WHITEFLY PREFERENCE IN TOMATO

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Silverleaf whitefly (*Bemisia tabaci* Genn.) is one of the most important pest in tomato. *Bemisia tabaci* causes direct damage through feeding and indirect damage through virus transmission. Whitefly control is mainly based on pesticide applications, but a promising alternative is the use of whitefly-resistant plants. Resistance has been found in several accessions of tomato wild relatives, such as *Solanum peruvianum*, *S. habrochaites*, *S. cheesmanii*, *S. pennellii* and *S. pimpinellifolium*. The aim of this study was to evaluate preference of *B. tabaci* for a selected set of tomato genotypes and to identify the metabolites underling the preference behaviour. A dual choice assay was performed to test the preference. The variables analysed were adult settlement and the preference for oviposition. The metabolic profiling was carried out using gas chromatography-mass spectrometry, and the compounds were extracted from the leaf with dichloromethane. Non-preference for both adult settlement and oviposition was found in two accessions of *S. habrochaites* assessed and in the line FCN 93-6-2. More than 149 different secondary metabolites were detected in the tomato leaf samples. From those a few were found in higher/lower concentration in the group of plants that showed non-preference, indicating that these compounds may play a role in the choosing behaviour. The lines were genotyped using a recently developed Infinium array that contained 6000 SNP markers. From the genotypic data we could infer that the region providing the non-preference may be located on the chromosomes 6 and/or 11.