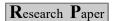


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## Yield and economics of rice crop as influenced by green manures and phosphorus levels

ABSTRACT: A field experiment was conducted during Kharif 2015 and 2016 to study the effect of

green manures and phosphorus levels to 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 during Kharif season and three phosphorus levels

to rice crop @ 45 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup>, 60 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup> and 75 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup> as sub-plot treatments. Significantly

the highest grain yield of rice was recorded with Dhaincha green manure incorporated treatment (5592

and 5587 kg ha<sup>-1</sup>) when compared to control. Among the phosphorus levels applied to rice crop the highest grain yield (5545 and 5567 kg ha<sup>-1</sup>) was recorded with 75 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup> and it was on a par with 60 kg P<sub>2</sub>O<sub>5</sub> ha<sup>-1</sup> during both the years of study. *Dhaincha* green manure incorporation to rice crop recorded maximum gross returns (Rs. 88724 and Rs. 88703), net returns (Rs. 36024 and Rs. 36003) and benefit cost ratio (1.68 and 1.7) and significantly the maximum gross returns (Rs. 88014 and Rs. 88443), net returns (Rs. 35005 and Rs. 34585), benefit cost ratio (1.67 and 1.7) were observed, which received

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75 kg  $P_2O_5$  ha<sup>-1</sup> treatment during both the years of study. **KEY WORDS**: Sunnhemp, Dhaincha, Phosphorus

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