

## عنوان مقاله:

Salinity stress evaluation on Moldavian balm (*Dracocephalum moldavica* L.) under aeroponic system condition

## محل انتشار:

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## خلاصه مقاله:

Salinity stress effect especially the highest concentration ( $2 \text{ dS m}^{-2}$ ), was significant for all traits including plant height (PH), number of flowering branches (NFB), number of leaves per plant (NLP), stem diameter (SD), fresh shoot weight (FSW), fresh root weight (FRW), dry shoot weight (DSW), dry root weight (DRW), root length (RL), number of hairy roots (NHR), number of main roots (NMR), root diameter (RD), total chlorophyll content (TCC), chlorophyll a (Cha), chlorophyll b (Chb), carotenoid content (CC), root sodium content (RSC), leaf sodium content (LSC), leaf potassium content (LPC), protein amount (PA), proline magnitude (PM), peroxidase (POD), catalase (CAT) and decreased the measured traits compared to the control. NaCl at  $2 \text{ dS m}^{-2}$  induced salinity reduced the number of leaves per plant by 43.58% compared to the control. The highest number of hairy roots (19.78) was observed in salinity treatment with  $0.25 \text{ dS m}^{-2}$ , which was accompanied by a significant decrease with increasing sodium chloride concentration to  $2 \text{ dS m}^{-2}$ . The total leaf protein content, proline accumulation and antioxidant activity of catalase and peroxidase at the highest salt concentration ( $2 \text{ dS m}^{-2}$ ) showed a significant increase compared to control. The results of this experiment indicate that the tolerance of the herbaceous medicinal plant to salt stress is induced by increasing the accumulation of proline, soluble proteins and antioxidant enzymes activity.

## کلمات کلیدی:

*Dracocephalum moldavica*, Photosynthetic pigments, Salinity, aeroponics, Morphological Indices, Physiological traits

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