

Effects of micronutrient sprays and irrigation intervals on the medicinal plant blond plantain (*Plantago ovata* L.)

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ABSTRACT:

A split plot experiment using the randomized complete design with three replications was conducted in a field in the western Hesaroozeh region of Zahedan in the crop year 2013-2014. This was conducted to study the effects of irrigation intervals and sprays of the micronutrients zinc and iron on yield, its yield components, and essential oils of the medicinal plant blond plantain. The main factor included three levels of irrigation interval (I_1 : the control: 7-day irrigation interval, I_2 : 14-day irrigation interval, and I_3 : 21-day irrigation interval), and the sub-factor at four spray levels (M_1 : the control, not sprayed; M_2 : zinc at 3 ppt; M_3 : iron at 4 ppt; and M_4 : zinc at 3 ppt + iron at 4 ppt). Results showed that the 7-day irrigation interval resulted in the maximum values of the studied traits and, among the spray treatments, the combination of the micronutrients zinc and iron significantly increased all the measured traits compared to the control. However, no statistically significant differences were observed between spraying the combined micronutrients and spraying just the iron fertilizer.

Keywords:

Micronutrients, seed yield, irrigation, blond plantain, mucilage