

**BIOLOGY OF COTTON BOLLWORM, HELIOTHIS ARMIGERA  
(LEPIDOPTERA : NOCTUIDAE) UNDER LABORATORY CONDITIONS**

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**ABSTRACT**

Study of the biology of Heliiothis armigera (Hb) under laboratory conditions reveals that a female lays on an average 877 eggs. The mean incubation period of eggs was 4.5 days. Larval period was completed on an average in 20.3 days. Pre-pupal stage lasted for 3.6 days. The male and female completed their pupal stages in 20.1 and 19.4 days respectively. The pre-oviposition, oviposition, and post-oviposition periods of female were 4.3, 7.2 and 2.4 days respectively. The male and female adults lived for 13.2 and 13.5 days respectively. The average duration of its life cycle was found to be 65.4 days.

**INTRODUCTION**

In general many insect pests attacking cotton crop would adversely affect its production. Among those, the bollworm, Heliiothis armigera (Hb) is more important, because in early stage of the crop it damages its leaves and flowers, and later, its bolls. This insect is polyphagous in nature; and in addition to cotton, it also attacks pulses (Gram), maize, sorghum, millet, ground nuts, bean, peas, tomatoe, potatoe, sunflower, tobacco, lucern, alfalfa and many other vegetable and field crops.

According to Riper and George (1) a female of Heliiothis armigera laid 750 to 1000 eggs in her life time, the egg stage ranged from 3 - 4 days, and the six larval instars completed their development in 15.5 days; while Stoeva (2) stated that the larval life varied from generation to generation. He recorded 24 - 36 days in the first generation and 16 - 30 days in the second generation. On the other hand, Öngören et al (3) reported that at 22°C and 28°C 65 - 70 % R.H. the larval stage lasted for 26.2 and 13.5 days respectively.

The adult males of this insect survived for 11.0 days and the females for 10.6 days as reported by Reed (4), while according to Öngören et al (3) the male adults lived for 6.9 and 7.6