Impact of Weather Parameters on the Incidence of Pink Bollworm, *Pectinophora gossypiella* (Saunders) on *Bt* and non-*Bt* Varietal Cottons

Y Rajasekhar, P V Krishnayya, N V V S D Prasad, V Manoj Kumar and V Srinivasa Rao
Department of Entomology, Agricultural College, Bapatla 522 101, Guntur dist, Andhra Pradesh

ABSTRACT

Studies on impact of weather parameters on the incidence of pink bollworm, *Pectinophora gossypiella* (Saunders) on *Bt* and non-*Bt* varietal cottons were carried out under Department of Entomology, Agricultural College, Bapatla at Regional Agricultural Research Station, Lam, Guntur during two seasons, *kharif* 2009-10 and *kharif* 2010-11. Pink bollworm larval population and their damage to locules was completely absent on stacked *Bt* cotton hybrids (RCH 2 BG II and Mallika BG II) compared to high larval population (0.50-11.50 larvae/25 green bolls) and locule damage (0.51-18.59% /25 green bolls) in non-*Bt* (L 604) during 49th (Dec. 3-9)- 8th (Feb.19-25) std. weeks with its peak (11.50 larvae and 18.59 per cent) during 8th std. week. The favourable weather parameters that influences the build up of high population of pink bollworm (6th to 8th std. weeks) are in the range of maximum and minimum temperatures 31-33 and 17-19^{o}C, morning and evening relative humidities 82-92 and 42-56 per cent, and the rainfall 0-4 mm. Maximum temperature and evening relative humidity exerted significant positive (r= 0.673**) and significant negative influence (r= -600*) on the pink bollworm incidence in L 604 non-*Bt,* respectively. All the weather variables (*viz.,* maximum and minimum temperatures, morning and evening relative humidities, and rainfall) together contributed to 68.7 per cent variation in pink bollworm larval population significantly (R^2=0.687*) in L 604 non-*Bt*. Of the five variables, minimum temperature was found to have significant influence on variation of larval population.

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