

THE EFFECT OF SALINITY ON THE GROWTH OF
SONNERATIA ALBA IN SOLUTION CULTURE

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Seedlings of Sonneratia alba were grown for three months in nutrient solutions containing either 0%, 25%, 50% or 100% sea water. Plants grew poorly in both 0% and 100% sea water treatments. Growth was greatly stimulated in 25% and 50% sea water treatments. Shoot length, leaf numbers, leaf areas and the dry weights of shoots and roots were much higher in these treatments than in 0% and 100% treatments. Root lengths however increased gradually with increasing salinity with 100% sea water producing the longest roots.

Percentage water contents in the shoots of plants harvested in the evening were significantly lower in 0% and 100% sea water treatments than 25% and 50% treatments. This corresponded with a visual observation that plants in 0% and 100% sea water treatments showed a mid day wilt which did not occur in 25% and 50% sea water treatments. Collectively this indicates a difficulty for the plants to maintain maximum turgor both in the absence of sea water and in 100% sea water, particularly under actively transpiring conditions

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