Abstract

Tolerance to salinity was obtained in an open pollinated variety (KAT) widely grown in the East African region and a dryland hybrid (PH01) by applying in vitro selection and regeneration procedures. Immature zygotic embryos of KAT and PH01 plants were cultured on N6 medium supplemented with 2mg/l 2,4-dichlorophenoxyacetic acid to initiate embryogenic calli. Calli were then maintained for one month after which time they were subjected to increasing concentrations of NaCl (between 0 and 2.9%) to determine the appropriate concentrations of selection pressure. The survival and regeneration capacity of KAT and PH01 calli were significantly lower ($p<0.05$) than those of their controls after exposure on both levels of NaCl. The genotype did not influence the survival capacity of selected calli. However, KAT and PH01 were found to differ significantly ($p<0.05$) in regeneration capacity