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**Use of synthetic insecticides in the control of dengue vector mosquitoes  
*Aedes aegypti* and *Aedes albopictus***

M D B Perera<sup>1</sup>, T C Weeraratne<sup>2</sup>, M A C M Mansoor<sup>1</sup>, S H P P Karunaratne<sup>2</sup>

<sup>1</sup> Regional Office, Anti Malaria Campaign, Kurunegala

<sup>2</sup> Department of Zoology, University of Peradeniya, Peradeniya

The susceptibility of *Aedes aegypti* and *albopictus* to the discriminating dosages of DDT (an organochlorine) (4%), malathion (an organophosphate) (0.8%), propoxur (a carbamate) (0.1%), permethrin (0.25%) and deltamethrin (0.025%) (pyrethroids) were monitored by exposing mosquitoes to insecticide impregnated papers using World Health Organization (WHO) standard bio-assay test kit and technique. Both species gave 30% and 28% mortalities, respectively against DDT. Mortality against permethrin was 54% for *Aedes aegypti* and 45% for *Ae. albopictus*. Both species were susceptible (100% mortality) to malathion, propoxur and deltamethrin. Efficacy of the technical grade malathion, Pesguard FG161 and Deltacide in thermal fogging, and temephos (an organophosphate) as a larvicide was also monitored according to WHO testing procedures. When the adult mosquitoes were exposed to thermal fogging, both species gave 100% mortalities for all three insecticides at 10 m distance in all three habitat types used i.e. open area, habitat with little vegetation and habitat with dense vegetation. For malathion, 50% - 68% mortality was observed at 50 m distance. Pesguard and Deltacide gave 100% mortality up to 50 m in open area and in habitat with little vegetation. Both species showed >30% mortalities against Deltacide even at 75 m distance. The effect was negligible beyond 75 m. Efficacy of Deltacide was relatively high even with dense vegetation. Results showed that Deltacide had the highest efficacy followed by Pesguard and malathion. Presence of the monooxygenase inhibitor PB in Deltacide may act as an added advantage in knocking down resistant individuals by inhibiting monooxygenases which provide metabolic resistance. Under laboratory conditions, larvicide temephos (1 ppm) in water filled cement tanks (20 x 20 cm) was fully effective against the larvae of both species (100% mortality) for ten months and in the middle of the eleventh month, no larvicidal effect was observed (100% survivals). Under field conditions, 1 ppm temephos was fully effective (100% mortality) against larvae only for the first four months. More than 50% reduction of the efficacy was observed after six months. Results clearly showed that larvicidal effect of temephos is long lasting. Since it is a cheap insecticide, 1 ppm temephos can be highly recommended to use as a larvicide in dengue vector control programmes.