B-44 Seed germination of some agroforestry species under varying salinity regimes

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Sparseness of vegetation in salt-affected areas is partly due to the detrimental effects of sali germination. Therefore, studies were conducted to identify tree species which can germinate conditions. The study involved 4 species, castor (*Ricinus communis)* woodapple *(Feroni* maliththa *(Woodfordia fruticosa)* and tamarind *(Tamarindus indica)*.

Seeds of these species were placed in petri dishes lined with cotton wool or filled with pure sand diluted to give varying salinity regimes (approximately 2,4, 8,12, 14dSm^{-1}), was applied to the periodically. Normal water (0.13 dSm^{-1}) was used in the control. The petri dishes were arranged design with 5 replicates, and the time taken for germination and the rate of germination under vary regimes were observed. Low salinity levels (<2 dSm^{-1}) hastened and increased seed germination with increasing salinity beyond 4 dSm^{-1}, a progressive decrease in germination was observed decrease varied markedly among the species. When the salinity level was 8 dSm^{-1}, the % of ger maliththa, tamarind, castor and woodapple were about 85, 45, 35 and 25 respectively. Maliththa about 30% germination even at a salinity level of 12 dSm^{-1}.

Thus these species can be ranked in order of tolerance to salinity as follows: **Maliththa >> Ta Castor > Woodapple**