

RESEARCH ARTICLE

Assessment of yield and physiological parameters in (KRH-2) hybrid rice seed production (A×R) by using exogenous gibberellic acid

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SUMMARY

An experiment was conducted to study the effect of plant growth regulators in proper seed setting of hybrid rice (KRH-2) seed production using gibberellic acid (GA₃) on the physiological efficiency of rice. The physiological parameters and their relation with growth and yield attributes were analysed in this experiment. The experiment consisted of five treatments viz., T₁: application of 10 ppm GA₃ at pre flowering stage, T₂: application of 20 ppm GA₃ at pre flowering stage, T₃: application 10 ppm GA₃ at post flowering stage and T₄: application of 20 ppm GA₃ at post flowering stage T₅: Control. It was revealed that GA₃ applied on hybrid rice (KRH-2) seed production, at different stages of growth had improved significantly the yield attributes namely number of filled grains, 1000 grain weight and total yield of female line etc. with significant effect on growth parameters leading to enhancement in better seed set and ultimately better grain yield of both male and female lines of (KRH-2) hybrid rice seed production. Application of 20 ppm GA₃ at pre flowering stage, was found to be superior over other treatments. Gibberellic acid treatment significantly increased the yield of female line and this may be due higher photosynthetic contribution after flowering thereby enhanced 40-50 per cent higher grain yield over control.

Key Words : Gibberellic acid, Seed production, Hybrid rice (KRH-2), Pre-flowering, Post flowering

How to cite this article : Naik, M. Chandra, Meena, M.K., Suma, T.C., Palthe, Vasudev, Chavan, Sreedevi S., Murthy, Krishna and Janagoudar, B.S. (2015). Assessment of yield and physiological parameters in (KRH-2) hybrid rice seed production (A×R) by using exogenous gibberellic acid. *Internat. J. Plant Sci.*, 10 (2): 113-117.

Article chronicle : Received : 28.05.2014; Revised : 05.06.2015; Accepted : 14.06.2015

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