

Growth and yield assessment of organically grown elephant foot yam under bamboo and open condition

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ABSTRACT : The field experimental study was conducted at Forest Nursery, School of Forestry and Environment, Sam Higginbottom Institute of Agriculture, Technology and Sciences (Deemed-To-Be-University) Allahabad during 2014-2015 to evaluate the impact on Elephant Foot Yam (*Amorphophallus campanulatus*) with different organic manures under Bamboo (*Bambusa vulgaris*) based Agroforestry system. The experimental results observed in the present study at successive stage 225 DAS, that in the treatment T₁ application of Farmyard Manure (FYM) 18.18 t/ha produced significantly maximum plant height of 139.36 cm in the open condition and 114.30 cm under bamboo, collar diameter 7.47 cm in the open condition and 6.92 cm under bamboo, canopy spread in the open condition 85.83 cm and 81.52 cm under bamboo and maximum recorded or highest yield in the open condition 25.70t/ha whereas, 25.50 t/ha was found under bamboo. As far as the various treatments is concerned, all growth indices and yield attributes were realized with the application of Farmyard Manure (FYM) 18.18 t/ ha in (T₁) compare to treatments Vermicompost (T₂), Neem Cake (NC) (T₃), 50% FYM + 50%NC (T₄), 50% FYM + 50% Vermicompost (T₅), 50% FYM + 50% Leaf Mould C (T₆), 50% NC + 50% Vermicompost (T₇), 50% Vermicompost + 50% LMC (T₈) and Control (T₀) elephant foot yam significantly superior in the open condition as compared to cultivation under bamboo.

Key Words : Elephant foot yam, farmyard manure, open condition, bamboo.