

عنوان مقاله:

The Effect of Irrigation Regimes and N-Fertilizer Levels on Developmental Time and Parameters of Fecundity Life Table of *Spodoptera Exigua* (Hubner) on Sugar Beet

محل انتشار:

مجله بین المللی تحقیقات پیشرفته زیست شناختی و زیست پزشکی، دوره 5، شماره 3 (سال: 1396)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Roshanak Ghorbani - *Agriculture and Natural Resources Research Center of Lorestan, Iran*

Jahangir Khajehali - *Isfahan University of Technology, Iran*

خلاصه مقاله:

The beet armyworm, *Spodoptera exigua*, is one of the most important pests of sugar beet in Iran. The aim of this study was to determine the effect of water and nitrogen treatments of sugar beet planton developmental time and fecundity life table parameters of the pest. An experiment was carried out under laboratory conditions ($25 \pm 2^\circ\text{C}$, $70 \pm 5\%$ R.H. and 12L: 12D) on larvae reared on sugar beet leaves collected from different treated plants. Treatments consisted of three irrigation regimes, irrigation after 70, 105, 140 mm of cumulative evaporation from class A pan, and also three N-fertilizer levels, 200, 150, 100 kg/ha net nitrogen. The results showed that the longest larval and pupal developmental time, the lowest pupal weight and the shortest adult longevity were observed in 70 mm cumulative evaporation treatment. Additionally, the longest pupal developmental time, the lowest pupal weight and the shortest adult longevity were in 100 kg/ha net nitrogen treatment. Larvae reared on leaves collected from 105 mm cumulative evaporation and 200 kg/ha net nitrogen treatment resulted in the highest intrinsic rate of increase (rm), net reproductive rate (Ro), gross reproductive rate (G. R. R.), finite rate of increase (λ), the shortest mean generation time (T) and doubling time (t). This indicated that moderate drought stress and the highest amount of nitrogen fertilizer may increase the population density of the pest

کلمات کلیدی:

irrigation regimes, *Spodoptera exigua*, sugar beet

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1804498>

