

عنوان مقاله:

Effect of Different Temperatures and Hosts on Biology of the European Corn Borer, Ostrinia nubilalis(Hübner), in Laboratory Conditions

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خلاصه مقاله:

The European corn borer Ostrinia nubilalis (Hübner), as a worldwide corn pest, causes serious damages. In the present study, some biological aspects of O. nubilalis were investigated on three different host plants including corn stalks, potato, and soybean stems, and a specific semi-artificial diet. Once appropriate host was selected, developmental rates of eggs, larval and pupal stages as well as moth emergence, longevity, and female fecundity were determined at four constant temperatures (Yo, YF, YA, and YY±1)°C). The relationship between temperature and developmental rate was estimated with two linear models under laboratory condition (Yo-Ao% RH and a photoperiod of IFL:AD hour). Results showed significant differences between studied foods, such that corn stalk sections and semi-artificial diet were appropriate host for O. nubilalis compared to the other two hosts. It was also revealed that optimum temperature for growth of this pest was YA°C. Lower developmental threshold estimated by traditional and lkemoto-Takai linear models for whole immature stages were about \mathfrak{A} and $\mathfrak{ho}^\circ C$, and thermal constants were FYM and FMN degree day (DD), respectively. Compared to previous studies, these values were similar in the immature stages, except for the larval stage, which could indicate the importance of nutrition and role of the plant host in temperature *...* requirements

کلمات کلیدی:

.Corn pest, Host plant, Artificial diet, Temperature requirements, Linear models

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