

Studies on Growth and Yield of Rice as Influenced by Phosphorus Management Practices

M Venkata Lakshmi, Ch Pulla Rao, P V N Prasad, P Prasuna Rani and Y Ashoka Rani

Department of Agronomy, Agricultural College, Bapatla, A.P.

ABSTRACT

A field experiment was conducted during *kharif* 2016-17 and 2017-18 respectively on sandy loam soils at Agricultural College Farm Bapatla to study the yield and growth attributes of rice as influenced by phosphorus management practices. The experiment was laid out in a split plot design in *kharif* rice were replicated thrice. The treatments consisted of four main plots sources of phosphorus and three subplots levels of phosphorus. Results of the experiment showed that application of *in-situ* green manuring + PSB showed superior performance in terms of yield and growth characters like plant height, total number of tillers m^{-2} , drymatter accumulation of rice and other parameters studied, but was on a par with that of application of *in-situ* green manuring and significantly superior over inorganic fertilizer through SSP and biofertilizer (PSB) during both the years and pooled data. At all the growth stages, among the phosphorus levels, 150 % RDP showed significantly higher plant height, number of tillers m^{-2} , drymatter accumulation (kg ha^{-1}) and yield over 50 % RDP and it was on a par with 100 % RDP during both years of study and in pooled data.

Key words: *Phosphorus sources and levels, Rice, Yield and Growth characters*