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Title: Foraging Activity Of Apis Species On Strawberry Blossoms As Influenced By Pesticides

Keywords: Strawberry, Insect Pollinators, Apis spp., Insecticides, Fruit yield

Year: 2009

Name of journal: *Pakistan Entomologist*

Volume & Issue 31(1)

Page No: 57-65

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Abstract

The studies conducted during 2007-08 to determine the insect pollinators of strawberry cv. Chandler revealed that insects belonging to 4 orders, 7 families and 19 species frequented strawberry flowers. Of all these insects, honey bees viz., Apis cerana, A. mellifera, A. florea, A. dorsata were the dominant flower visitors. Their abundance was in the order: A. mellifera > A. cerana > A. florea > A. dorsata. The other insect visitors included soil nesting solitary bees such as Andrena leana, A. ilderda, butterflies, houseflies, syrphid flies and some beetles. Foraging populations of honeybees responded differently to environmentally variables. Each bee species differed significantly from one another in its responses to each chemical treatment. The toxicity of insecticides in the decreasing order of efficiency was malathion > carbaryl > metasystox > chlorpyrifos > neem oil > endosulfan > B. thuringiensis. Malathion and carbaryl were most toxic to A. florea one day after spray followed by A. dorsata, A. mellifera and A. cerana, respectively. Of all the insecticides metasystox was most toxic to all honeybee species and B. thuringiensis least toxic. The percentage of fruit set was much higher in open pollinated plants than control. There was 11.20 % malformed fruit in open pollinated plots as compared to 17.44 % in control plots. Insecticides and biopesticides were found to reduce the pollinator's population thereby affecting fruit-yield qualitatively and quantitatively.