

Insecticides susceptibility in *Culex vishnui* Theobald in paddy field in Sekinchan, Selangor, Malaysia

Cherng-Shii Leong¹, Chee-Dhang Chen^{*1}, Han-Lim Lee², Van-Lun Low¹, Koon-Weng Lau¹, Mohd Sofian-Azirun¹

¹ Institute of Biological Sciences, University of Malaya, 50603 Kuala Lumpur, Malaysia

² Medical Entomology Unit, Institute for Medical Research, Jalan Pahang, 50588, Kuala Lumpur, Malaysia

Culex vishnui is one of the primary vectors of Japanese encephalitis in Southeast Asia. The susceptibility of *Culex vishnui* larvae collected from paddy field in Sekinchan, Selangor, Malaysia, was studied against malathion, temephos and permethrin. The study sites were selected on the basis of contrasting agricultural practices and use of insecticides. Larval bioassays were carried out in accordance to the WHO standard procedures. Larvae of *Culex vishnui* were also tested against diagnostic dosage of malathion (0.125 mg/L) and temephos (0.002 mg/L). *Culex vishnui* larvae were resistant against diagnostic dosage of malathion and temephos with 24 hour post-treatment mortality (%) of 10.67 ± 1.15 and 0, respectively. In addition, permethrin exhibited significant lower LC_{50} value (0.048 ± 0.003 mg/L) against *Culex vishnui*, in comparison to temephos (0.074 ± 0.003 mg/L) and malathion (0.227 ± 0.007 mg/L) ($p < 0.05$), indicating that *Culex vishnui* was still susceptible to permethrin which can be used to control *Culex vishnui* in the paddy field.

