

Effect of Manures and Biopesticides on Growth, Yield and Fibre Quality of Cotton (*Gossypium Hirsutum L.*)

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ABSTRACT

A field experiment was conducted on fixed site during three consecutive kharif seasons of 2006-08 in vertisols of Regional Agricultural Research station, Nandyal, Andhra Pradesh . The experiment was laid out in split plot design with plant protection measures main plots and sources of nutrients as sub plots and replicated thrice. The treatments were imposed on same site for three years. The main plot treatments consisted of plant protection with chemicals and plant protection with bio pesticides. The sub plot treatments were FYM 10 t ha⁻¹, vermicompost 2.5 t ha⁻¹, green manure @15 kg ha⁻¹, FYM @ 5 t ha⁻¹ + vermicompost @ 1.25 t ha⁻¹, FYM @ 5 t ha⁻¹ + green manure @15 kg ha⁻¹, vermicompost @1.25 t ha⁻¹ + green manure @15 kg ha⁻¹, FYM 3.3 t ha⁻¹ + vermicompost 0.85 t ha⁻¹+ green manure @ 15 kg ha⁻¹, Recommended dose of fertilizer (40-20-20 kg NPK ha⁻¹) and control i.e. no application of either chemical or organic fertilizers. The results indicated that, plant protection either with chemicals or bio pesticides did not significantly influence the growth, yield and quality of cotton. Application of nutrients either with fertilizers or organic manures like FYM ,vermicompost,or green manure either singly or in combination on equal nutrient basis as that of recommended fertilizer dose recorded similar kapas yield. Increased uptake of NPK was observed with application of recommended dose of fertilizers compared to manures in the first year. In the succeeding year, cotton supplied with only organic manures recorded nutrient uptake on par with chemical fertiliser.

Key words : Bio pesticides, Growth, Hirsutum cotton, Manure, Quality, Yield.