

were placed in the round plastic Petri dishes (5 cm diameter) that filled with agar gel. The leaves were separately sprayed with methanolic extract of *M. azedarach* (80 mg/mL) and acetamiprid [70 mg/L (ai)] until run-off, using a hand-held sprayer. In control treatments, distilled water was used. The results indicated that there were no significant difference on the hatching time in the treatments ($P < 0.05$). The methanolic extract of *M. azedarach* (30.27 %) caused ovicidal effects which was not significantly different from mortality of eggs caused by acetamiprid (28.66 %). Also, the *M. azedarach* (5.32 %) significantly increased the percentage of nymphal development time. The highest mortality of nymphal instars was observed in *M. azedarach* (82.18 %), while the mortality of nymphs was significantly reduced in the acetamiprid (47.23 %). In addition, the percentage of pupal developmental duration (0.53 %) significantly increased in plant extract as compared with acetamiprid treatment ($P < 0.05$). The percentage of pupa mortality of the whitefly in methanolic extract (73.90 %) was significantly higher than in acetamiprid treatment (38.52 %). So, this plant extract on different stages of greenhouse whitefly could be affected on population dynamic of the pest.

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Evaluation of *Peganum harmala* (ethanolic extract) on the mortality and development time of *Thrips tabaci*

The onion thrips, *Thrips tabaci* Lindeman, is a polyphagous species with a world-wide distribution. It is major pest of vegetables and ornamentals in all over the world. That makes an attack on more than 300 agricultural plants and green houses. The major damages are due to break of leaf parenchyma cells and cells contents feeding. The resistance of the onion thrips to a wide range of insecticides both in green house and field crops was reported. In the experiment, the leaf discs of bean plants were placed on the agar gel (0.7 %) into the plastic Petri dishes (2 cm diameter). Ethanolic extract of *Peganum harmala* (with the 5 µg/ml concentration) was sprayed on the every bean leaf surface and then a larva (1 - 2 hours old) were placed on the every one of bean leaves. Ethanol (95 %) was used as control treatment. The results indicate the plant derived significantly increased the larva and pre pupa developmental time as compared to control treatment while, there was no significant difference on pupa developmental time in different treatments. The mean total percentage mortality of the thrips was 75 % during their development. The most mortality (%) was estimated during the pre pupa stage with a mean of 72.2 %. This plant extract with the low concentration (5µl/ml) can to manage this pest population by effect on the larva and pre pupa development time as well as mortality.

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Study of Influence deferent temperatures on some biological character of onion thrips *Trips tabaci* Lindemann

The main object of this study was to study the effects of deferent temperatures (20 - 25 - 30 °C) on some biological character of onion thrips *Trips tabaci* Lindeman. The egg hatching occurred in $9.11.39 \pm$ days in 20 °C, 7.4 ± 0.69 days in 25 °C and 2.24 ± 0.3 days in 30 °C. The first instars nymph development was completed in about $7.971.27 \pm$ days in 20 °C, 3.95 ± 0.41 days in 25 °C and 1.95 ± 0.41 in 30 °C. The second instars nymph development was completed in about 6.68 ± 1.02 days in 20 °C, 4.72 ± 0.75 days in 25 °C and 2.15 ± 0.54 in 30 °C. The prepupa development was completed in about 7.7 ± 1.70 days in 20 °C, $4.20.76 \pm$ days in 25 °C and $1.830.4 \pm$ in 30 °C. The pupa development was completed in about 4.9 ± 0.95 days in 20 °C, $2.88.022 \pm$ days in 25 °C and 1.86 ± 0.32 days in 30 °C. The generation development (on egg to adult emigration) was completed in about $36.391.43 \pm$ days in 20 °C, $20.520.62 \pm$ days in 25 °C and $10.021.65 \pm$ days in 30 °C.

The result showed that Development threshold \emptyset for egg is 17.4 °C and the Thermal constant (k) is 29.49 degree/day. The Development threshold for first instars nymph is 17.47 °C and the Thermal constant (k) is 25.46 degree/day. The Development threshold for second instars nymph is 16.56 °C and the Thermal constant (k) is 31.25 degree/day. The Development threshold for prepupa is 17.93 °C and the Thermal constant (k) is 32.8 degree/day. The Development threshold for pupa is 14.19 °C and the Thermal constant (k) is 30.30 degree/day. The Development threshold for on generation (on egg to adult emigration) is 18.33 °C and the Thermal constant (k) is 125 degree/day.