

Quantity and quality improving of soybean yield by zinc and iron foliar application under drought stress

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Abstract

In order to study the effect of foliar application of zinc and iron on yield quantity and quality of Soybean (*Glycine max* (L.)) under drought stress, an experiment was carried out as a split plot based on completely randomized block design with three replications. The main factor included four drought stress levels as irrigation after 60, 80, 100, 120 mm evaporation and the sub factor constituted four levels of foliar application as a water, zinc, iron and combined zinc and iron. The results showed that there was a significant interaction between drought stress and foliar application for seed per pod, pod in lateral branches, biological yield and seed yield. The maximum pod per main node stem and seed weight was obtained from the irrigation after 60 mm evaporation and foliar application of combined zinc and iron. Foliar application of zinc and combined zinc and iron had the highest effect on the seed, biological, protein, oil yield and harvest index. Also, foliar application had a significant effect on zinc and iron concentration in seeds and leaves.

Keywords: Soybean, Stress, Drought, Yield, Foliar application