

Influence of Organic Acids on Growth and Yield of Groundnut (*Arachis hypogaea* L.) Grown in Calcareous Soils

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ABSTRACT

A potculture experiment was conducted in Agricultural college, Bapatla, Andhra Pradesh to study the 'Influence of organic acids on growth and yield of groundnut (*Arachis hypogaea* L.) grown in calcareous soils" during *kharif* season of 2015-16. The experimental soil was calcareous (collected from Vertisol profile), alkaline in reaction, low in organic carbon, available nitrogen, medium in available phosphorus and high in available potassium. All the micronutrients except iron were sufficient in the soil with values above their critical limits. The treatments comprised of control (T₁); FeSO₄.7H₂O @ 0.25% (T₂); citric acid @ 0.25% (T₃); acetic acid @ 0.25% (T₄); oxalic acid @ 0.125% (T₅); ascorbic acid @ 0.25% (T₆) and hydroxyl amine hydrochloride (T₇) were replicated thrice in completely randomized design (CRD) with three replications. Foliar application of organic acids were applied to the respective pots at peak flowering, peg penetration and pod formation stage of the crop growth. The results recorded that foliar application of FeSO₄.7H₂O @ 0.25% followed by acetic acid @ 0.25% and citric acid @ 0.25% was significantly increased the growth (plant height, dry matter production), yield attributes, yield and biochemical (chlorophyll 'a' and 'b') parameters when compare to control.

Key words: Calcareous soils, Growth, Organic acids, Yield attributes.