

# Crop Residue Management in Rice-Rice Cropping System of Godavari Delta

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## ABSTRACT

Crop residues are good source of nutrients and are important component for sustainable Integrated Nutrient Management. In rice-rice growing areas, after *kharif* disposal of straw is a major problem for *rabi* rice crop. A field experiment was conducted during different seasons of *kharif* and *rabi* in consecutive two years with six treatments at APRRI & RARS, Maruteru viz., T1:Straw removed,T2:Straw (5 t ha<sup>-1</sup>) burnt and ash incorporated, T3:Straw (5 t ha<sup>-1</sup>) incorporated 20 days before planting rice,T4:Straw (5 t ha<sup>-1</sup>) incorporated 20 days before planting along with 25 % N of RDF ( as urea – N ) applied at the time of incorporation of straw,T5:Straw ( 5 t ha<sup>-1</sup>) incorporated 20 days before planting along with green manure applied @ 5 t ha<sup>-1</sup> at incorporation, T6: Straw incorporated @ 5 t ha<sup>-1</sup> 20 days before planting after microbial inoculation. The results revealed that the application of straw @ 5 t ha<sup>-1</sup> incorporated 20 days before planting along with GM 5 t ha<sup>-1</sup> (T<sub>5</sub>) recording the higher grain yield of 5972 kg ha<sup>-1</sup> during *kharif*, 7035 kg ha<sup>-1</sup> during *rabi* 2010-11 and 5073 kg ha<sup>-1</sup>during *kharif*, 5039 kg ha<sup>-1</sup>during *rabi* 2011-12, among different methods of straw incorporation. Similarly, content & uptake of nutrients and nutrient status in the post harvested soil were significantly higher with T<sub>5</sub> compared to other treatments during both the seasons of 2007 & 2008. It was followed by the treatment with incorporation of straw (5 t ha<sup>-1</sup>) 20 days before planting along with 25 % RDN as urea applied at the time of incorporation of straw. The lower grain yield as well as content & uptake of nutrients and nutrient status in the post harvested soil were recorded in treatment T<sub>3</sub> (Straw @5 t ha<sup>-1</sup>, 20 days before planting).