

AN IPM PROGRAMME AGAINST  
*CULEX (CULEX) PIPIENS* LINNAEUS, 1758 IN  
VALENCIA REGION (SPAIN)

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The integrated pest management (IPM) strategy for mosquito control, also known as integrated vector control (IVC), is an ecologically based approach that may involve several complementary interventions used in combination or singly.

Environmental management, and chemical, biological and mechanical control comprise the elements of IVC proposed for use in or near urban habitats.

From 1986 to 1995, a study of various control measures was carried out by the Laboratory of Entomology of the University of Valencia (Spain), to assess their effectiveness in control of the mosquito populations.

More than 325 foci were detected in the city, and their physical and chemical conditions were studied, as well as vegetation and fauna. According to their characteristics we used different methods to obtain a low density of larvae.

In the programme we used chemical insecticides, sanitation, biological and parabiological control. The chemical insecticides used were organophosphates and pyrethroids; in parabiological control *Bacillus thuringiensis* var. *israelensis* and *Bacillus sphaericus* were used, and for biological control we introduced *Valencia hispanica* (Cuvier et Valenciennes, 1846) and *Aphanius iberus* (Cuvier et Valenciennes, 1846) increasing their geographical distribution, which is currently very restricted.

In order to improve control of the pest populations, our programme was directed against immature stages of *Culex (Culex) pipiens* Linnaeus, 1758.

In all cases the foci were reviewed before and after treatment to evaluate the efficiency of the treatment.

In this work we show the results of the study, giving some practical guidelines for control of populations of *Culex (Culex) pipiens* in urban habitats, which while effective also presents less risk to man and the environment.