

SCREENING OF COMMONLY AVAILABLE SYNTHETIC INSECTICIDES FOR CONTROLLING WAXY SCALE (*Ceroplastes* spp.) IN MANGO

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Waxy scales (*Ceroplastes* spp.) are sap-sucking insects that cause a vast damage to horticultural crops. At present there is an increasing trend of spreading the infestation of waxy scales on cultivated mango plants. They suck plant sap thus severe infestation may result die back of shoots, branches and occasionally death of the host plant. The insecticides recommended for control scales are not effective due to its hard waxy cover. The study was carried out to investigate the efficacy of different locally available insecticides against waxy scales on mango under laboratory and greenhouse conditions at Fruit Research and Development Institute, Horana. Eight treatments including different concentrations of selected insecticides, 10 ml/10 L and 8 ml/10 L of Phyrifluquinazon, 10 ml/10 L and 8 ml/10 L of Fluphyradifurone, 5 ml/10 L of Spirodiclofen, 5 g/10 L of Sulfoxaflor, and 1 g/1 L of Thiamethoxam (treated) with untreated control were tested under laboratory conditions. Both adults and nymphs were bio assayed separately. All treatments were arranged in Completely Randomized Design with 5 replicates. The number of dead scales was taken from 15 number sample at 3, 7 and 9 days after the treatments. Mortality percentages were calculated. Results indicated that significantly higher mortality percentage of adults in Sulfoxaflor and Thiamethoxam treatments compared to other treatments at 9 days after application. Phyrifluquinazon, Sulfoxaflor and Thiamethoxam treatments showed significant mortality of nymphs than other treatments at 9 days after application. According to the results, most effective three insecticides, Phyrifluquinazon, Sulfoxaflor and Thiamethoxam were selected for pot experiment. The above 3 insecticides and untreated control pots were kept in a Completely Randomized Design with 5 replicates. Only nymph stage was considered in this experiment. Number of dead nymphs were taken at 1, 2 and 3 weeks after application. Mortality percentages were calculated. The results revealed that Sulfoxaflor and Thiamethoxam had significantly different mortality percentage compared to Phyrifluquinazon (40%) and untreated control 3 weeks after application. According to Thiamethoxam treatment (69.33%) was significantly different from Sulfoxaflor (54.66%). However the results revealed that only one application of insecticide was not enough to control this scale.

Keywords: Waxy scale, *Ceroplastes* spp., Mortality percentage, Insecticides