landscape gardens at Opour City, Qalupiea governorate , New Cairo City, Cairo governorate and Wady El-Mollak, Ismailia governorate during the period extending from May 2002-April 2004.The obtained results indicate that there are three broads of *Aphis nerii* on *Nerium oleander*, three generation of *Maconellicoccus hirsutus* on *Hibiscus rosa-sinensis* and five generations of *Gynaikothrips ficorum* on *Ficus nitida* annually. The generations' reveled large size during May and seems accordingly to be economically important. The efficiency of Azadirachtin and Natural soybean oil in comparison with the commonly used insecticides on pests show equivalent % reduction of *Aphis nerii, Maconellicoccus hirsutus* and *Gynaikothrips ficorum* possibility of alternative such bio-agent to the conventional insecticides. The tested cultural practices and application of Azadirachtin and Natural soybean oil two times respectively in accordance to appearance of generation successes to manage the insect and reduction of its numbers. The obtained results indicate that there are two

generations of BCW (*Agrotis ipsilon*) on turfgrass annually. The first generation revealed large size during April / May and seems accordingly to be economically important. The second generation appeared in scarcely numbers during July as compared with the first one. The efficiency of Dipel 2x in comparison with the commonly used insecticide chlorpyrifos-methyl on BCW show equivalent % reduction of BCW on turfgrass and possibility of alternative such bio-agent to the conventional insecticides. The tested cultural practices and application Dipel 2x two times in accordance to appearance of the first and the second generation of the insect in April and June successes to suppress the insect population and reduced its numbers.

KEY WORDS: *Aphis nerii, Maconellicoccus hirsutus, Gynaikothrips ficorum, Agrotis ipsilon, Nerium oleander, Hibiscus rosa-sinensis, Ficus nitida,* Turfgrass, monitoring, chemical pesticides, bio-agent, IPM.

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