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Effect of Different Insecticides on the Survival of the Oil Palm Pollinator, *Elaeidobius kamerunicus* (Coleoptera:Curculionidae)

SU CHONG MING*

Sarawak Oil Palms Berhad, No. 124-126, Jalan Bendahara, 98000 Miri, Sarawak, Malaysia

AND

C FBONG

Faculty of Agriculture and Food Sciences, Universiti Putra Malaysia, Bintulu Sarawak Campus, P O Box 396, 97008 Bintulu, Sarawak, Malaysia

This study investigated the effects of nine insecticides used in young mature oil palm plantations for bunch moth control and their effect on the survival of the oil palm pollinating weevils especially on the newly emerged young adult weevils from the spent male inflorescence spikelets. Ten male inflorescences were randomly selected from an eight-year-old oil palm field and sprayed with 1 litre each of selected insecticides five days before anthesis. Field sampling of the male inflorescence spikelets for weevil counting was conducted when the flowers began to open from the base of the spikelets and continued until pollen shedding is over and no more aniseed smell was detected. Results show that three insecticides namely Dinotefuran, Fipronil and Cypermethrin at 0.0056 per cent ai, 0.0048 per cent ai and 0.015 per cent ai respectively at 1 litre spray solution per inflorescence showed significantly detrimental effects on both survival of adult weevils and newly emerged adult weevils per spikelet. The mean percentages of survival weevil per spikelet for Dinotefuran, Fipronil and Cypermethrin were at 20.48 per cent, 12.09 per cent and 55.18 per cent respectively. The mean number of newly emerged adult weevil count per spikelet for male inflorescence treated with Dinotefuran, Fipronil and Cypermethrin at 0.58, 4.74 and 6.05 respectively were significantly lower as compared to control (43.06). There were no significant differences in both mean percentages of survival adult weevil and newly emerged adult weevil per spikelet by the other six insecticides as compared to control. The study concludes that prolonged usage of these three insecticides in the young mature oil palm plantation to control bunch moth will inevitably lead to detrimental effects on the survival and proliferation of the oil palm pollinators in the oil palm ecosystem in the long run. Extra precaution is therefore required when handling these insecticides in the fields in order to have more sustainable way of controlling oil palm bunch moth in peat.

Keywords: Bunch moth, insecticides, *Elaeidobius kamerunicus*, oil palm.

