

ABSTRACT

Two pot experiments were conducted at the Experimental Farm of the Faculty of Agriculture, Kafr El-Sheikh, Egypt, during the seasons of 2001-2003 to study the response of three ornamental transplants: *Aechmea fasciata*, *Billbergia nutans* and *Caesalpinia gilliesii* to soil salinity of NaCl, CaCl₂ and their mixture (1:1, by weight) at the levels of 0.0, 0.3, 0.6, 0.9, 1.2 and 1.5g salt/100g soil.

The obtained results could be summarized in the following:

- * Salinity treatments markedly reduced vegetative growth, flowering and chlorophylls (a, b and total) contents, compared to the control.
- * Calcium chloride salt was less deleterious than sodium chloride or the mixture (NaCl + CaCl₂, 1:1, by weight) of salts.
- * Raising salinity levels caused gradual decreases in vegetative growth and flowering characters except for time -to- flowering, as well as chlorophylls and Mg% in the leaves. While total phenols and prolines, content, Na, Ca and Cl% were increased by raising salinity levels.
- * *Aechmea* transplants survived up to 1.5% level of the three salts. But *Billbergia*'s did not survive at 1.5g/100g salt and the mixture of NaCl + CaCl₂, (1:1, by weight/100g soil). *Caesalpinia* transplants could not survive at 1.5% NaCl.
- * *Billbergia* transplants grown at either 1.5% of the three salts and 1.2% NaCl or the mixture of salts in the first season, as well as all salts at 1.2 and 1.5% in the second one, did not flower.

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