

**Aplikasi Pupuk Sp-36 & Pupuk KCl Terhadap Produksi dan Mutu Benih Mentimun (*Cucumis sativus* L.) Kode 1040** (*Application of Sp-36 Fertilizer & KCl Fertilizer on the Production and Quality of Cucumber Seeds (Cucumis sativus L.) Code 1040*) Supervised by: **Dr. Ir. Rahmat Ali Syaban, M. Si**

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**ABSTRACT**

*The public demand for cucumber continues to increase, but the production of high-quality seeds is often hindered by problems such as empty seeds and flower drop. This study aimed to determine the effect of SP-36 and KCl fertilizer application, as well as their interaction, on the production and quality of cucumber seeds code 1040. The research was conducted from June to October 2025 in Wonojati Village, Jenggawah District, Jember Regency, and the Seed Production Technique Laboratory of the State Polytechnic of Jember. The research method used was a factorial Randomized Block Design (RBD) with two factors and three replications. The first factor was the dosage of SP-36 fertilizer consisting of three levels: 200 kg/ha (P1), 250 kg/ha (P2), and 300 kg/ha (P3). The second factor was the dosage of KCl fertilizer consisting of three levels: 150 kg/ha (K1), 200 kg/ha (K2), and 250 kg/ha (K3). Data were analyzed using ANOVA and followed by Duncan's Multiple Range Test (DMRT) at a 5% significance level. The results showed that the interaction between SP-36 and KCl fertilizers had a highly significant effect on the parameters of fruit length, fruit diameter, number of seeds per fruit, 1000-grain weight, and germination percentage. The best treatment combination was obtained at a dosage of 300 kg/ha SP-36 and 250 kg/ha KCl (P3K3), which produced an average fruit length of 27.33 cm, fruit diameter of 61.06 mm, 179 filled seeds per fruit, seed production reaching 100.24 kg/ha, 1000-grain weight of 21.01 grams, and a germination rate of 92%. High doses of SP-36 and KCl fertilizers were able to provide sufficient phosphorus and potassium nutrients to support flower formation, the fertilization process, and maximize seed filling.*

**Keywords:** *Cucumber, SP-36, KCl, Seed Production, Seed Quality*