

# Gas Exchange of Irrigated and Non-Irrigated *Pinus canariensis* Seedlings Growing Outdoors in La Laguna, Canary Islands, Spain

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Chlorophyll fluorescence, gas exchange, water potential and relative water content were measured in the needles of five year old seedlings of *Pinus canariensis* in order to know their response to mild water stress. Two trial plots of ten plants per plot, of similar age and characteristics were irrigated daily until the experiment was undertaken, then one of the plots was left without watering while the other one was irrigated as before.

After a week of treatment, the water potential at midday did not change in any of the irrigated or non-irrigated plants maintaining around  $-0.4$  MPa, and the relative water content changed from 93% in irrigated to 84% in non-irrigated seedlings. The stomatal conductance decreased 60% in non irrigated plants and as a result  $\text{CO}_2$  assimilation decreased by 50% and transpiration was reduced at a higher proportion (70%), indicating a good control against water loss, before any change in water status in the needles could be observed suggesting an isohydric water economy in this plant.