

عنوان مقاله:

The influence of different temperatures and relative humidity on *Trichogramma brassicae* Bezdenko., populations, a biological control agent, collected from pomegranate orchards, in Iran

محل انتشار:

پنجمین کنفرانس ملی و اولین کنفرانس بین المللی کشاورزی ارگانیک و مرسوم (سال: 1396)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Mitra Moezipour - *Department of Plant Protection, Agricultural and Natural Resources Research Center of Mazandaran. Sari, Iran*

Seyyed Hossein Goldansaz - *Department of Plant Protection, Faculty of Agriculture, University of Tehran, Karaj, Iran.Q*

Marjan Seiedy - *School of Biology and Center of Excellence in Phylogeny of Living Organisms, College of Science, University of Tehran, Tehran, Iran*

Mohammad Ahmadi - *Department of Natural Resources, College of Agricultural and Natural Resources, University of Mohaghegh Ardabili, Ardabil, Iran*

خلاصه مقاله:

The Carob moth, *Apomyelois* (*Ectomyelois*) *ceratoniae* (Zell), is one of the pests of Mediterranean origin where it is an economic and sometimes major pest of crops such as Carob. This pest is the key pest of pomegranate in Iran. Under natural conditions, Carob moth attacks to pomegranate from April in Iran but it is varied for different areas according to weather conditions. Because of certain problems in chemical control of this pest, the biological control, is of main interest. The egg parasitoid, *Trichogramma*, is used extensively around the world as a biological control agent for the control of lepidopterous pests. One purpose of this work was to collect native *Trichogramma* wasps from pomegranate orchards in Iran (Markazi and Yazd provinces). The collected wasps were determined as *Trichogramma brassicae* Bezdenko. The present study aimed to compare the fertility life tables of two native populations of *T. brassicae*, from pomegranate orchards, under different regimes of temperatures and relative humidity. Environmental factors, specially temperature and humidity are the effective factors on the efficiency of this wasp. So here, effect of temperature (20, 25 and 30C) on fertility life table parameters was investigated in laboratory conditions using Jackknife method. Life table assays revealed that temperature, had significant effects on the intrinsic rate of natural increase, for two populations. According to the highest value of r_m , 30C was determined as optimum temperature. So, the effect of three relative humidity on life table parameters was tested at 30C. The life table response experiment showed that relative humidity had significant effect on fertility life table parameters ($P0.0001$). The highest value of r_m was at 6510% RH. Survival curve analysis revealed that significant differences exist among the three temperatures for Saveh (Markazi province) population and for Yazd population. No significant differences were observed among the survival curves of relative humidity treatments for Yazd and Saveh populations. Regarding to the results of this study, we can focus on quality of environmental issues, as well as consider information pertaining to optimal release conditions of *T. brassicae* as an effective biological control agent. Temperature and humidity are two essential components of mass production facilities for consistent rearing of insects in field release programs. Because

of mass rearing of Trichogramma as a natural enemy in insectaries, our findings also are useful for mass production ... of parasitoids. Demographic parameters of Trichogramma

کلمات کلیدی:

Apomyelois (Ectomyelois) ceratoniae, Pomegranate, Trichogramma brassicae Bezdenko, Fertility life table, Intrinsic rate of natural increase

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/933049>

