DETERMINATION OF VOLATILE ORGANIC COMPOUND PROFILES OF DIFFERENT COCONUT VARIETIES IN RELATION TO COCONUT MITE *Aceria guerreronis* INFESTATION

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Coconut mite (*Aceria guerreronis* Keifer) is a devastating pest in many coconut growing countries in the world. Infestation of the coconut mite has serious consequences on the economy and livelihood of people in the affected countries. Biological, chemical and physical management methods have been developed to manage the pest. However, there are issues on their practicability and cost. Therefore, cultivation of the coconut varieties which are resistant/ tolerant to coconut mite is a sustainable solution. Plant volatiles play a major role in their resistance to pest and diseases. Such information on coconut plants is scarce. This study was conducted to determine the differences in volatile compound profiles of young coconut fruits of four coconut varieties: Sri Lanka Green Dwarf and Ordinary Tall (putative susceptible varieties), and Sri Lanka Yellow Dwarf and *Gon Thembilli* (putative resistant varieties). The volatile profiles of 3-4 month old coconut fruits collected from uninfested and infested palms of the four varieties were compared to identify the changes following infestation by *A. guerreronis*. Furthermore, the volatile compounds were analyzed by using the GC-MS method. Differences in the volatile profiles were observed.

Keywords: *Aceria guerreronis*, Coconut, GC-MS, Host plant resistance, Plant volatiles