



Journal of Himalayan Life Sciences
Volume 1, Issue 1 (2021)

Ameliorative effect of Sulphosalicylic acid and Mannitol in rice varieties (Swift Gold and BH-21) under salinity stress

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Abstract: Plants grow on soil which assist root anchorage and also behave as a pool of water and nutrients that are needed for plant's growth and evolution which may be disturbed by different sorts of plant stresses. Salt stress (abiotic stress) is one of the main reasons that lead to low productivity. Rice is hypersensitive to salt stress. In the experimental setup, four pots were taken for each variety and 10 seeds were sown in each. Various parameters were calculated on the 14th day. Then for the treatment, one pot per variety was taken as control. In the second pot a solution of 100mM NaCl was added. 5mM Mannitol and 5mM Sulphosalicylic acid were respectively added in the latter two pots along with 100mM NaCl. The main aim was to determine the harmful effects of salt stress on growth and other morphological parameters in rice and to study the ameliorative effect of Sulphosalicylic acid and Mannitol on salt stressed rice varieties (Swift Gold and BH-21). The results shows that under saline conditions the growth parameters of rice reduced. The growth of plants was considerably improved when the rice plants were treated with these chemicals.

Keywords: Salt stress, stress amelioration, sulphosalicylic acid and mannitol.