



# Livro de Resumos



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## Salicylic acid improves the tolerance of olive trees against the Mediterranean adverse summer conditions

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The projected climate changes in the Mediterranean region, that include low rainfall, excessive heat load and high daily irradiance, are of utmost relevance for rainfed olive orchards, since are expected negative consequences on physiology, growth, productivity and quality. In this sense, agronomic strategies may be implemented to offset those negative effects. Rainfed young olive trees (*Olea europaea* L.) cv. Cobrançosa were sprayed with 100  $\mu$ M salicylic acid (SA), a signaling phytohormone with diverse regulatory roles in abiotic stresses responses. The results demonstrate that SA influenced positively the leaf water status, stomatal conductance and photosynthetic capacity of rainfed trees. The protective action of SA is associated with the induction of some stress tolerance indicators, as the increase in soluble proteins and ascorbate concentrations, and the improvement of plant nutritional status. This more comfortable conditions during the summer period allowed a faster restauration of the physiological functions in the early autumn. Finally, the sprayed plants exhibited higher yields than the control ones. In summary, SA seems to be an efficient strategy to improve olive tree tolerance against the adverse summer conditions of Mediterranean region.

**Keywords:** Photosynthetic capacity, water status, metabolites, mineral nutrition, yield

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