

INTRAVARIETAL VARIABILITY IN RICE FOR SALT TOLERANCE

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ABSTRACT

An experiment was conducted by growing forty plants, each of NR 1 and NIAB 6 to study the yield and leaf ionic composition of individual plants grown at 70 mol m^{-3} NaCl in nutrient solution. Plants were grouped into five salt tolerance classes on the basis of paddy yield data. NR 1 had much higher number of plants in the tolerant class than NIAB 6. Ionic composition was determined in leaf cell sap at two different stages. Concentration of sodium, potassium and chloride in leaf sap increased steeply with age and a progressive decrease in the concentration of sodium and chloride was observed with increase in salt tolerance character of a plant. Potassium and $\text{K}^+:\text{Na}^+$ ratio had a highly significant positive correlation with salt tolerance of various classes. Differential accumulation of sodium and chloride in individual plants of both the lines at two different stages was closely associated with their salt tolerance. The relationship between zinc: phosphorus ratio and the salt tolerance of individual plants.