

# **EFFECT OF COWS MANURE AND NPK FERTILIZER DOSES ON GROWTH AND YIELD OF TOMATO PLANTS (*Solanum lycopersicum* L.)**

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## **ABSTRACT**

The decline in tomato plant productivity is caused by a lack of soil fertility and nutrient intake. This research aims to determine the effect of doses of cow manure and NPK fertilizer on the growth and yield of tomato plants (*Solanum lycopersicum* L.). The research was carried out at the Practice Garden of the Faculty of Agriculture, UPN "Veteran" Yogyakarta, in January-April 2024. The field trial research method was prepared using a Complete Randomized Block Design (RAKL) + Control. The first factor is the dose of cow dung fertilizer which consists of 3 levels, namely 15 tons/ha, 20 tons/ha, and 25 tons/ha. The second factor is the dose of NPK fertilizer which consists of 3 levels, namely 275 kg/ha, 375 kg/ha and 475 kg/ha. The observation data was analyzed using orthogonal contrast and variance tests at the 5% level, then the data was further tested with DMRT at the 5% level. The results of the research showed that the combination of treatment with doses of cow dung fertilizer and doses of NPK fertilizer had a significant effect on the control of the total fruit weight parameter per hectare. There is an interaction between cow dung fertilizer and NPK fertilizer on the parameters of number of fruit per plant, fruit weight per plant, fruit weight per plot, and total fruit weight per hectare. Treatment with cow dung fertilizer 750 g/plant and NPK fertilizer 14.25 g/plant gave the best results on fruit diameter.

Keywords: Tomatoes, Cow Manure, and NPK