

Current Status of Mosquitoes Vector Research and Control in Iran

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Abstract : Malaria, *Dirofilaria immitis* (dog heart worm), and *D. repens* (dirofilariasis), which are transmitted by mosquitoes, have been reported in Iran. The Iranian mosquito fauna includes seven genera, 65 species, and three subspecies. *Aedes albopictus* has been reported since. West Nile, Sindbis, Dengue, Japanese encephalitis viruses, and the nematode *Setaria* (setariasis) has been reported in the country but there are no information about their vectors in Iran. Iran is malaria elimination phase. Insecticides residual spraying (IRS), distributed of insecticides long lasting treated nets (ITNs), fogging, release of larvivorous fishes and *Bacillus thuringiensis*, chemical larviciding, as well as case finding and manipulation and modification of breeding places carried out through the IVM program in the country. Prolonged exposure to insecticides over several generations of the vectors, develop resistance, a capacity to survive contact with insecticides. However, use of insecticides in agriculture has often been implicated as contributing to resistance in mosquito's vectors. Resistance of mosquitoes to some insecticides has been documented just within a few years after the insecticides were introduced. Some enzymes such as monooxygenases, esterases and glutathione S-transferases have been considered as a reason for resistance to pyrethroid insecticides. In conclusion, regarding to documented resistance and tolerance of mosquitoes vectors to some insecticides, resistance management is suggested by using new insecticide with novel mode of action.

Keywords : control, Iran, resistance, vector

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