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Study on biology, population fluctuations and rate of damages of yellow broad mite, *Polyphagotarsonemus latus* (Acari: Tarsonemidae), on different potato varieties in Jiroft

P. NAMVAR[1]* and M. ARBABI[2]

1- Agricultural Research Center of Jiroft

2- Iranian Research Institute of Plant Protection, Tehran

ABSTRACT

Yellow broad mite *Polyphagotarsonemus latus* is a serious pest in tropical area and glasshouses. In Iran this mite is recorded for the first time on potato plants in 2001 from Jiroft. Biology and population fluctuation of this mite have studied under controlled conditions (25±1°c, 70±10%^{Rh} and LD 14:10), on excised leaf. Duration of developmental stages including egg hatching, nymphal, quiescent and preoviposition periods were recorded as 1.32, 1.1, 1.12 and 1.3 days respectively. The longevity of male and female observed 7.9 and 9.76 days with mean fecundity of 30.53 eggs.

Population fluctuations of *P. latus* studied on six dominant cultivated potato varieties (Arinda, Diamond, Maradona, Primor, Agria and Concord (Ramos and Sante in 2nd year) through weekly sampling from September to February, along with intensity symptoms of injuries and rate of damages. Analysis of variances of collected data showed that, Arinda, Diamond and Primor in first year and Arinda, Maradona and Ramos in second year possessing higher mean density of mites on potato leaves while Agria and Concord in first year and Sante and Concord in the second year had the lowest mite populations. Maximum damages recorded for Arinda followed by Maradona, Diamond and lowest damages observed for Sante varieties According to DMRT method.

Key words: *Polyphagotarsonemus latus*, Biology, Population fluctuation, potato varieties, Damages, Jiroft

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* Corresponding author: peyman_namvar@yahoo.com

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Address of the authors: P. NAMVAR, Agricultural Research Center of Jiroft, Jiroft, Iran; M. ARBABI, Iranian Research Institute of Plant Protection, P. O. Box 1454, Tehran 19395, Iran.