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**Research Paper**

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# Effect of different integrated nutrient management practices on elephant foot yam (*Amorphophallus paeoniifolius* Dennst.) under eastern Uttar Pradesh conditions

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**ABSTRACT :** Elephant foot yam is a long duration crop, taking about 7-8 months to realise its full yield potential. This is the reason it requires a nutrient management package which can supply nutrients for longer duration till the maturity of the crop, which is only possible through the incorporation of organic sources of nutrients to the soil. The present experiment, therefore, was conducted at the Main Experiment Station of the Department of Vegetable Science, Narendra Deva University of Agriculture and Technology, Kumarganj, Faizabad, UP, during 2006-07 and 2007-08, with the aim to formulate an integrated package of nutrient management involving both inorganic as well as organic sources of nutrients for elephant foot yam under eastern Uttar Pradesh conditions. Ten treatments, using NDA-9 as the experimental material were tested *viz*., $T_0$ : Absolute control (no fertilizer), $T_1$ : 100:60:80 kg NPK/ha, $T_2$ : $T_1$ + 50 kg N/ha substituted through FYM, $T_3$ : $T_1$ + 50 kg N/ha substituted through vermicompost, $T_4$ : 125:60:100 kg NPK/ha, $T_5$ : $T_4$ + 50 kg N/ha substituted through FYM, $T_6$ : $T_4$ + 50 kg N/ha substituted through vermicompost, $T_7$ : 150:60:120 kg NPK/ha, $T_8$ : $T_7$ + 50 kg N/ha substituted through FYM and $T_9$ : $T_7$ + 50 kg N/ha substituted through vermicompost. On the basis of both the year's data, it was found that the application of 150:60:120 kg NPK/ha + 50 kg N substituted through FYM ($T_8$) proved to be the best, which resulted in the maximum canopy spread (77.00 cm), maximum corm weight per plant (2.64 kg) as well as total corm yield (44.24 q/ha). It was established that continued crop production potential of soils has a direct relationship to its organic fraction of the soil, and therefore, organic sources of nutrients, in any form, either alone or in combination, may be advocated for use, at least for elephant foot yam.

**KEY WORDS :** Integrated nutrient management, Vermicompost, Elephant foot yam, Amorphophallus

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