

**Application Concentrations of Gibberellin Growth Regulators and Liquid
Organic Fertilizers on the Growth and Yield of Tomato Plants
(*Lycopersicum esculentum* Mill.)**

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ABSTRACT

Tomato is one of the most important vegetable crops in Indonesia. Efforts to increase the growth and yield of tomatoes are by fertilizing and providing growth regulators. This study aims to determine the best concentrations of ZPT gibberellin and POC on the growth and yield of tomato plants. The research was conducted in October - December 2022 at the Practical Garden of the Faculty of Agriculture UPN "Veteran" Yogyakarta, Wedomartani, Sleman. The study used a field experiment in a Randomized Completed Block Design (RCBD) with 2 factors and 1 control with 3 replications. The first factor, the concentration of Gibberellin 3 levels, namely 50 ppm, 100 ppm, and 150 ppm. The second factor, the concentration of POC 3 levels, namely 6 ml/L, 9 ml/L, and 12 ml/L. Control plants were not given any treatment. The results showed that there was an interaction between the concentrations of Gibberellins and POC. The best Gibberellin treatment was at a concentration of 150 ppm and the best POC treatment was at a concentration of 12 ml/L as indicated by the parameters of plant height, stem diameter, leaf area, dry weight of plants, number of flowers, number of flowers to fruit, number of buds, number of fruits, diameter fruit, weight per plant, fruit weight per plot, and fruit weight per hectare.

Keywords: Giberellins, Liquid Organic Fertilizer, Tomato