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EVALUATION OF SELECTED SYNTHETIC INSECTICIDES, NEEM PRODUCTS AND BORDER CROPS IN THE MANAGEMENT OF APHIDS (Aphis *gossypii*) IN OKRA (*Abelmoschus esculentus*) IN EASTERN KENYA

Thesis submitted to the University of Nairobi, Department of Plant Science and Crop Protection in partial fulfilment of the requirements for the award of Master of Science degree in Crop Protection

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ABSTRACT

Studies to evaluate the efficacy of two synthetic insecticides, imidacloprid 350g/l (Gaucho FS ®) and Lambda- cyhalothrin 17.5g/l (Karate 1.75 EC ®) and two neem products, 0.15%w/w azadirachtin (Achook®) and 0.6%w/w azadirachtin (Neem extractive®) and a combination of Neem extractive® and Karate® in the management of aphids (*Aphis gossypii* Glover) in okra (*Abelmoschus esculentus* L Moench) were conducted in the field during two planting periods of December 2003- March 2004 and February - May 2004 at Kibwezi Irrigation Project in Eastern Kenya. Gaucho was applied, as a seed dressing while the other insecticides were foliar applied. Both the live and the parasitised aphids (mummified aphids) population were monitored on the leaves of ten randomly selected plants per plot for nine weeks. Aphid population was also monitored on ten pods per plot and this was done on weekly basis for seven weeks.

Application of pesticides significantly ($P<0.05$) reduced both live and parasitised aphid population on both the leaves and pods. Imidacloprid (Gaucho®) was the most effective pesticide in reducing aphid population and aphid reduction in the imidacloprid treated plots were 98.2% and 96.4% during the two respective planting periods. Neem products namely Achook® and Neem extractive® compared well in suppressing aphid population in the first planting period. Karate® and a combination of Karate® and Neem extractive® were the least effective treatments and the two were not significantly different in reducing aphid population.