

Effect of split application of nitrogen and desiccant on yield and quality of rice (*Oryza sativa*)

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Received June 15, 2017 and Accepted August 24, 2017

ABSTRACT : Rice is a vital food crop because half the world's population feeds rice as a main part of their diets. It provides more calories per hectare than any other cereal grain. The yield components of rice are the number of panicles/unit area, number of spikelets/panicle, weight of spikelet and spikelet sterility or filled spikelet. Insufficient nitrogen supply in inappropriate timing is an important constraint to productivity of rice (*Oryza sativa* L.). A field experiment was conducted at Dighwadubauli, Baikunthpur, Gopalganj, Bihar during two consecutive *kharif* seasons of year 2009 and 2010, respectively to know the effect of split application of nitrogen and desiccant on yield and quality of rice. The experiment was conducted in split plot design replicated thrice. Treatments comprising of different ways of nitrogen splitting were put in the main plot and combinations of time of harvest and desiccants in the sub-plots. There were four treatments in the main plot and 12 treatments combination in the sub-plot making a total of 48 sub plots in each replication. The results showed that application of nitrogen at panicle initiation stage in rice enhanced maturity time by 4-5 days without any gain in yield. Nitrogen application at transplanting and active tillering stage in proportion of 50:50 or 25:75 was best for yield in rice cultivation. Application of 0.1% paraquat or 10% common salt solution did not affect yield and quality of rice adversely.

Key Words : Rice (*Oryza sativa*), split application of nitrogen, desiccant, yield, quality.