Optimasi Konsentrasi Paclobutrazol dan Dosis Pupuk NPK terhadap Produksi dan Mutu Benih Mentimun (*Cucumis sativus* L.). *Optimization of Paclobutrazol Concentration and NPK Fertilizer Dosage on Seed Production and Quality of Cucumber* (*Cucumis sativus L.*). *Supervised by*: Putri Santika, S.ST., M.Sc.

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ABSTRACT

Cucumber is a vegetable commodity that has a high economic value and several benefits such as containing vitamin C, and medicine to treat several diseases. Every year, the demand for cucumber increases in line with population growth, improved living standards, and public awareness of the importance of nutritional value. In addition, a major challenge in agriculture is how to increase crop yields without compromising environmental quality. Thus, more effective and environmentally friendly strategies are needed to increase crop yields. The purpose of this study was to determine the effect of paclobutrazol concentration and NPK fertilizer dosage on the production and quality of cucumber seeds (Cucumis sativus L.). The research was conducted in June-September 2024 in Wringintelu Village, Puger, Jember Regency. This study used a factorial Randomized Group Design (RAK) with 2 factors. The first factor is paclobutrazol concentration consisting of 0.00 ml/L (K1), 0.187 ml/L (K2), and 0.375 (K3). The second factor is the dose of NPK fertilizer consisting of 100 kg/ha (D1), 175 kg/ha (D2), and 250 kg/ha (D3). Data were analyzed using ANOVA (Analysis of Variance). If the results showed significant or very significant differences, then further tests were conducted using DMRT (Duncan Multiple Range Test) at the 5% level. The results showed that the interaction between the concentration of paclobutrazol and the dose of NPK fertilizer gave a significantly different effect on the number of seeds per fruit with the highest results in the K1D3 treatment (118.17 grains)

Key Words : P*aclobutrazol Concentration**,** NPK Fertilizer Dose, Cucumber*