

# Effect of Growth Regulators on Nodulation and Nitrogen Fixation in Groundnut (*Arachis Hypogaea* L.)

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## ABSTRACT

To study the effect of growth regulators *viz.*, Indole-3-Acetic Acid (IAA), Kinetin, and Homobrassinolide (HBL) on nodulation and nitrogen fixation in groundnut. The present investigation was under taken with IAA, Kinetin @ 10 ppm and HBL @ 3.0  $\mu$ M at 30 DAS. Nitrate reductase activity (5.67  $\mu$ M  $NO_2^-$   $g^{-1}$   $hr^{-1}$ ), leghaemoglobin content (1.93 mg per fresh weight of nodules), leaf nitrogen content (3.48 %), soil nitrogen content (0.052 %), number and fresh weight of nodules (68.96 and 0.57 g) respectively were increased in the treatment pre soaking of seeds before sowing with kinetin @ 10 ppm followed by foliar spray of kinetin @ 10 ppm ( $T_4$ ) at 30 DAS which is on par with the treatment, pre soaking of seeds before sowing with HBL @ 3.0  $\mu$ M followed by foliar spray of HBL @ 3.0  $\mu$ M at 30 DAS ( $T_{12}$ ).

Key words: *Groundnut, Indole Acetic Acid, Kinetin, Homo brassinolide, Nitrogen fixation.*