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Identification of parasitoids associated with *Bemisia tabaci* (Hemiptera: Aleyrodidae) on selected vegetable crops in the Batticaloa district

A Devanilogini[1*] and R F Niranjana[2]
1Department of Agricultural Engineering, Faculty of Agriculture, Eastern University, Sri Lanka
2Department of Agricultural Biology, Faculty of Agriculture, Eastern University, Sri Lanka

This study involved the identification of parasitoids associated with whitefly, *Bemisia tabaci* on selected vegetable crops in the Batticaloa district. Twenty leaves of whitefly infested chilli, *Capsicum annum* and manioc, *Manihot esculenta* were collected from each of the highly cultivated area in the Batticaloa district at weekly interval for the period of one month. Collected samples were precisely observed and the total nymphal instars and parasitized pupae of *Bemisia tabaci* were recorded for the estimation of parasitization. The parasitized pupae were kept with leaves in the parasitoid rearing vials until the emergence of adult parasitoid.

Four hundred and thirty three mounted slides of adult parasitoids were examined to identify the species based on their taxonomic characteristics. A number of different keys, reference collections, taxonomic catalogues and many descriptions were used in the identification. The parasitoid species that parasitized the *Bemisia tabaci* was *Encarsia guadeloupae* Viggiani. The parasitization rates of *Encarsia guadeloupae* on *Bemisia tabaci* associated with chilli and manioc were 53.13% and 42.42% respectively and there was no significant difference (P> 0.05) in the rate of parasitism between these two crops. Results of this study revealed that, the *Encarsia guadeloupae* has a great potential to suppress *Bemisia tabaci* on vegetable cultivation in the Batticaloa district.

*madura1983@yahoo.com Tel: 065-2240490