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Comparative Performance of *Helicoverpa Armigera* Hübner (Lepidoptera: Noctuidae) on Chickpea and Faba Bean

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Abstract

Helicoverpa armigera Hübner (Lepidoptera: Noctuidae) is one of the most economically important agricultural pests of chickpea in Asia and Africa. Foundational to the development of IPM programs is a thorough understanding of pest species biology and ecology.Life table analysis is a valuable tool for understanding how insect growth, developmental time, reproductive capacity, life expectancy, and survival of insect populations contribute to overall population dynamics. Since, chickpea and faba bean are two of the most preferred hosts by *H. armigera*, the construction of life tables, and an improved knowledge of the life cycle will be valuable in developing improved IPM programs for these crops. Specifically, these data will be useful for forecasting pest incidence and the timing of insecticide applications to maintain low infestation levels. Moreover, efficient, economically feasible and ecologically viable IPM strategy begun from better understanding of *H. armigera* biology. However, there is no detailed work on the life table parameters of *H. armigera* on chickpea and faba bean plants. Therefore, the present study was conducted to better understand the life cycle of *H. armigera* reared on chickpea and faba bean under laboratory conditions via the development of age-stage life tables. The results of life table study indicated that the highest survival rate was during the late larval instar on both hosts followed by early instars. High mortality was during prepupal stage on chickpea and during the 5^{th} larval instar on faba bean. Total larval period was 15.8 days on chickpea and 15.1 days on faba bean. Larvae reared on chickpea exhibited the longest (14.9 days) period of mean total pupal and pre-oviposition durations. Maximum fecundity and eggs viability were recorded from insect reared on chickpea. The current result revealed that chickpea was the most suitable host for reproduction and survival of *H. armigera* than faba bean under laboratory condition.

Keywords: Chickpea, Faba bean, *Helicoverpa armigera*, IPM, Legumes, Life tables

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