

## LEAF WATER CONTENT PREDICTS THE RISK OF HYDRAULIC FAILURE IN TWO *SALVIA* SPECIES

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Limited water availability is a common event for terrestrial plants especially in arid biomes. Nevertheless, current global warming is exposing plants to higher risks of drought-driven die-off, calling for identification of simple and reliable indicators of species-specific die-back risk, to anticipate and/or mitigate the negative effects of drought on vegetation and crop productivity. In the present study we check the predictive power of the leaf water content for monitoring the leaf hydraulic failure of two Mediterranean native species: *Salvia ceratophylloides* Ard. (Sc) and *S. officinalis* L. (So). In fact, the leaf hydraulic conductance (KL, i.e. leaf water transport efficiency) has been widely recognized to strongly affect the whole plant productivity. Then, possible link(s) between KL and leaf water content may be useful for predicting plant mortality risk under drought. The study species showed significant differences in relative water content (RWC) thresholds inducing the loss of rehydration capacity as well as KL impairment. Our results suggest that *S. ceratophylloides* is more resistant to drought than *S. officinalis*. However, the two species also showed different leaf saturated water content values (5 g g<sup>-1</sup> in Sc and 3 g g<sup>-1</sup> in So). As a consequence, the different RWC thresholds inducing 50% loss in rehydration capacity and leaf hydraulic conductance as recorded in Sc vs So corresponded, de facto, to similar leaf water content values. In conclusion, leaf water content and not RWC was the most reliable parameter for predicting the risk of leaf hydraulic impairment and, then, the potential decline of these two species under severe drought.