

Effect of *Bt* and BGII Cotton Hybrids on some Biological Parameters of *Spodoptera litura* (Lepidoptera: Noctuidae)

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ABSTRACT

After introduction of *Bt* cotton (Cry 1Ac), *H. armigera* was controlled. But, after that another foliage pest *Spodoptera litura* (Fabricius) became serious. To combat the menace of *S. litura*, BGII cotton (Cry 2Ab) was introduced. To test the effectiveness of BGII genotypes against *S. litura*, six genotypes viz., Ankur Jai BGII, Ankur Jai *Bt*, Ankur Jai non *Bt*, RCH 134 BGII, RCH 134*Bt* and RCH 134 non *Bt* were used. Fresh leaves of genotypes were fed to first instar of *S. litura* to observe larval survival. At 60, 90 days after sowing of crop (DAS) larval survival was lowest on Ankur Jai BGII (5.00 and 13.33 %) and RCH 134 BGII (6.67 and 11.67 %) genotypes. But survival of first instar was observed increasing after 120 DAS. Effect of middle leaves was also observed on various biological parameters like larval period (days), larval weight (mg), larval survival (%), pupal period (days), pupal weight (mg), adult emergence (%) and fecundity of third instar larvae of *S. litura*. The BGII genotypes were observed effective against *S. litura* up to 60 and 90 DAS but at 120 DAS effectiveness observed decreasing. Whether, the parameters observed increasing at 120 DAS on BGII genotypes but they were not equal to *Bt* and non *Bt* genotypes. At 140 DAS, mortality of larvae again increased may be due to combined effect of Cry 2Ab and aging of the crop.

Keywords: *Spodoptera litura*, cotton, larval survival