

# Effect of Nano Urea on Growth and Yield of Direct Seeded Rice in North Coastal Zone of Andhra Pradesh

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## ABSTRACT

The field experiment was conducted in sandy clay loam soils to test the effect of nano urea on the performance of direct seeded rice (*Oryza sativa* L) during *kharif*, 2022 at Agricultural College Farm, Naira, Acharya N.G. Ranga Agricultural University, Andhra Pradesh. The experiment was laid out in randomized block design with seven treatments, which included the use of conventional and nano urea. The results revealed that the application of 1/3 RDN (40 kg N ha) through conventional urea as basal + three foliar sprays of nano urea @ 2.5 ml lit<sup>-1</sup> of water at 30, 50 & 70 DAS (T<sub>3</sub>) recorded significantly higher plant height (134.5 cm), number of total tillers m<sup>-2</sup> (468.5 No. m<sup>-2</sup>), dry matter accumulation (14946 kg ha<sup>-1</sup>) and grain yield (6750 kg ha<sup>-1</sup>) which was significantly higher compared to other treatments. However it was on par with the application of T<sub>2</sub>: (Urea 1/3 RDN (40 kg N ha<sup>-1</sup>) as basal + two foliar sprays of nano urea @ 2.5 ml lit<sup>-1</sup> of water at conversion to wet and PI stages). While the lowest response of growth parameters and grain yield was observed in the treatment with the application of only four foliar sprays of nano urea @ 2.5 ml lit<sup>-1</sup> of water at 10, 30, 50 and 70 DAS (T<sub>6</sub>) and found inferior to rest of treatments.

**Keywords:** *Nano urea, conventional urea, growth parameters and grain yield*