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Project Title: Insecticides efficacy and resistance dengue vectors
 Project Number:DOH95-DC-1030
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Abstract:

According to the disease of Center for disease control, Department of Health, this year (2007) confirmed dengue fever cases till November 13, amounts to 1423. The dengue cases distribution were 984 in Tainan City, 200 in Tainan County, 105 in Kaohsiung city, 24 in Kaohsiung County, 23 Taipei, 19 in Taipei County, 13 in Taoyuan County, 12 Taichung, 8 in Chiayi County, 5 in Taichung City, 5 in Nantou County, 5 in Pingdong County, 4 in Miaoli County, 3 in Yilan County, 3 in Hsinchu County, 3 in Changhua County, 3 in Yunlin County, 2 in Keelung city, 1 in Hsinchu County. Among 1423 cases; 145 were imported cases, 1278 were indigenous infected cases. The dengue fever epidemics still in the areas, 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. The current year (2007), the bioassay tests of *Aedes aegypti*, and *Aedes albopictus* were sustained. The dengue fever vector mosquitoes collected from different areas were tested with seven kinds of insecticide dry film (from WHO) to determine insecticide susceptibilities of adult *Aedes aegypti* and *Aedes albopictus*. The *Ae. aegypti* of Chinchian cohort were resistant to propoxur, cyfluthrin, deltamethrin, etofenprox, cypermethrin and permethrin. The *Ae. aegypti* of Samming cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, permethrin and cyhalothrin. The *Ae. aegypti* of Zuoying cohort showed the resistance to etofenprox, permethrin and cyhalothrin. The *Ae. aegypti* of Hsiaokung cohort showed the resistance to etofenprox and permethrin. The *Ae. aegypti* of Linya cohort showed the resistance to propoxur, etofenprox, cyhalothrin and permethrin. The *Ae. aegypti* of Hsinsing cohort showed the resistance to propoxur, etofenprox, permethrin and cyhalothrin, cyfluthrin, deltamethrin, etofenprox, cyhalothrin and permethrin. The *Ae. aegypti* of Chienjin cohort showed the resistance to etofenprox and permethrin. The *Ae. aegypti* of Yenzhsen cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, cyhalothrin and permethrin. The *Ae. aegypti* of Gusan cohort showed the resistance to propoxur, cyfluthrin, deltamethrin, etofenprox, permethrin, and deltamethrin. The *Ae. aegypti* of Chijen cohort showed the resistance to propoxur, etofenprox and permethrin. The synergists of PBO (piperonyl butoxide) · DEM (diethyl maleate) · DEF (s,s,s-tributyl phosphorotrithioate)