

CBFV 2009

XII Congresso Brasileiro de Fisiologia Vegetal
"Desafios para produção de alimentos e bioenergia"
7 a 12 de setembro de 2009 - Fortaleza - CE



PROMOÇÃO:



Salt resistance in two cashew species is associated to accumulation of organic and inorganic solutes

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This study establishes relationship between salt resistance and solute accumulation in roots and leaves of two contrasting cashew species (*Anacardium microcarpum*, sensitive and *Anacardium occidentale*, resistant). Seedlings of the two cashew species, at same physiological stage (eight leaves), were cultivated in a nutrient solution containing 0, 50, 100, 150 and 200 mM NaCl under greenhouse conditions during the time required for the die of 50% of all leaves: 14 days in *A. microcarpum* (sensitive) and 24 days in *A. occidentale* (resistant). The sensitive species showed a 50% root dry matter reduction (LC₅₀) in 63 mM against 128 mM NaCl recorded for the most resistant one, whereas the shoot LC₅₀ were 90 and 132 mM, respectively. The salt sensitivity, as indicated by the time required for the die of 50% of all seedling leaves at 200 mM NaCl, was directly associated with accumulation of Na⁺ and mainly Cl⁻ in leaves and in a minor extent in roots, whereas the K⁺/Na⁺ ratios were not correlated to salt resistance either in roots or leaves. Proline and free amino acids concentrations were strongly increased by salinity especially in leaves of the most resistant species whereas the soluble sugar concentrations were not influenced whatever NaCl treatment in both species. In contrast, the root soluble sugar content was significantly decreased by salinity only in the most sensitive species. The higher salt resistance in *A. occidentale* is associated with a more effective exclusion mechanism of Na⁺ and mainly Cl⁻ from leaves and with a high leaf proline accumulation.

Key words: *Anacardium occidentale*, *Anacardium microcarpum*, ionic toxicity, osmo-solutes, salinity

Financial support: CNPq/FUNCAP