

Abstract

There were 346 confirmed dengue cases until November 2004 in Taiwan. Among them 265 cases were indigenous infected and 81 were imported infected. 241 cases were found in Pingtung county, 18 cases in Kaohsiung city, 5 cases in Kaohsiung county, and one case in Taichung. The insecticides have been routinely applied for mosquito control by pest control operators when dengue fever cases occurred in the epidemic areas. The insecticides resistance in mosquito will meet inevitably. We used 7 kinds of WHO insecticide-impregnated papers to determine insecticide susceptibility of adult *Aedes aegypti* and *Aedes albopictus*. The *Aedes aegypti* of Chianjen cohort were resistant to cyfluthrin, etofenprox, permethrin and cyhalothrin. The *Aedes aegypti* of Hsiaokung cohort showed the resistant to etofenprox and permethrin. The *Aedes albopictus* of Hsiaokung cohort showed the resistance to fenitrothion. The *Aedes aegypti* of Juaying cohort showed the resistance to cyfluthrin, etofenprox, permethrin and cyhalothrin. The *Aedes albopictus* of Juaying cohort showed the resistance to fenitrothion, only 25% were killed. The *Aedes aegypti* of Samming cohort showed the resistance to cyfluthrin, deltamethrin, etofenprox, permethrin and cyhalothrin. The *Aedes aegypti* of Linya cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, permethrin and cyhalothrin. There was no insecticides resistance in the *Aedes albopictus* of Linya cohort. The *Aedes aegypti* of Fengsan cohort showed the resistance to propoxur, etofenprox, and permethrin and cyhalothrin. There were no insecticides resistance found in the *Aedes albopictus* of Dalou cohort. The *Aedes aegypti* of Guejin cohort showed the resistance to propoxur and permethrin. The synergists worked well on any *Aedes aegypti* cohort except the TPP showed <1 synergistic ratio in Chianjen cohort. The residual effect on the special use insecticide showed the good control effect except the tetramethrin. The active ingredient prallethrin in the mosquito liquid form vaporizer showed the better results than the esbiothrin.

Keywords: *Aedes aegypti* ; *Aedes albopictus* ; insecticides resistance ; synergistic ratio