



RESEARCH ARTICLE

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## Response of fertilizers and organic manures on growth and yield parameter of different variety of tomato under poplar based agroforestry system

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**ABSTRACT :** Poplar (*Populus deltoides*) known as a best tree used in alley cropping system for the production of tomato (*Lycopersicon esculentum*) under agroforestry system. The objective of the study was to see the impact of Organic (FYM) and Inorganic fertilizers (UREA, SSP and MOP) on the the growth yield of tomato of a 'Tomato P.K.M-1' and 'Tomato F<sub>1</sub> Ferline' at the Nursery area of a College of Forestry, Sam Higginbottom University of Agriculture, Technology and Sciences Allahabad, Uttar Pradesh. The experiment was laid out in Randomized Block Design with three replications. Different level of organic and inorganic fertilizers combination was taken F<sub>1</sub> (control), F<sub>2</sub> (100% NPK), F<sub>3</sub> (100% FYM), F<sub>4</sub> (75% NPK + 25% FYM), F<sub>5</sub> (50% NPK + 50% FYM), and F<sub>6</sub> (25% NPK+ 75% FYM) were used for Tomato plants. The highest plant height, the maximum number of branches, number of flowers and fruits/plant as well as the greatest fruit size, fruit yield/plant and fruit yield/ha were obtained best in F<sub>2</sub> (100% NPK) application of the recommended dose of nutrients. The results revealed that significantly the highest plant height higher yield and yield attributing characters were recorded with the application of 100% NPK.

**KEY WORDS :** Nitrogen, Phosphorus, Potassium, Farm yard manure, Single super phosphate

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