>>> PRACTICE ABSTRACT 6 <<<

Can Macrolophus pygmaeus mediate teh damage caused by Bemisia tabaci on vegetable crops?

Whitefly, Predator, Zoophytophagy, Trophic interactions, Plant morphology

Italy

Today, pest management based mainly on biological control represents the most sustainable alternative to pesticide use. The whitefly Bemisia tabaci is one of the key pests negatively impacting the yield and quality of vegetable crops, while the predator Macrolophus pygmaeus is one of the main natural enemies widely used for its control, although it can sometimes behave as a pest, causing damage to plants.

This study analyzes M. pygmaeus's role as a plant feeder alongside the whitefly on potted eggplants in lab conditions. Results show no height differences between plants infested solely by the whitefly or by both insects compared to non-infested controls. However, plants infested solely by B. tabaci exhibit significant reductions in chlorophyll content, photosynthetic performance, leaf area, and shoot dry weight compared to those infested by both the pest and its predator or non-infested controls. Conversely, root area and dry weight experience greater reductions in plants exposed to both insects compared to those infested only by the whitefly or non-infested plants. These findings emphasize M. pygmaeus's significant role in mitigating B. tabaci damage to host plants, suggesting early release in greenhouse settings during infestations.

>>> READ MORE

https://www.mdpi.com/2075-4450/14/2/164

Alessia Farina, Giuseppe Eros Massimino Cocuzza, Pompeo Suma, Carmelo Rapisarda

NKB: Guadalupe López

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101000570

Virtigation