



## ASSESSMENT OF NATURAL ENEMIES AS POTENTIAL FOR BIOCONTROL OF *Scirtothrips dorsalis* HOOD (THYSANOPTERA: THIRIPIDAE) IN THE CARIBBEAN

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The Chilli Thrips, *Scirtothrips dorsalis* Hood (Thysanoptera: Thripidae) has been identified as an invasive pest in the Caribbean Islands and is considered to represent a significant threat to agriculture and trade. Chilli thrips is a polyphagous specie and has been documented to attack more than 100 recorded hosts from about 40 different families which include vegetable, fruit and ornamentals. In Barbados *S. dorsalis* was found to be a significant pest on cotton, chili pepper, *Capsicum chinense* L., and carrots. Chemical control is the common method of control used, having frequent applications. As a result, growers are facing problems as phytotoxicity, labour costs associated with frequent pesticide applications, re-entry periods into treated areas, arrival of new pests, and the occasional loss of an effective pesticide due to health hazards. In order to provide an efficient and sound method to suppress the population of the pest, biological control of *S. dorsalis* has been proposed as a solution to these problems (Heinz et al. 2004). The aim of this study was to determine the natural enemies' complex attacking chilli thrips in Barbados for later use as biological control agents. The evaluations were made in the Entomology Department, Ministry of Agriculture and Rural Development in Barbados. Sixteen (16) areas planted with "Sea Island Cotton" and chilli pepper were monitored weekly in order to determine the level of pest damage and the presence of natural enemies. The study was conducted for fourteen (14) months. The presence and frequency of biocontrol agents were registered. Adults and immature stages of the predators were collected. The species found were identified by experts from the British Museum of Natural History and the Lisandro Alvarado University, UCLA, in Venezuela. The natural enemies reported attacking the pest were identified as: *Orius insidiosus*, *Frankliniella vespiformis*, and *Chrysoperla externa*. In base of the results biocontrol is recommended to be considered a method of control of chilli thrips in the Caribbean.

**Key words:** Biocontrol agents, predators, Chilli thrips.