

Abstract

Coriander (*Coriander sativum* L.) is an important plant in Apiaceae family and has many medical uses. In this research the effects of humic acid on some physiological and growth parameters and antioxidant activity of *C. sativum* were studied in sistan region. Treatment includes humic acid application on at leaf stage at 4 levels ; 0 (Control): 1,2, and 3 Kg ha⁻¹. Trait including stem Length , stem diameter, root Length , fresh weight root, dry weight root, Leaf fresh weight, dry weight of Leaf, number of Lateral branches, seed weight, photosynthetic pigments, phenolic, flavonoids and anthocyanin Compounds amount. The total phenolic Contents of the methanolic extracts were determined by Folin- Ciocalteu method and the antioxidant activity was evaluated using DPPH (2,2-diphenyl-1-picrylhydrazyl) assay. The statistical results showed significant effects of humic acid on growth and physiological parameters and antioxidant activity of *C. sativum*. Humic acid application results showed that the highest chlorophyll a and b content obtained in 2 Kg ha⁻¹ of humic acid the least was in control. The results suggested application of 1 Kg ha⁻¹ humic acid is the best treatment in the production of *C. sativum* under organic condition in sistan region. The result of this study showed methanolic extract of leaf and stem of *C. sativum* has strong antioxidant activity.

Key words: physiological parameters, *Coriandrum sativum* L., Humic substance



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**Effect of different levels of humic acid on growth and physiological
parameters of Coriander (*Coriandrum sativum* L.)**

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