

EFFECT OF TEMPE WASTEWATER CONCENTRATION AS LIQUID ORGANIC FERTILIZER IN VARIOUS CULTIVING MEDIA ON THE GROWTH AND YIELD OF TOMATO PLANTS (*Lycopersicum esculentum* Mill.)

By: Cindy Violetta

Supervised by: Darban Haryanto and Suwardi

ABSTRACT

Waste utilization into organic fertilizer is one effort to overcome the environmental pollution problem, with high organic matter. In addition, the growing media is the environmental factor that need to be considered. This research aims to determine the best concentration of liquid organic fertilizer from tempe wastewater and a growing media mixture on the growth and yield of tomato plants. The research was conducted at paranet house in Kemiri Village, Jepon, Blora, Central Java and used Completely Randomized Design with 2 factors plus 1 control. The first factor is the concentration of tempe wastewater which consists of three levels and the second factor is growing media mixture which consists of three levels. Data were analyzed using Analysis of Variance, a Contrast Orthogonal, and Duncan's Multiple Range Test (DMRT) at 5% level. There is no best combination between the two treatments. Treatment of 40% concentration of liquid organic fertilizer from tempe wastewater gave the best results on the parameters of plant height, total fruit number, and fruit weight per plant. The mixture of husk charcoal growing media was the best for the total number of fruit parameters.

Keywords: tempe wastewater, liquid organic fertilizer, growing media, tomato plants