

Abstract

In order to study the effects of irrigation and composting levels on yield and yield components of borage an experiment with complete randomized block design in split plot arrangement with three replications was conducted in the University of Zabol. Treatments included irrigation levels (drought stress): (1) control (no stress) with irrigation once every 5 days. (2) mild drought stress with irrigation every 8 days. (3) severe drought stress with irrigation 11 days as main plots and the use of compost as a source of control (no fertilizer), 10, 20 and 30 tons of compost per hectare were considered as sub plots. The results showed that water deficit stress, plant height was reduce. The highest and the lowest height was observed at control and severe drought stress, respectively. Consumed 30 tons of compost greatest effect on plant height (16/44 cm). Maximum number of leaves concern control (no stress) treatment and the use of 30 tons of compost. The use of compost on chlorophyll content increased with increasing stress levels. The highest dry matter yield of plant with 8969 Kg.ha⁻¹ was belonged to no stress (control) and application of 30 tons per hectare of compost. It was lowest in the high stress and lack of application of compost. Generally dry matter decrease with increasing drought stress but increased the amount of compost applied in the reduce stress levels in the region less. In the total production dry yield in Zabol region, application of the 30 ton.ha⁻¹ of compost and irrigation once every 5 days is suitable.

Keywords: chlorophyll, Herbal plant, irrigation interval, Organic manure, yield.



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Title

**The effects of drought stress and compost
levels on qualitative and quantative traits
of borage(*Boragoofficinalis*)**

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