

## Effects of *Bemisia tabaci* and *Macrolophus pygmaeus* on morphophysiological traits of plants



*Whitefly, Predator, Zoophytophagy, Trophic interactions, Plant morphology*



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**Whiteflies** (*Hemiptera: Aleyrodidae*) are critical pests attacking many cultivated plants worldwide. Among them, *Bemisia tabaci* (Gennadius) is a global pest causing significant losses to a wide variety of crops by affecting plant development. To control *B. tabaci* infestations, the release of natural enemies has become increasingly important as an ecologically safe and effective biological control method, with the mirid bug *Macrolophus pygmaeus* (Rambur) playing a primary role.

However, due to its zoophytophagous habits, an improper application rate of this predator can also make it a threat to plants. Therefore, a better understanding of the role that *M. pygmaeus* plays in crops is needed. To address this, a study was conducted to assess the impact of whiteflies alone or combined with *M. pygmaeus* on vegetable solanaceous crops, with special emphasis on tomato and eggplant.

The main morphological (total height, dry weights, leaf area) and physiological (photosynthetic performance, indirect chlorophyll content) parameters of the plants were analyzed in different conditions (healthy plants, or infested by the pest, or with pest and predator together). At the experimental conditions and the insect densities adopted, results show a variable susceptibility by different plant species to *B. tabaci* and a significant reduction induced by *M. pygmaeus* in negative effects caused by the pest on morphophysiological traits of the plants.

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