

# **Influence of Nitrogen Management Practices with *Glyricidia* Leaf Manure on Yield and Nutrient uptake of Rice (*Oryza sativa* L.)**

**N Venkata Lakshmi, R Veeraraghavaiah, G Subbaiah, Y Ashoka Rani and P Ravindra Babu**

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

## **ABSTRACT**

Field experiments were conducted during *kharif* seasons of 2007-08 and 2008-09 on sandy clay loam soils of Agricultural College Farm, Bapatla to study the economics and productivity of rice with different levels of nitrogen (120, 180, 240 kg N ha<sup>-1</sup>) and in combination with *Glyricidia* leaf manure @ 10 t ha<sup>-1</sup>. The study revealed that application of 240 kg N ha<sup>-1</sup> + *Glyricidia* leaf manure (GLM) @ 10 t ha<sup>-1</sup> recorded significantly higher yield components and yield of rice and found on a par with that of application of 240 kg N ha<sup>-1</sup> alone and 180 kg N ha<sup>-1</sup>+ GLM @ 10 t ha<sup>-1</sup>, showing the benefit of GLM to a tune of 60 kg N ha<sup>-1</sup> in enhancing the yield of rice during both the years of the study. Across the treatments, application of 240 kg N ha<sup>-1</sup> with GLM resulted in significantly higher NPK uptake (162.2, 22.7, 201.7 kg N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O ha<sup>-1</sup>), during *kharif*, 2007 and during *kharif*, 2008 145.2, 15.3, 157.2 kg N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O ha<sup>-1</sup>, compared to that of 120 kg N ha<sup>-1</sup> with or without GLM and 180 kg N ha<sup>-1</sup> application alone. The status of available NPK in the soil was significantly higher in the plots, which received N levels along with GLM @ 10 t ha<sup>-1</sup> than that of fertilizer N alone during both the years of the study.

**Key words :** *Glyricidia* leaf manure, Nitrogen levels, Rice.