

# **Influence of Weather Parameters on the Incidence of American Bollworm, *Helicoverpa Armigera* (Hubner) on *Bt* and non-*Bt* Varietal Cottons**

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## **ABSTRACT**

Studies on impact of weather parameters on the incidence of American bollworm, *Helicoverpa armigera* (Hubner) on *Bt* and non-*Bt* varietal cottons were carried out at Department of Entomology, Agricultural College, Bapatla in collaboration with Regional Agricultural Research Station, Lam, Guntur during two seasons, *kharif* 2009-10 and *kharif* 2010-11. American bollworm larval population was completely absent on stacked *Bt* cotton hybrids (RCH 2 BG II and Mallika BG II) compared to higher larval population (0.04-0.42 larvae/plant) in L 604 non-*Bt* during 40<sup>th</sup> (Oct.1-7)-52<sup>nd</sup> (Dec.24-31) std. weeks with its peak (0.42 larvae/plant) during both 45<sup>th</sup> and 46<sup>th</sup> std. weeks. The favourable weather parameters that influences the build up of high population of American bollworm (44<sup>th</sup> to 46<sup>th</sup> std. weeks) are in the range of maximum and minimum temperatures 29-32 and 21-23°C, morning and evening relative humidities 87-91 and 71-87 per cent, and the rainfall 24-28 mm. Evening relative humidity exerted highly significant positive ( $r=0.699^{**}$ ) influence on the American bollworm incidence in L 604 non-*Bt*. All the weather variables *viz.*, maximum and minimum temperatures, morning and evening relative humidities, and rainfall) together contributed to 56.3 per cent variation in American bollworm larval population non-significantly ( $R^2=0.563$ ) in L 604 non-*Bt*.

**Key words :** American bollworm, *Bt* and non-*Bt* varietal cottons, Weather parameters.