



University of Zabol
Graduate school
Faculty of Agriculture
Department of Agriculture
Dissertation for obtaining a master's degree Agroecology

Title

The effect of foliar application of micronutrients iron and zinc on Performance and performance components of mung beans under drought stress conditions

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Abstract:

Thesis for obtaining a master's degree in Agroecology in order to investigate the effect of foliar application of iron and micronutrient elements on the yield and yield components of mung bean under drought stress conditions, an experiment in the form of split plots in the form of a randomized complete block design with three replications in the field. The research of Zabul University Agricultural Research Institute located in Zahk (Chah Nima) city was carried out in the spring of 2015. The experimental treatments include drought stress at four levels including: complete irrigation (control), irrigation interruption at the beginning of flowering, irrigation interruption at the end of flowering, and irrigation interruption at the sheathing stage as the main factor, and iron and zinc foliar spraying. Four levels included: foliar spraying with distilled water, iron foliar spraying, zinc foliar spraying and iron and zinc foliar spraying as secondary factors. The results showed that the effect of drought stress and foliar application of micronutrient elements (iron and zinc) on plant height, number of lateral branches, number of pods per plant, weight of 1000 seeds, biological and seed yield and index is significant at 1% level. . The comparison of the comparisons showed that the highest biological and seed yield is obtained from the no-stress treatment. The number of leaves per plant, the number of seeds per plant and the stem diameter were significant in the interaction of drought stress and foliar spraying. The comparison of the interaction of drought stress and foliar spraying showed that the most effect on the plant was from the stress reduction treatment with iron and zinc foliar spraying. In general, foliar application of micronutrient elements (iron and zinc) to a large extent compensated for the damage caused by drought stress in mung bean.

Keywords: flowering, pod formation, irrigation interruption, stem diameter, number of leaves, weight of 1000 seeds