

Impact of Different Levels of Nitrogen on the Incidence of Various Sucking Insect Pests of Bollgaurd II Cotton

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ABSTRACT

Nitrogen is one of the most frequently used chemical fertilizer to improve plant production, productivity and it also influences dynamics of herbivores in terms of development and reproduction. A field study was conducted at Regional Agricultural Research Station, Lam, Guntur during 2013 *Kharif* to investigate the impact of nitrogen in BG II cotton hybrid Jaadu at different levels; 120, 150, 180, 225, 280, 350 and 440 kg N ha⁻¹ on the incidence of cotton insect pests *viz.*, aphid, leafhopper, thrips and whitefly along with natural enemies *viz.*, spiders and coccinellids. Results obtained from the study indicated that the mean populations of aphids (42.54), leafhoppers (6.52), thrips (1.44) and whiteflies (1.83) were more at higher nitrogen applied treatments than at lower treatments. Among the sucking pests only leafhoppers and aphids crossed the ETL at various stages of crop growth. The peak incidence of leafhoppers and aphids was observed at 48 DAS and 97 DAS respectively. The populations of thrips and whiteflies were below ETL throughout the season. Significant positive correlations were observed between the sucking insect pests and nitrogen levels. The natural enemies populations were found to have direct relation with sucking insect pest population.

Key words : *Bt* hybrid, ETL, Natural enemies, Nitrogen levels, Sucking pests.