

# Irrigation management strategies with brackish water in production and post-harvest quality of “Toad Skin” melon

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## Abstract

In regions with water scarcity, it is necessary to use well water, often brackish water, in the irrigation of crops, which requires the adoption of management mitigation strategies. This study was carried out in the Fazenda Pedra Preta, Mossoró, Brazil, with the objective of evaluating the use of 10 management strategies of irrigation with two types of water (electrical conductivity  $EC_{WP1} = 0.57 \text{ dS m}^{-1}$  and  $EC_{WP2} = 4.33 \text{ dS m}^{-1}$ ). This was based on alternating and/or varied application as a function of the phenological stage during the plant growth phase, on the production, mean weight, and quality of the “Toad Skin” melons (*Cucumis melo* L., cv Sancho). A randomized complete block design with four replications was used, totaling 40 experimental plots. It was concluded that irrigation with water of electrical conductivity of  $0.57 \text{ dS m}^{-1}$  in the flowering and fruiting phases and water of  $4.33 \text{ dS m}^{-1}$  in the vegetative growth and maturation phases has produced more commercial fruits with higher mean weight. Through time, water management strategies did not influence the number of fruits per plant, fruit productivity, soluble solids content, and pulp firmness.