

GROWTH AND YIELD OF TOMATO (*Lycopersicon esculentum* Mill.) IN VARIOUS DOSES OF VERMICOMPOST AND TIME OF WATER SHOOT PRUNING

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ABSTRACT

Continuous use of inorganic fertilizers in tomato cultivation can cause soil degradation so it is necessary to reduce inorganic fertilizers and use organic fertilizers, one of which is vermicompost. The aim of the study was to obtain the best treatment combination from the application of various doses of vermicompost with the time of water shoots pruning, determine the right dose of vermicompost and the right time for pruning. This research was conducted from July 2022 to October 2022 in Kalasan, Yogyakarta. The research method in the field used a Randomized Complete Block Design (RCBD) factorial. Factor I was the dose of vermicompost: 5 tons/ha, 10 tons/ha, 15 tons/ha, and 20 tons/ha. Factor II was the time of water shoot pruning: 20 DAP, 35 DAP, and 50 DAP. The research results showed that vermicompost 20 tons/ha and water shoot pruning at 20 DAP gave the best result on the parameters of number of fruit/plant/harvest, number of fruit/plant, total number of fruit, fruit diameter, fruit weight/plant/harvest, fruit weight/plant, total fruit weight. The vermicompost dose of 20 tons/ha gave the best results on the parameters of plant height at 21 and 28 DAP, stem diameter at 21 and 28 DAP, number of leaves at 21 and 28 DAP, flowering age, fresh weight of stover, dry weight of stover, number fruit/plant/harvest, number of fruit/plant, total number of fruit, fruit diameter, fruit weight/plant/harvest, fruit weight/plant, total fruit weight. Water shoot pruning gave the best results on the parameters of plant height at 21 and 28 DAP, number of leaves at 21 and 28 DAP, flowering age, number fruit/plant/harvest, number of fruit/plant, total fruit weight, fruit diameter, fruit weight/plant/harvest, fruit weight/plant, total fruit weight.

Keywords : *tomato, vermicompost, water shoot pruning*