

Character Association Studies for Yield and Lodging related Parameters in Rice (*Oryza sativa* L.)

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ABSTRACT

Studies on character association for yield and lodging parameters were conducted on 24 different Near Isogenic Lines of rice along with their respective parents developed for submergence, lodging and salinity tolerance by using marker assisted backcrossing. Analysis of variance revealed considerable variability among the entries for all the characters studied. Correlation analysis revealed that grain yield per plant has significant positive genotypic association with number of grains per panicle, days to 50% flowering and panicle length and negative association with 1000 grain weight, basal internodal length and per cent of lodging. Indirect selection for these traits inherited together positively would be rewarding for the development of high yield varieties. Per cent of lodging showed highly significant negative association with culm diameter, culm thickness and bending stress of lodging related traits indicating that careful selection for wider, thicker culms coupled with high yield would result in non lodging varieties.

Key words: *Grain yield, lodging, near isogenic lines, salinity, submergence.*