

CAN A MOSQUITO BE A CARRIER OF LARVICIDES ?

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Aedes mosquitoes which are vectors of Dengue fever, are capable of breeding in tree holes, bamboo stumps and artificial containers which often are inaccessible not only to human being but also to insecticide spray particles.

The use of ultra low volume (ULV) space sprays is effective in controlling vector adults but it is not an efficient way of treating larval habitat, even if we had excellent larvicides. The use of predatory mosquitoes, such as *Toxorhynchites sp.*, seems to be one of the most ideal ways of controlling such kind of vectors, although there are some problems to be overcome, i.e. a mass rearing method, selection of proper species fitted to the prey breeding area etc.

In the light of this situation, the authors propose the possibility of a new control method, in a combination of mosquitoes and insect growth regulator (IGR). We found that the female *Aedes* mosquito herself could carry an effective amount of IGR (pyriproxyfen) to an oviposition site, transfer it during her oviposition and inhibit adult emergence of larvae breeding there. An effective amount of pyriproxyfen can be picked up by mosquitoes after less than several minutes exposure to the surface treated with an oily formulation of pyriproxyfen. In other words, a female mosquito can act as an effective carrier equipped with a well tuned radar system with less environmental pollution. This control strategy is applicable to other species, such as predatory mosquitoes whose breeding sites are similar to those of *Aedes* species. We will also discuss the possibility of use of female *Toxorhynchites splendens* for the same purpose.