



Seventh Article: Sharing with another outside the specialization-Published

Article title	Interaction between biological aspects of <i>Tetranychus urticae</i> Koch (Acari:Tetranychidae) and some chemical composition in two colored <i>Acalypha wilkesiana</i> Müll. Arg. (Malpighiales: Euphorbiaceae) leaves.
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Abstract

Acalypha wilkesiana is considered a great tool for rearing *Tetranychus urticae* in the laboratory; it has two colors of leaves i.e., green and red. The leaf pigment content and some chemical properties were observed in this study to examine the correlation between the biology of *T. urticae* and the physio-biochemical features of the green and red leaves of *A. wilkesiana*. Results showed that *T. urticae* individuals achieved faster growth and a greater number of eggs deposited by females when feeding on *A. wilkesiana* with greener leaves, which contained higher levels of photosynthetic pigments (chlorophyll a and b, and total carotenoids). There was a significant positive correlation ($P \leq 0.05$) between *T. urticae* female hatchability, egg deposited/female, and daily rate with contents of total carbohydrate, total carotenoids, soluble sugars, chlorophyll a, and chlorophyll b. For male biology, there was a significant positive correlation ($P \leq 0.05$) between *T. urticae* male life span, immature stages, and life cycle with contents of total phenols, and anthocyanin. These results indicated the role of chemical components of *Acalypha* leaves in the biological aspects of *T. urticae*.