

**Effect of plant nourishments on *Tetranychus urticae* Koch (Acari: Tetranychidae) abundance, in Watermelon Fields of Esfarayen region**

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**ABSTRACT**

Watermelon with a vast area of cultivation is one of the most important products of the North Khorasan Province and the city of Esfarayen. In these areas, *Tetranychus urticae* can be considered as one of the most important pests of this product; the uncontrolled use of chemical pesticides causes the population to become resistant to pesticides and remains; poisons are very important for their fresh food; Plant nutrition quality hosts a factor influencing pest growth and reproduction. In order to investigate the effect of nutrition in field conditions on different biological stages of *T. urticae*, an experiment in the form of a randomized complete block design with seven treatments (chicken manure, cow manure, sheep manure, NPK, NPK + Humic acid, Humic acid and control) in Three sampling times were performed in 2015 in Esfarayen city. The results showed that the largest population of *T. urticae* in chicken manure on biological stages (egg, larva, nymph and adult), respectively, with an average ( $34.1 \pm 27.12$ ,  $78.1 \pm 04.12$ ,  $35.1 \pm 04.8$  and  $69.1 \pm 73.12$ ) and the lowest number in the NPK + Humic acid fertilizer granulation in biological stages (egg, larva, nymph and adult), respectively ( $67.0 \pm 16.4$ ,  $55.0 \pm 88.2$ ,  $38.0 \pm 18.2$  and  $67.0 \pm 07.5$ ) was observed. The results of this research granular fertilizer treatment Humic acid and Humic acid + NPK granulated onion fields in order to control the two-spotted spider mite is considered.

**Keywords:** Watermelon, fertilizer, *Tetranychus urticae*, Population density, Nutrition.

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