

Growth Characteristics, Yield Attributes, Grain Yield and Quality of Rice Hybrids as Influenced by Nitrogen Fertilization

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ABSTRACT

A field experiment was conducted during the *kharif*, 2008 to study the effect of nitrogen fertilization on production potential and quality characters of rice genotypes. Among the genotypes tested, the hybrids PA6201, PHB-71 recorded significantly higher LAI and dry matter production values at all the growth stages when compared to variety Rajavadlu. These hybrids also exhibited their superiority in terms of yield attributes and yield. Hybrids PA6201, PHB-71 recorded 19.84%, 15.61% of higher yield respectively, over the variety Rajavadlu. The increased levels of applied nitrogen from 0 to 225 kg N ha⁻¹ significantly improved the growth characteristics and yield attributes of rice genotypes, in turn it resulted in higher grain and straw yield with higher levels of nitrogen. The interaction effect between rice cultivars and nitrogen levels on grain yield found to be significant. Among the rice hybrids tested, PA6201 recorded highest grain yield at 225 kg N ha⁻¹ followed by PHB-71. In case of quality characteristics, significantly more head rice recovery (63.63%) and amylose content (24.43%) were recorded by PA6201 over PHB-71 compared to that of Rajavadlu. Application of N @ 225 kg ha⁻¹ recorded appreciable higher values of quality characteristics such as head rice recovery and amylose content over 150 kg N ha⁻¹, 75 kg N ha⁻¹ and control.

Key words : Hybrid cultivars, Grain quality, Growth and yield attributes, N levels, Yield.