

Effect of Days to Flowering on Plant Height and Yield in Rice

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Abstract

Breeding strategy in rice mainly depends on the degree of association among different characters and its magnitude and nature of variation. Path analysis reveals the amount of direct and indirect effect of the causal components on the effect component. In the present study the effect of days to flowering on the yield and plant height were examined using one hundred traditional rice cultivars. One hundred traditional rice cultivars were transplanted according to the randomized complete block design with four replicates. Each replicate consisted of 3 lines and twenty plants were included in to each line. Days to flowering (DF), plant height (cm) (PH), and yield/plant (g) (YLD) were measured after harvesting. Rice cultivars were grouped as 70, 80, 90, 100 DF. Correlation analysis was done by IBM SPSS 20 statistical software and path analysis was done by IBM SPSS AMOS statistical software. Path correlations were calculated to determine the total effect of DF on the YLD and PH. The effect of days to flowering on the yield and plant height was greatly varied with the days to flowering. The effect of days to flowering on the yield was maximum when the days to flowering was around 80. Up to 90 days to flowering the effect of days to flowering on the yield was positive but when the days to flowering was more than 90, the effect of days to flowering on the yield was negative. Effect of days to flowering on plant height was highest when the days to flowering was shortest.

Keywords: *Traditional rice cultivars, Days to flowering, Plant height, Yield, Path analysis*

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