
EFFECT OF DIFFERENT SALINITY LEVELS ON SEED GERMINATION OF SALT TOLERANT TREE SPECIES

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An experiment was conducted, during March-July 2000, at the Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, to study of the effect of levels of salinity on seed germination of three salt tolerant species, namely *Acacia leucoploea* (Katu Andara), *Parkinsonia aculeate* (Parkinsonia) and *Cassia auriculata* (Ranavara)

The experimental design used, was Randomized Complete Block Design with 5 treatment and 4 replications. Here, sea water (40 ds/m) was diluted to give varying salinity levels (i.e. 2, 4, 8, and 12 ds/m) and normal water (0.13 ds/m) was used as the control. Saline solutions were applied to seeds and the rate and percentage germination was observed.

The results obtained from the experiment showed that, low salinity levels (4 ds/m) increased seed germination of all 3 species. But with increasing salinity beyond 8 ds/m a decreasing in germination was observed. When the salinity level was 8 ds/m, the percentage of germination in Katu Andara, Parkinsonia and Ranavara about 40, 40 and 13 respectively.

The percentage of germination in Ranavara was 0 at the salinity level of 12 ds/m. But in Katu Andara and Parkinsonia, 23% and 15% germination was observed at 12 ds/m. Thus, these species can be ranked in order of tolerance to salinity as follows:

Katu Andara > Parkinsonia > Ranavara