

Influence of Kinetin on Photosynthetic and Yield Parameters in Basmati Rice (*Oryza Sativa* L).

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Abstract—Rice (*Oryza sativa* L.) is one of the most important cereal crop of the world in terms of food, area and production. After wheat, rice is the second most produced crop worldwide. The main objective of the study was to make use of Kinetin to enhance the yield potential of crop. A field experiment was conducted on three cultivars of basmati rice (Punjab Basmati 2, Punjab Basmati 3 and Pusa Basmati 1121) with treatment allotted in split plot design and foliar application of Kn @10,20 and 40mg/l were sprayed at vegetative and anthesis stage. Different parameters such as total chlorophyll, total Carotenoid and Yield contributing parameters grain yield were recorded at maturity. Kinetin had promoted the formation of total chlorophyll and Carotenoid content in leaves at vegetative and anthesis stages as compared to the control. There was sharp increment of grain yield with the application of kinetin treatment. This increase was amplified with raise in the concentration of kinetin and maximum raise was observed at highest concentration of kinetin i.e 40 mg/l.

Keywords: Kinetin, Basmati Rice, photosynthetic parameters, yield attributes.