4-1. Insecticide Susceptibility of Anopheles sinensis (Diptera: Culicidae) larvae in Paju City, Malaria Endemic Area

Shin, E-Hyun, Yong Bum Lee, Young In Park, Bo Hee Kim, Hee IL Lee, Jong Soo Lee, Jae Chul Shim¹ and Won Ja Lee

Department of Medical Zoology, National Institute of Health

¹Cesco R & D Center

A study was conducted to determine the susceptibility of *Anopheles sinensis* larvae, malaria vector, from Paju city to 25 pesticides including 12 pyrethroids, 11 organophosphates and two other pesticides. The anopheline mosquito larvae showed the most highly susceptible to chlorfenapyr with LC₅₀ of 0.0063 ppm followed by spinosad, temephos, fenthion and beta-cyfluthrin with 0.03, 0.0366, 0.0367, 0.0998 ppm, respectively, and fluvalinate (>128 ppm) was the least susceptible. Also, 12 pesticides of them were compared with Koyang strain (Kyonggi-do) of data 1992. The development of resistance was noticed to ethofenprox, cypermethrin and permethrin as much of 176.8, 73.6 and 6.2 folds at LC₅₀, respectively, and also fluvalinate was showed high resistance development. In generally, the pyrethroid insecticides were showed higher development of resistance than organophosphorus insecticides.