Performance of Rice Crop as Influenced by Green Manures and Phosphorus Levels

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ABSTRACT

A field experiments was conducted during *kharif* 2015 and 2016 to study the effect of green manures and phosphorus levels in rice crop at Agricultural College Farm, Bapatla. The experiment was conducted in split plot design on sandy clay loam soil with three main treatments and three sub-treatments. The treatments consisted of *dhaincha* green manure crop, sunnhemp green manure crop and without green manure as main plot treatments and three phosphorus levels to rice crop @ 45 kg P_2O_5 ha^{-1}, 60 kg P_2O_5 ha^{-1} and 75 kg P_2O_5 ha^{-1} as sub- plot treatments during *kharif* season. Green manure incorporation significantly influenced the growth parameters, yield attributes and yield of rice. Significantly the highest grain yield of rice was recorded with *dhaincha* green manure incorporated treatment (5592 and 5587 kg ha^{-1}) when compared to control (5049 and 5003 kg ha^{-1}). Among the phosphorus levels applied to rice crop the highest grain yield (5545 and 5567 kg ha^{-1}) was recorded with 75 kg P_2O_5 ha^{-1} and it was on a par with 60 kg P_2O_5 ha^{-1} during both the years of study.