

عنوان مقاله:

Ajowan (*Trachyspermum copticum*) Responses to Organic Fertilizers and Bio-fertilizers under Drought Stress

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خلاصه مقاله:

Water stress and soil nutrients affect the growth of medicinal herbs as well as the quantity and quality of their essential oils. The effect of drought stress and different fertilizers on yield and morphological traits of Ajowan was studied in a split-plot experiment on the basis of a Randomized Complete Block Design with three replications in Qaen, Iran. The main plot was devoted to irrigation at three levels (full or weekly irrigation in the whole period of growth-C, weekly irrigation until the beginning of stem elongation and after that every other week irrigation-S₁ and weekly irrigation until the beginning of flowering and after that every other week irrigation-S₂). The sub-plot was devoted to fertilization at five levels (control, NPK chemical fertilizer, Nitroxin biofertilizers+Barvar ۲, organic fertilizer, and cattle manure). It was found that irrigation significantly affected seed yield, branch number per plant, umbel number per plant, umbellet number per umbel, seed number per umbellet and plant height. Seed yield was reduced by ۳۷.۸% under the treatment of S₁ as compared to full irrigation. The influence of fertilization treatments was significant on seed yield, umbellet number per umbel, seed number per umbellet and plant height. The treatment of chemical fertilizer resulted in the highest seed yield. In total, full irrigation accompanied with the treatment of chemical fertilizer produced the maximum seed yield. However, since chemical fertilizers are not recommended to be applied especially for medicinal herbs, it can be recommended to use biofertilizer (Nitroxin+Barvar ۲) given the fact that its .yield had no significant difference with that of chemical fertilizer

کلمات کلیدی:

Drought Stress, Organic fertilizer, yield, morphological traits, Ajowan

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