

**RESPON PERTUMBUHAN DAN HASIL TANAMAN MENTIMUN
(*Cucumis sativus* L.) TERHADAP KONSENTRASI ZAT PENGATUR
TUMBUH PACLOBUTRAZOL DAN PUPUK KALIUM NITRAT (KNO₃)**

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ABSTRAK

Tujuan penelitian adalah mendapatkan kombinasi konsentrasi yang tepat antara paclobutrazol dan pupuk Kalium Nitrat (KNO₃) untuk pertumbuhan dan hasil tanaman mentimun. Penelitian dilaksanakan pada Bulan Februari sampai dengan Bulan Mei 2020 di Kampung Sayur Tarudan, Sewon, Bantul, Yogyakarta. Penelitian ini menggunakan Rancangan Acak Kelompok Lengkap, yang terdiri dari dua faktor ditambah satu kontrol (tanpa paclobutrazol dan pupuk KNO₃). Faktor pertama adalah konsentrasi zat pengatur tumbuh paclobutrazol (P) yang terdiri dari 3 taraf yaitu (P₁) 200 ppm; (P₂) 400 ppm; (P₃) 600 ppm. Faktor kedua adalah konsentrasi Pupuk KNO₃ (K) yang terdiri dari 3 taraf yaitu 6 gr/l (K₁); 8 gr/l (K₂); 8 gr/l (K₃); 10 gr/l (K₃). Tanaman kontrol merupakan tanaman tanpa perlakuan paclobutrazol dan pupuk KNO₃. Data dianalisis dengan menggunakan Sidik Ragam pada taraf 5%. Untuk mengetahui ada beda nyata antara kontrol dengan perlakuan dilakukan uji *Contras Orthogonal* taraf 5% dan apabila terdapat beda nyata antar perlakuan maka dilanjutkan uji Jarak Berganda Duncan pada taraf 5%. Hasil penelitian menunjukkan adanya interaksi antara perlakuan paclobutrazol dan pupuk KNO₃ pada parameter diameter batang 40 HST, jumlah daun 40 HST, rasio bunga betina dan jantan, jumlah buah, bobot buah pertanaman, dan bobot buah perpetak. Paclobutrazol 400 ppm nyata lebih baik pada parameter jumlah bunga betina, rasio bunga betina dan jantan, jumlah buah, bobot buah pertanaman, dan bobot buah perpetak. Pupuk KNO₃ 10 g/l nyata lebih baik pada parameter diameter batang 40 HST, jumlah bunga jantan, jumlah bunga betina, rasio bunga betina dan jantan, bobot buah pertanaman, dan bobot buah perpetak.

Kata kunci: Mentimun, paclobutrazol, pupuk KNO₃

**RESPONSES OF GROWTH AND YIELD OF CUCUMBER PLANT
(*Cucumis sativus* L.) ON CONCENTRATIONS OF
PACLOBUTRAZOLE AS A PLANT GROWTH REGULATOR
AND POTTASIMUM NITRATE FERTILIZER (KNO₃)**

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ABSTRACT

The research aimed to obtain the best combination of plant growth regulator paclobutrazole concentration and pottasium nitrate fertilizer concentration for growth and yields of cucumber. The experiment was conducted in February to May 2020 in Kampung Sayur Tarudan, Sewon, Bantul, Yogyakarta. The research used a Completely Randomized Block Design, which consisted of two factors plus one control (without paclobutrazole and pottasium nitrate fertilizer). The first factor was concentration of paclobutrazole that consisted of 3 levels, which were 200 ppm, 400 ppm, and 600 ppm and the second factor was concentration of pottasium nitrate fertilizer (KNO₃) which were 6 g/l, 8 g/l, and 10 g/l. The data analyzed using analysis of variance on a 5% level, the Contrast Orthogonal on a 5% level to find out the difference between control and treatment and further tested by the Duncan's Multiple Range Test on a 5% level to find out the difference between treatments. The research result showed that there was an interaction between paclobutrazol treatment dan pottasium nitrate fertilizer on parameter of 40 HST stem diameter, 40 HST amount of leaves, the ratio of female and male flowers, amount of fruits, fruit weight per plantation, and fruit weight per plot. The best concentration of paclobutrazol was significantly better in paraemeters amount of female flowers, male and female flowers ratio, amount of fruits per plantations, weight of fruits per plantaion and weight fruits per plot was 400 ppm. The best concentraion of pottasium nitrate fertilizer was significantly better in parameters 40 HST stem diameter, amount of male flowers, amount of female flowers, amount of fruits per plantation, weight of fruits per plantation, and weight of fruits per plot was 10 g/l.

Keywords: Cucumber, paclobutrazole, pottasium nitrate fertilizer