

Insecticides efficacy and resistance dengue vectors

ABSTRACT :

There were 591 confirmed dengue cases found in Taiwan until November, 7 in 2005. 420 dengue cases were found in Kaohsiung city, 156 in Kaohsiung County, 9 in Pingtung County, 4 in Tainan County, 1 in Taipei county, and 1 in Keelung City. 10 cases present hemorrhagic syndrome and two dead. These implied that the active virus still in dengue vector mosquitoes thus the insecticides routine application still is not inevitable in the epidemic areas. The insecticides resistance in mosquito still needs to be monitored. We used 7 kinds of WHO insecticide-impregnated papers to determine insecticide susceptibility of adult *Aedes aegypti* and *Aedes albopictus*. The *Ae. aegypti* of Chinchian cohort were resistant to cyfluthrin, deltamethrin, etofenprox, cypermethrin and permethrin. The *Ae. aegypti* of Hsiaokung cohort showed the resistance to cyfluthrin, deltamethrin, etofenprox, cyhalothrin, and permethrin. The *Ae. aegypti* of Linyu cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, cyfluthrin, and permethrin. The *Ae. aegypti* of Hsinsing cohort showed the resistance to cyfluthrin, etofenprox, cyhalothrin, and permethrin. The *Ae. aegypti* of Nanchi cohort showed the resistance to cyfluthrin, deltamethrin, etofenprox, cyhalothrin, and permethrin. The *Ae. aegypti* of Samming cohort showed the resistance to etofenprox and permethrin but *Ae. albopictus* were still susceptible to tested pesticides. The *Ae. aegypti* of Linyu cohort showed the resistance to propoxur, cyfluthrin, etofenprox, permethrin and cyhalothrin. The *Ae. aegypti* of Chienjin cohort showed the resistance to cyfluthrin, deltamethrin, etofenprox, cyhalothrin, and permethrin. The Yenzhsen cohort showed the resistance to etofenprox and permethrin. The *Ae. aegypti* of Gusan cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, permethrin, and cyhalothrin. The *Ae. aegypti* of Chien cohort showed the resistance to cyfluthrin, deltamethrin, etofenprox, permethrin, and cyhalothrin. The *Ae. aegypti* of South district of Tainan cohort showed the resistance to deltamethrin, etofenprox and permethrin. The *Ae. aegypti* of Guejin of Tainan county cohort showed the resistance to etofenprox. Four synergists with permethrin 2-4 times synergistic ratio only. The mosquito liquid vaporizer showed the knockdown effect. There were no insecticides resistance found in the *Aedes albopictus* of the tested strains.

Key words: *Aedes aegypti*, *Aedes albopictus*, insecticides resistance, synergistic ratio