SIMULATION ANALYSIS OF ELEVATED CO_2 AND TEMPERATURE WITH RICE GROWTH MODEL ORYZA 2000 UNDER DRIP-FERTIGATED AEROBIC RICE

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Abstract: Simulation analysis with well calibrated and validated dynamic model of ORYZA2000 using present data inputs of drip fertigation system indicated that temperature-induced yield alterations in future climates could be favourably mitigated with the CO_2 fertilization along with fertigation practices. With the decline of the already limited water available for rice production, there is a need to adopt Water-saving measures such as aerobic rice to meet the challenge of feeding billions of people living and relying on rice. The crop growth model ORYZA2000 was used to calculate seasonal water balances of drip fertigation and flood irrigated aerobic rice study was conducted in Tamil Nadu agricultural university, India from 2007 during dry season.

Keywords: Simulation; Model; aerobic Rice; Elevated CO_2; Temperature increment; Grain yield

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