

RESEARCH ARTICLE

Studies on phenological characters and yield attributes of rice genotypes at graded levels of phosphorus

■ HIMANSHU PATEL, BRAJENDRA, V.N. MISHRA AND V.P. BHADANA

SUMMARY

Phosphorus is one of the most limiting nutrients for plant growth in soil in both acidic and alkaline soils. To screen the genotypes for their P use efficiency and response to its application the genotypes need to be grown under different gradients so as to compare their performance under different regimes of P application. Therefore, low P plots were divided into 4 sub-plots with different gradients (0,20,40 and 60 kg P_2O_5 /ha, respectively). Results showed that at 0 (absolute control) level of P_2O_5 , rice genotypes differed widely among all the phenological and yield attributing characters studied. Root length measured was recorded lowest for Mahsuri cultivar (18cm) whereas highest root length at maturity stage was recorded for Vikas and Vasumati cultivars (26cm each). At 20 Kg P_2O_5 /ha level, root length measured was recorded lowest for Mahsuri cultivar (19cm) whereas highest root length at maturity stage was recorded for Akshaydhan cultivar (30cm). At 40 Kg P_2O_5 /ha level, root length measured was recorded lowest for MTU 1010 cultivar (20cm) whereas highest root length at maturity stage was recorded for Vasumati cultivar (30cm). Similarly At 60 Kg P_2O_5 /ha level, for plant height the values ranged from a low of 58cm for Rp-bio-226 cultivar to a high of 99cm for Vardhan cultivar. Significant but not steep variations were noticed among cultivars for root length, flag leaf length and effective number of tillers characteristics at maturity stage.

Key Words : Phenological characters, Yield attributes, Rice genotypes, Phosphorus

How to cite this article : Patel, Himanshu, Brajendra, Mishra, V.N. and Bhadana, V.P. (2016). Studies on phenological characters and yield attributes of rice genotypes at graded levels of phosphorus. *Internat. J. Plant Sci.*, 11 (2): 198-202, DOI: 10.15740/HAS/IJPS/11.2/198-202.

Article chronicle : Received : 02.02.2016; Revised : 09.04.2016; Accepted : 23.05.2016

MEMBERS OF THE RESEARCH FORUM

Author to be contacted :

HIMANSHU PATEL, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA

Address of the Co-authors:

BRAJENDRA AND V.P. BHADANA, ICAR-Indian Institute of Rice Research, HYDERABAD (TELANGANA) INDIA

V.N. MISHRA, Indira Gandhi Krishi Vishwavidyalaya, RAIPUR (C.G.) INDIA