

**EFFECTIVENESS OF VARIOUS CONCENTRATIONS OF
GIBBERELLIN AND CYTOKININ ON GROWTH AND YIELD OF
TOMATO PLANT (*Solanum lycopersicum* L.)**

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ABSTRACT

The research aims to determine the difference between the treatment combination and the control, determine the appropriate concentration of gibberellins and cytokinins on the growth and yield of tomato plants, and determine the effectiveness value of gibberellins and cytokinins administration. The research used a Complete Randomized Block Design with factorial 3x3+1. The first factor was gibberellin concentration with three levels, namely 75 ppm, 100 ppm and 125 ppm. The second factor was cytokinin concentration with three levels, namely 75 ppm, 100 ppm and 125 ppm. Control, without administration of gibberellins or cytokinins. The research data were analyzed using ANOVA at 5% level followed by DMRT and Orthogonal Contrast Test at 5% level. The results showed that the combination of treatments had a real effect and was better than the control on every parameter except dry weight, age at start of flowering, age at start of harvest, number of fruit per dompole, harvest index, and dry weight effectiveness value. The best gibberellin concentration was 100 ppm at plant height of 35 HST, age at start of harvest, and effective value of fruit weight per hectare. The best cytokinin concentration is 100 ppm at plant height of 35 HST. The effectiveness value of 100 ppm gibberellin is quite effective in the parameters of plant fruit weight per hectare. The effectiveness values of 100 ppm cytokinin are quite effective in the parameter of fruit weight per hectare.

Keywords: tomato, gibberellin, cytokinin, concentration