

## Foliar application of Fe, Zn and NPK nano-fertilizers on seed yield and morphological traits in chickpea under rainfed condition

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**ABSTRACT:**

There found only little information about the beneficial effects of nano-fertilizers on seed yield and plant growth in chickpea. Therefore, a field experiment was conducted for finding the effects of foliar application of Zn, Fe and NPK as nanofertilizers on chickpea at rainfed conditions. Plant height, number of branches, seed weight, biological yield and seed yield were significantly increased as compared to plants grown in normal (without fertilizer) condition. Highest seed yield (137.3 g/m<sup>2</sup>) was obtained by Fe + Zn foliar application and caused 34% increase in the seed yield. The most increase in seed weight (~ 12%) was obtained by the foliar application of NPK and Fe + Zn. Interestingly, the combination of Fe + Zn with NPK showed no significant differences compared with the normal treatment. In conclusion, this study proved that foliar application of Zn, Fe and NPK, through the action as a growth promoter, can increase in the plant growth and seed yield in chickpea.

**Keywords:**

Chickpea, Iron, Zinc, nano-fertilizer, seed yield

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