



VIRTIGATION – Emerging viral diseases in tomatoes and cucurbits: Implementation of mitigation strategies for durable disease management

Deliverable D5.1

Plant extracts with insecticidal effect identified

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1 PUBLISHABLE SUMMARY

As part of T5.1 to control the whitefly vector (*Bemisia tabaci*, MED-type), 12 different candidate plant extracts were tested against various developmental stages of whitefly under controlled laboratory conditions. All experiments were conducted on tomato host (cv. Moneymaker). Each experiment includes four treatments by spray application (hand sprayer) i.e., an untreated control, a positive control (Closer-Corteva), a negative control (water with all additives) and test treatment (water with active ingredient and additives) and four replicates were used for each treatment. Based on the evaluation under lab condition, except formulations F4A and F6, all other formulations were effective on adults. Most of the formulations did not perform well on egg stage. Formulations F1, F2 and F5 were also effective on nymph stages 1 and 2, and yet to be tested against nymph stages 3 and 4 (results expected in December 2022). Formulations F7 to F12 are yet to be tested against all nymph stages.

Based on the results available so far, at least 3 formulations (F1, F2 & F5) were identified to be effective on more than one of the developmental stages of whitefly. These 3 formulations will be sent to WP5 partners for testing under greenhouse conditions. During December 2022-January 2023 additional candidates could be shortlisted (and will be sent to partners) based on the scoring results on nymph stages.