

**EFFECT OF TEA WASTE LIQUID ORGANIC FERTILIZER  
CONCENTRATION (*Camellia sinensis*) AND COMPOSITION OF GOAT  
MANURE PLANTING MEDIA ON THE GROWTH AND YIELD OF  
TOMATO PLANTS (*Lycopersicon esculentum* Mill)**

Research by : Reti Columba Lifa  
Supervised by : Darban Haryanto and Maryana

**ABSTRAK**

The increase in tomato consumption must be balanced with an increase in tomato production every year so that the supply of tomatoes in the community is met. The aim of this study was to determine the effect of tea waste liquid organic fertilizer concentration and the best combination of treatments on the growth and yield of tomato plants. The research was conducted from June to November 2022 at the Wedomartani Experimental Garden, Faculty of Agriculture, UPN "Veteran" Yogyakarta, subdistrict Ngemplak, Sleman Regency, Yogyakarta. The research method used a completely randomized design (CRD) factorial (3×3+1). The first factor was the concentration of POC tea grounds at 3 levels, namely, 200 ml/l + NPK 3 g, 300 ml/l + NPK 3 g, and 400 ml/l + NPK 3 g. The second factor is the composition of the planting medium, which consists of 3 comparison levels (soil: goat manure), namely (1:1), (1:2), and (2:1). Control using soil media and NPK fertilizer. Data were analyzed with orthogonal contrast to determine the real effect, followed by ANOVA. If there is a significant difference, the DMRT test is continued with a test level of 5%. The results showed that the combination of treatments had a significant effect on the control parameters for the number of leaves, stem diameter, day of flower appearance, age at harvest, number of fruit bunches, number fruit of plant, and fruit weight per harvest. There is an interaction between the concentration of tea waste liquid organic fertilizer grounds 200 ml/l + NPK 3 g and the composition of goat manure 2:1 on the parameter of stem diameter, and 300 ml/l + NPK 3 g + 3:1 in the day parameter that appears to be of interest.

**Keywords** : *tomato, tea waste liquid organic fertilizer, goat manure*