
Integrated Pest Management

IPM is the balanced use of cultural, biological, and chemical procedures that are environmentally compatible and economically feasible to reduce pest populations to a tolerable level.

Methods of Control

Physical/Cultural

This involves practices which attempt to reduce mosquito breeding habitat. Efforts include preventing water from standing for more than four days by: repairing ditches to prevent seepage, clearing ditches of vegetation to promote rapid flow, improving drainage channels in irrigated fields, and dumping containers of standing water around the home.

Biological

Biological control includes using naturally occurring organisms to control pests. Bacteria called Bti, which is toxic only to mosquito and black fly larvae, and is not toxic to beneficial insects and can be used to control the larval stage of mosquitoes. Native fathead minnows can be used to control mosquito larvae in areas where there is standing water for long periods of time, such as wetlands and ponds.

Chemical

Permethrin, a man-made version of Pyrethrin which is derived from plants in the Chrysanthemum family, is used as a last resort, and only when nuisance threshold values have been exceeded.

Nuisance threshold values (mosquito numbers above 100 per trap) are determined by trapping adult mosquitoes in annoyance areas. Permethrin is applied using a method known as ultra-low volume spray (droplet size calibrated to 12-20 microns) so that an extremely small amount of product is applied over a large area (at less than 0.007 lbs/acre ~1 oz/acre).