

عنوان مقاله:

Effect of exogenous salicylic acid on some physiological characteristics of Marrubium vulgare under drought

محل انتشار:

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خلاصه مقاله:

The paper reports the effects of salicylic acid (SA) application on some physiological characteristics of Marrubium vulgare grown in pots applied with or without SA under drought stress. The treatments were composed of CK (control), DR (drought), SA (500 μ M) and DSA (SA+drought). The results showed that drought stress decreased the plant dry materials and net CO₂ assimilation rate (A), which were all increased by addition of SA. Salicylic acid treatment did not increase relative water content in well-watered plants, as compared with control plants. In the present drought conditions, the improvement of photosynthesis of barley plants applied with SA compared with the DR treatment was associated with the increase in g_s , whereas the maximal quantum yield of PSII (Fv/Fm) did not change with SA treatment. However, the reduction of maximal efficiency of PSII in dark-adapted leaves (Fv/Fm) and effective quantum yield of PSII (Φ PSII) were detectable in leaves of water-stressed plants. The present work suggested that the improvement of SA on drought tolerance of Marrubium vulgare plants was associated with the increase of antioxidant defense abilities and maintenance of photosynthesis under drought

کلمات کلیدی:

Antioxidative enzymes, drought, Marrubium vulgare, net CO₂ assimilation rate (A), salicylic acid

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