

Preliminary evaluation of mating disruption method for controlling pomegranate fruit moth, *Ectomyelois ceratoniae* Zeller (Lep.: Pyralidae)

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Pomegranate Fruit Moth (PFM), *Ectomyelois ceratoniae* (Lep.: Pyralidae), is the most important insect pest of pomegranate in Iran and other pomegranate producing countries. The pest oviposit into fruit crown and larvae penetrate into fruits directly. Reducing pest population density would result in decrementing pest damage on fruits. Mating disruption using PFM pheromone analog has offered the possibility of acceptable population decrease leading to its sustainable pest control. In the present study, the efficiency of mating disruption was evaluated for PFM control by using 500 g / h of ATGC Biotech (India) containing 2 % of the pheromone analog in Garmsar region, in 2018. The capture of monitoring traps and infection rate of fruits were monitored in mating disruption and control treatments. The monitoring traps in mating disruption treatment caught 0.021 moth /day / trap which was 77 % less compared with that in control treatment (0.092 moth /day / trap). Also, the rate of infested fruits in mating disruption treatment (6.2 ± 1.3 %) was 83 % less compared with that in control treatments (35.6 ± 4.7 %). Eventually, the percentage of fruit infestation rate in the control was 6 times more compared with that in mating disruption treatment, showing the efficiency of mating disruption to control the damage of PFM. Therefore, according to the results, mating disruption is efficient for reducing PFM damage and can be used in integrated pest management program of PFM.

Key words: Pomegranate, Pomegranate fruit moth, Pheromone, Mating disruption.