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EFFECTS OF PROLONGED WATER STRESS AND SALICYLIC ACID TREATMENTS ON GROWTH AND PHYSIOLOGICAL PROPERTIES OF IRANIAN POPULATIONS OF CALENDULA OFFICINALIS

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In order to evaluate the effect of salicylic acid on morphophysiological traits of *Calendula officinalis* L. under water deficit stress, an experiment was performed in three replicates. Drought stress (100, 66, 33% FC) and salicylic acid treatments as (0, 0.5, 1, 1.5 mM) were conducted on plants. The results indicated that water deficit stress significantly increased proline content, peroxidase activity and vice versa reduced the plant height, shoot Wet/ dry weights, flower number and flower vase life, and leaf relative water content (RWC). The results showed that the effect of salicylic acid treatment and as well as interaction effect of water deficit and salicylic acid for all characters except for plant height was significant. Based on the present results, foliar application at the 1 mM salicylic acid can improve the response to drought stress in *Calendula officinalis* L.

Keywords: Antioxidant, Proline, Relative water content (RWC), Stress