

Effect of N, P and K Application on Growth and Yield of Machine Transplanted Rice

G Lakshmi Bhavani, Ch Pulla Rao, M Srinivas and P R K Prasad

Department of Agronomy, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

A field experiment was conducted during *khariif* 2014 under canal irrigation at Andhra Pradesh Rice Research Institute & Regional Agricultural Research Station, Maruteru, West Godavari (Dist.) of Godavari agroclimatic zone, to study “Effect of N, P and K application on growth and yield of machine transplanted rice.” The experiment was laid out in factorial randomized block design and replicated thrice. The results of the present investigation showed that application of graded levels of nitrogen only increased the growth, yield attributes and yield of rice but not with the application of phosphorus and potassium. Increase in level of nitrogen significantly increased the grain and straw yields of rice upto 120 kg N ha⁻¹. While, further increase to 150 kg N ha⁻¹ resulted in significant reduction in yields. A significant interaction between N and K on yield attributes and yield (kg ha⁻¹) and rest of the interactions were remained non significant. Among the nutrient combinations tested, application of 120- 90-90 kg N-P₂O₅ -K₂O ha⁻¹ followed by 120- 90-60 kg N-P₂O₅ -K₂O ha⁻¹ for machine transplanted rice will be more beneficial in achieving higher grain yield and profitability.

Key words : Machine transplanted rice, Nutrient, N, P, and K, Rice, Yield.