

عنوان مقاله:

Changes in growth, chlorophyll content and grain yield of Coriander (*Coriandrum sativum* L.) in response to water stress, chemical and biological fertilizers and salicylic acid

محل انتشار:

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خلاصه مقاله:

Salicylic acid (SA) is a phyto-hormone that regulates physiological and biological processes in plants and can be used to improve plant growth under different environmental conditions, including water stress. Thus, a field experiment as split plot factorial based on randomized complete blocks design with three replications was conducted in 2014 to investigate the effects of fertilizer and salicylic acid on growth, chlorophyll content and grain yield of coriander (*Coriandrum sativum* L.) plants under drought stress. Treatments were three levels of water supply (irrigation after 60, 90 and 120 mm evaporation from class A pan) and four levels of fertilizer application (control, 100 kg ha⁻¹ Urea, Nitrokara (biofertilizer) and 50% Urea + Nitrokara) and foliar spray of salicylic acid (0 and 1 mM). Results indicated that water deficit had a significant reduction effect on leaf area, chlorophyll content, fresh weight of root and leaf and grain yield. Salicylic acid and 50% Urea + Nitrokara resulted in a significant increase of all traits under stress and well watering conditions. Although highest amount of studied traits was observed in plants treated with SA or application of 50% Urea and Nitrokara under well watering, but the changes rate was higher under stress conditions. Therefore, salicylic acid and combination of urea and Nitrokara can be used to promote growth of coriander under different water availabilities, which ultimately can enhance field performance of this plant. © 2016 Published by CASRP publishing company Ltd. UK. Selection and/or peer-review under responsibility of Center of Advanced Scientific Research and Publications Ltd. UK

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