Effect of organic and inorganic sources of nitrogen on growth and yield of cabbage (*Brassica oleracea* var. *capitata* L.)

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ABSTRACT

A field experiment was conducted during Rabi, 2008-2009 at Horticulture Nursery, College of Agriculture, Gwalior (M.P.). The result of the experiment revealed that application of organic manures either alone or in combination with urea enhanced the growth and yield attributes in cabbage over control. Highest growth attributes like plant height, plant spread, number of leaves per plant and leaf area were obtained under the treatment T8 which received 50 per cent N as urea + 50 per cent N as vermicompost. The effect of vermicompost alone or in combination with chemical fertilizer N was at par with use of poultry manure. Application of nitrogen through various sources significantly influenced the weight and volume of head. The maximum weight and volume were recorded with the application of nitrogen 50% through urea + 50% through vermicompost which was statistically at par with application of nitrogen 50% through urea + 50% through poultry manure. These treatments have a significant difference over rest of the treatments including control. Application of nitrogen 50% through urea and 50% through vermicompost resulted in significantly highest diameter of head over rest of the treatments. Application of nitrogen 50% through urea + 50% through vermicompost produced the highest yield of cabbage (383.20 q/ha), which was statistically significant over rest of the treatments including control. The treatments next in order were the application of nitrogen 50% through urea and 50% through poultry manure and 50% nitrogen through urea + 25% through vermicompost + 25% through poultry manure.

Key words: Vermicompost, Poultry manures, Cabbage, Growth, Yield