

Greenhouse and Field Screening of Wild *Lycopersicon* Germplasm for Resistance to the Whitefly *Bemisia argentifolii*

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Thirty-two accessions of wild tomato (*Lycopersicon* spp.) germplasm were evaluated for resistance to the whitefly *Bemisia argentifolii* Bellows & Perring in a greenhouse choice bioassay. Density data were recorded for the adaxial and abaxial leaf surfaces for (i) all life stages of *B. argentifolii* and (ii) types I, IV, V and VI trichomes. Individual plant selections (33 from 22 wild tomato accessions) with high resistance were subsequently tested in the field to verify the resistance found in the greenhouse screening. Resistance was defined by the density of all life stages of the whitefly observed on the eight leaflets sampled at nodes 5 and 7. Only type IV trichomes had a consistent (but low) and significant negative correlation between trichome density and whitefly density for various life stages. The highest whitefly resistance was observed in *Lycopersicon pennellii* accessions LA 716, LA 1340 and LA 2560. The most resistant *L. hirsutum* f. *typicum* accessions were LA 1777 and LA 1353.

KEY WORDS: Silverleaf whitefly; *Bemisia tabaci*; sweetpotato whitefly; tobacco whitefly; host plant resistance; tomato resistance.

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