

عنوان مقاله:

Performance Evaluation of *Spodoptera exigua* (Lepidoptera: Noctuidae) Larvae on 10 Sugar Beet Genotypes Using Nutritional Indices

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خلاصه مقاله:

The aim of this study was to evaluate the effect of ten different sugar beet genotypes on nutritional indices of the beet army worm, *Spodoptera exigua* (Hübner) (Lep.: Noctuidae) at $25 \pm 1^\circ\text{C}$, $60 \pm 5\%$ RH and a photoperiod of 16:8 (L: D) hour. The sugar beets evaluated in this study included two sugar beet cultivars (HM 1339 RZ and SBS1006), five populations (SB26, SB27, SB29, SB33, SB34), one hybrid ($(\gamma 112^*SB36)^*Sh-1-HSF-5$) and two lines (FC 301 and FC 220). Fourth instar larvae reared on $(\gamma 112^*SB36)^*Sh-1-HSF-5$ showed the highest Relative Growth Rate (RGR) of 0.31 mg mg⁻¹ day⁻¹, Relative Consumption Rate (RCR) of 4.79 mg mg⁻¹ day⁻¹ and Approximate Digestibility (AD) value of 94.35% compared with the other host plants. The lowest value of RCR (0.81 mg mg⁻¹ day⁻¹) was on SBS1006. The Efficiency of Conversion of Ingested food (ECI) was varied from 1.80% on FC 220 to 9.14% on SB34. The highest AD value of fifth instar (92.63%) was on $(\gamma 112^*SB36)^*Sh-1-HSF-5$ and the lowest value of this index was recorded on SB27 (83.71%). The highest AD value of whole larval instars was noted in $(\gamma 112^*SB36)^*Sh-1-HSF-5$ (93.73%). The lowest value of RCR (1.78 mg mg⁻¹ day⁻¹) was found on SB27. The heaviest pre-pupa (81.01 mg), pupa (72.55 mg) and wet adults (19.14 mg) of beet armyworm were recorded on $(\gamma 112^*SB36)^*Sh-1-HSF-5$. The results indicated that $(\gamma 112^*SB36)^*Sh-1-HSF-5$ was the most suitable host for *S. exigua* that should be considered in cultivation or breeding programs.

کلمات کلیدی:

Antibiosis, beet armyworm, Food Consumption, Insect weight

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