INDIRECT DEFENCE OF TOMATO PLANTS ATTACKED BY *Tetranychus evansi*
DEFESA INDIRETA EM TOMATEIROS ATACADOS POR *Tetranychus evansi*

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Plants employ an array of direct and indirect strategies of defence against herbivores. Direct defences usually consist of plant secondary metabolites such as proteinase inhibitors and alcaloids, or physical structures (i.e. trichomes and spines) that reduce herbivore feeding on plants. An example of indirect defence is the release of blends of volatile organic compounds induced after herbivory in plants. These volatiles help natural enemies to find plants infested with herbivores, resulting in a reduction of herbivore densities and plant damage. However, some herbivores have adapted to cope with plant defences. The red spider mite *Tetranychus evansi* has been found to suppress jasmonic acid and salicylic acid signalling pathways in attacked plants. This results in reduced levels of induced defences and higher herbivore performance on attacked plants, compared with induced plants. The plant hormones suppressed by *T. evansi* are involved in both direct and indirect defences in many plants, including tomato. We therefore investigated whether this spider mite also interferes with indirect plant defences. The induction of volatile organic compounds in tomato plants attacked by *T. evansi* and attraction of predatory mites to odours from infested plants were assessed. As a control, we included plants attacked by a strain of the closely related spider mite *T. urticae*, which is known to induce both direct and indirect plant defences. In olfactometer experiments, volatiles from tomato plants infested with *T. evansi* were not attractive to the predatory mites *Phytoseiulus macropilis*, *P. longipes* and *P. persimilis*, whereas volatiles from plants infested with *T. urticae* were significantly attractive to these predators. Identification of the volatile compounds released by the plants upon attack showed that *T. evansi* did not induce the production of compounds that are often observed in attractive blends from plants attacked by *T. urticae*. In conclusion, these results confirm the remarkable ability of *T. evansi* to manipulate the defence in tomato plants, thus decreasing the threat of natural enemies.

Palavras-chave: GC-MS, herbivore-induced plant volatiles, olfactometer
Financiamento: FAPEMIG, CNPq, CAPES, NWO