

**Response of Growth and Yield of Various Varieties of Tomato (*Lycopersicum  
esculentum*) To Dosage of P Fertilizer (SP-36**

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**ABSTRAC**

Productivity of tomato plants is influenced by varieties and fertilization. The problem of determining varieties and doses of P fertilizer (SP-36) is a problem for tomato cultivation. The aims of the study were to examine the interaction of tomato plant varieties with P (SP-36) fertilizer doses, to obtain the best tomato varieties, and to obtain the optimum P (SP-36) fertilizer doses. The research was conducted at the Green House of the Nurul Hidayah Islamic Boarding School garden, Puluhdadi, Seturan, Sleman in October-November. The experimental design was a factorial complete randomized block design (RAKL) with 3 replications. Factor I variety of tomato plant varieties (V), V1 Tymoti ; V2 Servo V3 : Betavila. Factor II: P0 (0 gram/plant); P1 (1.5 gram/plant); P2 (3.0 gram/plant) ; P3 (4.5 grams/plant). Data were analyzed using variance (Analysis of Variance) followed by Duncan's Multiple Range Test (DUNCAN) with a significance of 5% and Trend Comparison. The results showed that the best treatment for the Tymoti variety at a dose of 3 grams/plant, the Servo variety at 3 grams/plant, and the Betavila variety at a dose of 4.5 grams/plant were found in the parameters of plant height 30 HST, flowering age, harvest age, fruit weight per plants, fruit weight per plot and conversion of fruit weight per hectare. The Servo variety was significantly better in fruit weight yield, flowering age, harvest age and the optimum dose of SP-36 fertilizer was 2.5-3.0 gram/plant

*Key word : tomato varieties, P fertilizer, growth and yield*