

**PREDACIOUS MITES ATTACKING PESTS
INFESTING SOYBEAN AND PEANUT AT MENIA
AND BEHERA GOVERNORATES, EGYPT**

By

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B.Sc. Agric. Sci. (Plant Protection), Fac. Agric., Cairo Univ., 2008

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ABSTRACT

The targets of the present study are, to survey the most common predatory mites found on soybean and peanut plants at Menia and Behera governorates and identify the unknown mite species. Description of the immature stages of selected predators which have not been described before and biology of the most common predatory mite (*Typhlodromus athiasae* Porath and Swirski) was studied on the main pest (*Tetranychus urticae* Koch) associated with soybean and peanut under laboratory conditions.

The surveyed mite species belong to 4 suborders, 26 families and 57 genera. The total identified species associated with soybean and peanut plants were collected from El-Behera and El-Menia governorates during (2013 – 2015).

Studies included description of a new mite species of the genus *Asca* (Acari: Mesostigmata: Ascidae). Studies also included description of the immature stages of *T. athiasae* (Acari: Mesostigmata: Phytoseiidae).

Laboratory studies on some biological aspects of the predatory mite *T. athiasae* were undertaken, using different stages of the two-spotted spider mite *Tetranychus urticae* (eggs, immature and adult), on female fecundity. Significant differences were recorded on the fecundity of *T. athiasae* as the total no. of eggs were (27.56, 27.00 and 44.61), when fed on females, nymphs and eggs of *T. urticae*, respectively, and the daily laid eggs being were (1.06, 1.27 and 1.47), respectively.

The consumption rate showed that during life span were (169.61, 563.08 and 3399.8) on females, nymphs and eggs of *T. urticae*, respectively

The life table parameters showed that the intrinsic rate of natural increase (r_m) was (0.178, 0.177 and 0.191), the net reproductive rate (R_o) values averaged (19.56, 16.58 and 24.98) and the finite rates of increase (λ) were (1.194, 1.193 and 1.210). The mean generation time (T) were (16.75, 15.88 and 16.84 days), and the values of doubling time (DT) recorded (1.68, 1.70 and 1.58), when *T. athiasae* fed on females, nymphs and eggs of *T. urticae*, respectively.

Key words: *Tetranychus urticae* Koch, *Typhlodromus athiasae* Porath and Swirski, *Asca aegyptiaca* sp. nov, Soybean and Peanut plants.

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