



# Effect of graded levels of nitrogen on micronutrient content, uptake and yield of paddy in Vertisols of TBP command

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**Abstract :** A field experiment was conducted during *Kharif* 2012 to study the effect of graded levels of nitrogen on micronutrient content, uptake and yield of paddy in Vertisols of TBP command at Agricultural Research Station, Gangavati. The experiment was laid out in Factorial Randomized Block Design with five treatments and three replications each. There were five levels of N (RDN, 20% extra RDN, 40% extra RDN, 60% extra RDN and 80% extra RDN) and paddy varieties (GGV-05-01 and BPT-5204) were grown with a spacing of 20 × 10 cm and following standard agronomic cultural practice. Plant height and number of tillers increased with the application of N up to 60 per cent extra RDN. Variety GGV-05-01 recorded higher plant height whereas higher number of tillers was recorded by BPT-5204. Yield attributes (panicle length, weight and test weight) and grain yield increased with increasing levels of N up to N<sub>3</sub> (RDF + 40% additional N) and the increase in grain yield (53.46 q ha<sup>-1</sup>) was 5.7 per cent higher over control (RDF) (50.56 q ha<sup>-1</sup>). GGV-05-01 recorded the highest grain yield (54.53 q ha<sup>-1</sup>) compared to BPT-5204 (51.07 q ha<sup>-1</sup>). The straw yield increased significantly up to N<sub>5</sub> (RDF + 80% additional N). The macro and micro nutrient content and uptake increased with increasing levels of N up to N<sub>5</sub> or N<sub>4</sub>. GGV-05-01 recorded higher Fe and Cu content and uptake in grain compared to BPT-5204.

**Key Words :** Paddy, Nitrogen levels, Micronutrient uptake, Yield

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