

**GROWTH PERFORMANCES OF CASHEW NUT
(*Anacardium occidentale* L)
AND RANAWARA (*Accasia auriculata* L) UNDER
DIFFERENT LEVELS OF SALINITY**

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There are large extents of salt affected lands in Sri Lanka, which is estimated to be 223,000 hectares or about 3% of land area of the island, mainly in dry zone areas. This severely affect the productivity of the agricultural lands. And selection of salt-tolerant tree/crop species is considered to be one of the alternatives to overcome this problem.

Two separate pot experiments were conducted to study the effect of different salinity levels on growth performances of cashew nut (*Anacardium occidentale* L) and Ranawara (*Accasia auriculata* L) at the Faculty of Agriculture, Mapalana. Each tree species consisted of eight treatments, which were differentiated, with different concentrations of salinity (i.e. 0, 2, 4, 6, 8, 12, 16, 20mmhos/cm). The experimental design for both experiments were Complete Randomized Design (CRD) with 4 replicates. One month old plants raised in poly bags (10" x 12") were used to apply different treatments. 100 ml of saline water, which, was prepared by diluting sea water in different treatments was applied twice a week. Plant height and the dry matter yield of shoots and roots were measured at 3, 6, and 9 weeks after the treatment application.

The results revealed that plant height, shoot and root biomass has decreased significantly with increasing levels of saline water up to 12mmhos/cm compared to the control where normal water (0.13mmhos/cm) is applied in cashew nut. Ranawara seems to be more salt tolerant. At the early stage, shoot height, shoot weight and root weight significantly decreased with increasing level of salinity but at latter stage they were not much affected with increasing level of salinity. Therefore Ranawara could be recommended as medium salt tolerant tree species while cashew nut is not much tolerant to salinity.