

Effect of Boron, Brassinosteroids and Salicylic Acid on Growth, Dry Matter Production and Yield of Chick Pea

S Nagaraju, K L Narasimha Rao, G Rama Rao and M Lal Ahamed

Department of Crop Physiology, Agricultural College, Bapatla 522 101, Andhra Pradesh

ABSTRACT

The present investigation entitled “Physiological effects of Boron, Brassinosteroid and Salicylic acid on growth, dry matter production and yield of chickpea (*Cicer arietinum* L.)” was undertaken at the Agricultural College Farm, Bapatla during *rabi* 2013-14. The experiment was laid out in randomized block design with eight treatments *viz.*, Brassinosteroid @ 1ppm at 25DAS (T₁), Salicylic acid @ 20ppm at 35DAS (T₂), Borax @ 0.25% at 45DAS (T₃), Brassinosteroid @ 1ppm at 25DAS + Salicylic acid @ 20ppm at 35DAS (T₄), Brassinosteroid @ 1ppm at 25DAS + Borax @ 0.25% at 45DAS (T₅), Salicylic acid @ 20ppm at 35DAS + Borax @ 0.25% at 45DAS (T₆), Brassinosteroid @ 1ppm at 25DAS + Salicylic acid @ 20ppm at 35DAS + Borax @ 0.25% at 45DAS (T₇) and Control (T₈) in three replications. Application of Brassinosteroid at 25DAS, Salicylic acid at 35DAS and Borax at 45DAS (T₇) exhibited higher performance by increasing plant height by 13.9 per cent. Brassinosteroid at 25DAS, Salicylic acid at 35DAS and Borax at 45DAS (T₇), produced high amount of total dry matter, which was 27.14 per cent higher than the control and 9.0 to 27.14 per cent higher than remaining treatments. The same treatment resulted in an increase of 23.29 per cent in pod yield ha⁻¹ and 23.12 per cent in harvest index compared to control.

Key words: *Brassinosteroids (BR), Growth, Salicylic acid, Boron, Total Dry matter, Yield.*