Pengaruh Penambahan Pupuk MKP dan Pemangkasan Pucuk Terhadap Produksi dan Mutu Benih Mentimun (*Cucumis sativus* L.). *The Effect of Adding MKP Fertilizer and Pruning Shoots on the Production and Quality of Cucumber Seeds* (Cucumis *sativus L.*) *Supervised by* Dr. Ir. Rahmat Ali Syaban, M.Si

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ABSTRACT

Research on The Effect of Adding MKP Fertilizer and Pruning Shoots on the Production and Quality of Cucumber Seeds (Cucumis sativus L.) was conducted at Jl. Tawangmangu Tegal Gede Village, Antirogo Hamlet, Sumbersari District, Jember Regency, East Java Province in July-November 2024. Followed by further research located in the Seed Technology Labolatory. This research used Factorial Randomised Group Design (RAK) with two factors, each factor using three levels and repeated 3 times. The first factor is the application dose of MKP fertiliser consisting of 4 g/l (M1), 5 g/l (M2) and 6 g/l (M3). The second factor is shoot pruning consisting of the 10 internode (P1), 12 internode (P2) and 14 internode (P3). The data obtained were analysed using the analysis of variance (ANOVA) test and the observation parameters showed significantly different, so the Duncan Multeple Range Test (DMRT) was conducted at the 5% level The results showed that MKP fertilizer application at 5 g/L had a highly significant effect on the number of fruits per plant (3.18 fruits), while 6 g/L significantly affected fruit diameter per plant (5.54 cm), seed weight per plant (9.44 g), seed yield per plot (82.03 g/plot), and seed yield per hectare (328.14 kg/ha). Significant effects were also observed from the application of 6 g/L MKP fertilizer on the number of female flowers per plant (10.40 flowers), and from 5 g/L MKP fertilizer on the number of filled seeds per plant (448.40 seeds), 1000-seed weight (20.99 g), germination rate (91.44%), growth rate (23.16 %), and seedling uniformity (55.00 %). Shoot pruning treatment had a highly significant effect at the 12th node on the number of female flowers per plant (10.58 flowers), and a significant effect at the 14th node on the number of fruits per plant (3.07 fruits) as well as at the 12th node on the number of filled seeds per plant (453.62 seeds). The interaction between MKP fertilizer application (M) and shoot pruning (P) showed a significant effect on the combination of 5 g/L MKP fertilizer and pruning at the 12th node for the number of filled seeds per plant (512.93 seeds), and the combination of 5 g/L MKP fertilizer and pruning at the 14th node for seed weight per plant (10.870 g), yield per plot (108.73 g), and yield per hectare (434.93 kg/ha).

***Keyword** : Cucumber, MKP Fertilizer, Shoot Pruning, Seed Production*