

Pengaruh Pemberian Pupuk SP36 dan Jarak Tanam Terhadap Produksi Benih Mentimun (*Cucumis sativus* L.) Kode KE021 (*The Effect of SP36 Fertilizer and Planting Spacing on Cucumber Seed Production (Cucumis sativus L.) Code KE021*) Supervised by: Dr. Ir. Nantil Bambang Eko S., M.Si.

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ABSTRACT

Cucumber plant is one of the horticultural commodities. Even though this plant does not originate from Indonesia, cucumber is known to almost all Indonesian people and is also known in the health sector as a herbal medicine. To improve the quality and quantity of cucumber seeds, it is necessary to improve the cultivation system. This study aims to determine the effect of applying SP36 fertilizer and proper spacing on the growth and production of cucumber seeds, Code KE021. This research was conducted at the Jember State Polytechnic, Sumbersari, Jember from 15 July 2022 to 20 September 2022. This study was designed using a two-factor Factorial Randomized Complete Block Design (RCBD) with 3 replications. The first factor is SP36 fertilizer with 3 levels, namely P1: 150 kg/ha, P2: 250 kg/ha, P3: 350 kg/ha. The second factor is spacing consisting of 3 levels, namely J1: spacing of 30 cm x 60 cm, J2: spacing of 40 cm x 60 cm, J3: spacing of 50 cm x 60 cm. Observational data were analyzed using ANOVA and further tested using 5% DMRT. The results showed that the spacing of 50 cm x 60 cm had a very significant effect on seed weight per plant of 447.83 grams, fruit length of 20.53 cm, and fruit diameter of 6.72 cm. The treatment of SP36 fertilizer had a very significant effect on all parameters, namely seed weight per plant 479.45 grams, fruit length 20.41 cm, fruit diameter 6.76 cm, seed weight per plant 7.48 grams, number of seeds per fruit 241.93 grains, seed production per ha was 220.44 kg, the weight of 1000 grains was 2.98 grams, and the germination rate was 96.48%. The combination of the two treatments had a very significant effect on fruit length of 20.98 cm and had a significant effect on seed weight per plant of 484.29 grams and fruit diameter of 6.91 cm.

Key words: *cucumber, SP36 fertilizer, and plant spacing*