

## Physiological basis for increasing the yield of blackgram on yield parameters under the influence of brassinosteroids

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### SUMMARY

The present investigation entitled physiological basis for increasing the yield of blackgram (*Vigna mungo* L.) on yield parameters under the influence of brassinosteroids was undertaken at the Agricultural College Farm, Bapatla during *Kharif* 2011-12. The treatments comprised of foliar spray of brassinosteroids @ 0.025 mg L<sup>-1</sup>, 0.05 mg L<sup>-1</sup>, 0.075 mg L<sup>-1</sup>, 0.1 mg L<sup>-1</sup> at vegetative, pod development and vegetative + pod development stages. Besides these, water spray is maintained in RBD with three replications. Application of brassinosteroids @ 0.1 mg L<sup>-1</sup> at vegetative + pod development stage resulted maximum increase in plant height (35.3 per cent) than control. Spraying of brassinosteroids @ 0.1 mg L<sup>-1</sup> at vegetative + pod development stage resulted in highest increase of leaf area, dry weight at the rate of 56.2 and 97 per cent, respectively, indicating its positive impact in accumulating dry matter. Foliar spray of brassinosteroids significantly increased the yield and yield attributes especially in the sprays at both stages. The grain yield per plant, 100 seed weight, harvest index recorded higher with the two sprays compared to alone sprays at vegetative or pod development stage. However, spray of brassinosteroids @ 0.1 mg L<sup>-1</sup> at vegetative + pod development stage recorded highest net returns of Rs. 38,235.17 and C-B ratio (1:2.68) and proved superior to the rest of the treatments.

**Key Words :** Brassinosteroids (BR), Homobrassinolide (HBR), Growth, Total dry matter, Yield, Blackgram

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