

Influence of Zinc Nutrition on Total Dry Matter, Yield Parameters and Yield of Chickpea (*Cicer arietinum* L.)

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ABSTRACT

A field experiment was conducted during *rabi* season of 2020-21 at Agricultural College Farm, Bapatla to study influence of zinc nutrition on total dry matter, yield and yield attributes of chickpea under heat stress. The experiment was laid out in split plot design with three main treatments *i.e.*, three dates of chickpea sowing *viz.*, normal sowing (sown on November 10th - (M₁)), moderately delayed sowing (sown on November 30th - (M₂)) and late sowing (December 20th - (M₃)) to expose the crop to late sowing induced heat stress during flowering and pod formation stages and four sub treatments *viz.*, no zinc application (control – S₀), foliar spray of ZnSO₄. H₂O @ 0.2 % (S₁), Zn-EDTA @ 0.3 % (S₂) and ZnSO₄. 7H₂O @ 0.5 % (S₃) at pre flowering and pod formation stages in three replications. The results showed that late sown chickpea crop decreased total dry matter, number of pods plant⁻¹, test weight and seed yield by 26.5, 14.1, 12.6, 5.5 and 17.6 per cent, respectively, over normal sown crop. Foliar spray of ZnSO₄. 7H₂O @ 0.5 % at pre flowering and pod formation stages increased the total dry matter, the number of pods plant⁻¹, test weight and seed yield by 21.8, 17.3, 26.0, 3.4 and 42.6 per cent, over the untreated plants. Normal sown crop sprayed with ZnSO₄. 7H₂O @ 0.5 % at pre flowering and pod formation stages (M₁S₃) recorded the highest mean values above parameters and the lowest mean values were recorded by the late sown crop with no zinc application (M₃S₀).

Keywords: *Chickpea, Dry matter, Yield and Zinc Nutrition.*