

## Effect of graded nutrient levels and time of nitrogen application on performance of rice under SRI

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### SUMMARY

Field experiments were conducted for two consecutive *Kharif* seasons of 2005 and 2006 at Agricultural College farm, Naira, Srikakulam district, A.P. on sandy clay loam soil with an objective of optimization of agro-techniques for higher productivity of rice under SRI in North Coastal Zone of Andhra Pradesh. The treatments comprised of four graded nutrient levels assigned to main plots and four time of nitrogen application practices assigned to sub plots tried in split plot design. The highest stature of growth, yield attributes, lesser spikelet sterility, higher grain yield and more returns were obtained with the application of 100-50-50 kg ha<sup>-1</sup> N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O and these parameters were at their minimum with the supply of 60-30-30 kg ha<sup>-1</sup> of N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O. The increase in yield with supply of 100-50-50 kg ha<sup>-1</sup> N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O (N<sub>3</sub>), compared to supply of 60-30-30 kg ha<sup>-1</sup> N, P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O (N<sub>1</sub>) was 15.1 and 15.4 per cent, during 2006 and 2007, respectively. Similarly, the highest stature of growth, yield attributes, lesser spikelet sterility, higher grain yield and more returns were produced with the supply of nitrogen fertilization in three splits as 1/3 basal + 1/3 at active tillering + 1/3 at panicle initiation (T<sub>1</sub>). While these parameters were the lowest with split application of nitrogen dose as 1/2 at active tillering + 1/2 at panicle initiation without basal application (T<sub>2</sub>) and increase in yield with (T<sub>1</sub>) compared to (T<sub>2</sub>) was 10.6 and 14.4 per cent, during 2006 and 2007, respectively under SRI.

**Key Words :** Rice, SRI, Graded levels of nutrients, Time of N application, Yield attributes, Grain yield, Returns

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