

## Abstract

Laboratory and greenhouse experiments were carried out to identify the problems involved in rearing the whitefly, *Bemisia tabaci* Genn., and the parasitoid, *Eretmocerus mundus* Mercet, to investigate the effect of temperature on life history of both whitefly host and parasitoid, and to determine the proper ratio for parasitoid introduction.

The suitability of each of the four host plants (eggplant, *Lantana* shrubs, tobacco, tomato) used for rearing whiteflies and parasitoids was assessed according to its susceptibility to infestations by whiteflies, mites and fungi and according to the direct and indirect effect it exerted on the parasitoid. Accordingly, tomato proved to be the most suitable host plant.

Temperature exerted a profound effect on the various biological aspect of both whiteflies and parasitoids. An increase in temperature from 14 to 25 °C resulted in shortening the developmental period, the life span of adults and the preoviposition period, and in increasing the fecundity of both *B. tabaci* and *E. mundus*. Temperature, also, exerted different effects on alternation of the sex ratio in both host and parasitoid. However, at the two temperatures tested (14 and 25 °C), unfertilized eggs of both whiteflies and parasitoids produced only male progeny.

The proper ratio for controlling *B. tabaci* by *E. mundus* was 20:1 (one female parasitoid to every 20 3rd larval instar of whitefly). At this ratio the highest percentage of parasitization occurred