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Integrated control and prevention of malaria (Anopheles stephensi) and dengue (Aedes aegypti) vectors with plant extracts through water, insecticides and BTI

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Mosquitoes act as life threatening disease vectors. Due to non-availability of vaccine and treatment for most of these diseases, the only solution is to control the mosquitoes. The continuous application of synthetic insecticides causes development of resistance in vector species, biological magnification of toxic substances through the food chain and adverse effects on environmental quality and non-target organisms including human health. So, under the Integrated Mosquito Management (IMM), emphasis is given on the application of alternative strategies in mosquito control such as use of insecticides, plant extracts and Bti. Mosquito larvae were collected from different habitats and brought for identification. After identification, Anopheles and Aedes mosquitoes were reared separately and treated with different plant extracts, growth regulators and Bti. Plant extracts through water and insecticides and Bti were tested in combination to test their efficacy against Anopheles and Aedes larvae. Again mortality data was collected and subjected to prohibit analysis to calculate LC_{50}. The least value of LC_{50} (162-398 ppm) observed with solution of water extracts, Bti and insecticides for Anopheles and Aedes larvae. By adopting these techniques we should able to manage the populations of Anopheles and Aedes in the environment.

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