

Population Dynamics and Influence of Weather Parameters on the Incidence of Cotton Leafhoppers, *Amrasca biguttula biguttula* (Ishida)

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ABSTRACT

Studies on population dynamics and influence of weather parameters on the incidence of cotton leafhoppers, *Amrasca biguttula biguttula* (Ishida) 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. The leafhopper population was higher during 39th to 46th standard weeks with peak population (no./3 leaves/plant) of 13.64 (42nd std. week) in RCH 2 BG II, 6.92 (44th std. week) in Mallika BG II and 8.75 (41st std. week) in L 604 non-*Bt*. The favourable weather parameters that influences the build up of high population of leafhoppers (39th to 46th std. weeks) are in the range of maximum and minimum temperatures 29-35 and 21-25°C, morning and evening relative humidities 77 to 91 and 55-87 per cent, and the rainfall 3 to 39 mm. The population of leafhoppers showed strong significant positive correlation with maximum and minimum temperatures ($r=0.487^{**}$ and 0.740^{**}), evening relative humidity ($r=0.555^{**}$) and rainfall ($r=0.358^{**}$), while a significant and negative association with morning relative humidity ($r= -0.334^{*}$). The multiple linear regression analysis indicated that all the weather variables together contributed to 57.2 per cent variation in leafhoppers population significantly ($R^2=0.572^{*}$). However none of these variables exerted significant influence on the variation of leafhopper population independently

Key words : Leafhoppers, Population dynamics, Weather parameters.