



Fourth Article: Sharing with another inside the specialization- Ppublished

Article title	Effectiveness of <i>Calotropis procera</i> (Apocynaceae) leaf extract and its fractionations against <i>Tetranychus urticae</i> (Acari: Tetranychidae)
Participants	Safar, S. H. M., Sayed, M. A., and El Sherif, D. F. Plant Protection Dept., Fac. of Agric., Fayoum Univ., Fayoum, Egypt
Article status	Sharing with another inside the specialization- Published in International Journal
The Journal	Persian Journal of Acarology, Vol 13(2): 335–348.

ABSTRACT

In this study, toxicity of crude leaf extract of *Calotropis procera* (Aiton) (Apocynaceae) was assessed against *Tetranychus urticae* Koch (Acari: Tetranychidae) in laboratory conditions using the spraying method. The LC50 values after 24 hours of treatment were calculated as 3608.73 and 2277.02 mg/L for female and male mites respectively. These amounts after 48 hours of treatment were 2456.98 and 1671.2 mg/L. Results showed that the incubation period, total immature and life cycle durations of *T. urticae* were prolonged under the influence of the *C. procera* extract. The fecundity and hatchability percentages were significantly lower (18.2 eggs/females and 94.38%) compared to control (44.73 eggs/females and 99.47%), respectively. The reduction rate of *T. urticae* at different stages after 1, 3, 7, and 14 days of spraying showed that *C. procera* had a positive impact on mite population reduction that recorded 94.84 and 100% for females and males 14 days post-treatment. The methanolic extract of *C. procera* leaves was separated into 18 fractions. The 10th fraction exhibited 67, and 73% mortality, 48 and-72 hours post-treatment, respectively. Seventeen substances were identified in this fraction by using the GC-MS. These findings suggest that the leaf extract of *C. procera* which contains different novel compounds has the potential to be used for controlling *T. urticae* in the future.

نائب رئيس الجامعة لشئون الدراسات العليا والبحوث
والمشرف على الكلية

أ.د/ عرفة صبرى حسن

رئيس القسم

أ.د/ أيمن أحمد عويس