

# Plant growth pattern, tiller dynamics and dry matter accumulation of wetland rice (*Oryza sativa* L.) as influenced by application of different manures

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### Abstract :

To observe the comparative performance of different organic manures with inorganic fertilizers on the

growth rate, tillering and dry matter accumulation of rice an experiment was conducted in the Research Farm of Sher-e-Bangla Agricultural University, Dhaka, Bangladesh during June to November, 2008. The 10 treatments comprised viz. T1 (Control), T2 (Green manure @ 15 t ha<sup>-1</sup>), T3 (Green manure @ 15 t ha<sup>-1</sup>+ N40P6K36S10 i.e.50%NPK), T4 (Poultry manure @ 4 t ha<sup>-1</sup>), T5 (Poultry manure @ 4 t ha

-1+ N40P6K36S10 i.e. 50% NPK), T6 (Cowdung @ 12 t ha<sup>-1</sup>), T7 (Cowdung @ 12 t ha<sup>-1</sup>+ 40P6K36S10 i.e. 50% NPK), T8 (Vermicompost @ 8 t ha<sup>-1</sup>), T9 (Vermicompost @ 8 t ha<sup>-1</sup>+ N40P6K36S10 i.e. 50% NPK) and T10 (N80P12K72S10 i.e.100% NPK). Plant height, number of tillers hill

-1, total dry weight of plants, crop growth rate and relative growth rate were significantly influenced by different treatments. Except plant height and total tiller per hill all the parameters were found to be the highest with the treatment T5 (Poultry manure @ 4 t ha<sup>-1</sup>+ N40P6K36S10 i.e. 50% NPK). The dry matter production showed a significant relationship with grain yield of rice. [Nature and Science 2010;8(4):1-10]. (ISSN: 1545-0740).

### Key Word :

Rice, Organic manures, CGR, RGR, Dry matter partitioning, Yield

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