

Effect of Nitrogen, Phosphorus and Biofertilizer Management on Growth and Yield of Pearl Millet [*Pennisetum Glaucum* (L.) R. Br.] *

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ABSTRACT

A field experiment was conducted at the Agricultural College Farm, Bapatla, to study the effect of N, P and biofertilizer management practices on growth, and yield of pearl millet. The treatments consisted of T₁: Control, T₂: Biofertilizer alone (Azospirillum and PSB), T₃: 20 kg N + 15 kg P₂O₅ ha⁻¹, T₄: 40 kg N + 30 kg P₂O₅ ha⁻¹, T₅: 60 kg N + 45 kg P₂O₅ ha⁻¹, T₆: T₂ + T₃, T₇: T₂ + T₄ and T₈: T₂ + T₅. Application of 60 kg N + 45 kg P₂O₅ ha⁻¹ + biofertilizer recorded the highest plant height (201.1 cm) but recorded the lowest days to attain 50% flowering. All the yield attributes viz., number of earheads m⁻², length of earhead (cm), number of grain rows earhead⁻¹, number of filled grains row⁻¹ and test weight (g/1000 grains) were significantly influenced by different treatments under test. Highest number of earheads m⁻² (33.6), length of earhead (25.0 cm), grain rows earhead⁻¹ (32.0) and number of filled grains row⁻¹ (87.4) were recorded with T₈ treatment (60 kg N + 45 kg P₂O₅ ha⁻¹ + biofertilizer) which was at a par with T₇ treatment (40 kg N + 30 kg P₂O₅ ha⁻¹ + biofertilizer). Highest value of test weight (9.3 g/1000 grains) and harvest index (31.8%) was recorded with T₇ treatment being at par with T₈ treatment and proved significantly superior to control. Significantly highest grain (29.7 q ha⁻¹) and stover (67.5 q ha⁻¹) yield recorded with T₈ treatment.

Key words : *Azospirillum*, Nitrogen, Pearl millet, Phosphorus, PSB, Yield.