

ESTABLISHMENT OF BASELINE SUSCEPTIBILITIES FOR EARLY
DETECTION OF INSECTICIDE RESISTANCE AND
RESISTANT MECHANISMS IN ANOPHELINE MOSQUITOES

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The main malaria vector in Sri Lanka, *An.culicifacies* is at present resistant to DDT only, and a few malathion resistant adults are now being encountered in the field.

A number of other anopheline species have been upto now found to be susceptible to most of the organophosphates and carbamates. Hence demonstrating the potential to develop resistance in these species by the early detection of rare resistant individuals, identifying the resistant mechanisms, studying the frequency and distribution of the resistant gene(s) will help in planning future strategies of pesticides management to delay resistance development.

Discriminating dosages for the different insecticides recommended for Public Health use and baseline susceptibilities for the resistant mechanisms have been established for the susceptible populations of anophelines. The standard WHO contact test procedures and some biochemical assays, general esterases and acetylcholine esterases which have been modified for the field, were used in the study.

These baseline values will be used for the early detection of insecticide resistance and identification of resistant mechanisms involving general esterases and altered acetylcholinestrases in malaria vectors in Sri Lanka.