

Nur Indah Hidayati. 220311100014. Pengaruh Waktu Pemberian Paclobutrazol pada Pertumbuhan dan Pembungaan Tanaman Terong Ungu (*Solanum melongena* L.). Dibimbing Oleh: Ir. Sinar Suryawati, M.Si dan Dr. Diana Nurus Sholehah, S.Farm., Apt., M.Si

ABSTRAK

Tanaman terong ungu (*Solanum melongena* L.) memiliki pola pertumbuhan bertipe *indeterminate*, dimana ketika tanaman telah memasuki fase generative diikuti oleh proses pertumbuhan vegetatif tidak berhenti melainkan tetap berlangsung secara bersamaan. Salah satu upaya mengoptimalkan produksi tanaman terong dapat dilakukan dengan pemberian zat pengatur tumbuh paclobutrazol yang berfungsi menghambat biosintesis giberelin untuk menekan pertumbuhan vegetatif dan mempercepat fase generatif. Penelitian ini bertujuan untuk mengetahui pengaruh perbedaan waktu pemberian paclobutrazol terhadap pertumbuhan dan pembungaan tanaman terong ungu serta menentukan waktu aplikasi yang paling optimal. Penelitian dilaksanakan di *Greenhouse* Universitas Trunojoyo Madura mulai Desember 2025 sampai dengan April 2026, menggunakan Rancangan Acak Kelompok dengan 6 taraf perlakuan waktu pemberian paclobutrazol dosis 150 ppm dengan cara disiram langsung pada tanaman, yaitu: P1 (25 HST), P2 (29 HST), P3 (33 HST), P4 (37 HST), P5 (41 HST), dan P6 (45 HST), yang diulang sebanyak 4 kali. Data dianalisis menggunakan *Analysis of Variance* taraf 5% dan dilanjutkan dengan uji *Duncan Multiple Range Test* taraf 5%. Hasil penelitian menunjukkan bahwa waktu pemberian paclobutrazol memberikan pengaruh nyata terhadap parameter vegetatif (tinggi tanaman, jumlah daun, luas daun, diameter batang, panjang akar, jumlah tunas, bobot basah dan bobot kering tanaman) dan pada parameter generatif yaitu jumlah bunga. Aplikasi paclobutrazol pada umur 33 HST (P3) menghasilkan panjang akar, serta bobot basah dan kering tanaman tertinggi, namun pembungaan paling cepat terjadi pada waktu aplikasi umur 29 HST (P2) sampai umur 33 HST (P3).

Kata Kunci: *Paclobutrazol, Pembungaan, Pertumbuhan, Tanaman terong ungu, Waktu Aplikasi.*

Nur Indah Hidayati. 220311100014. The Effect of Paclobutrazol Application Timing on the Growth and Flowering of Purple Eggplant (*Solanum melongena* L.). Supervisor: Ir. Sinar Suryawati, M.Si and Dr. Diana Nurus Sholehah, S.Farm., Apt., M.Si

ABSTRACT

Purple eggplant (*Solanum melongena* L.) has an indeterminate growth pattern, in which vegetative growth does not cease once the plant enters the generative phase but continues concurrently. One way to optimize eggplant production is by applying the plant growth regulator paclobutrazol, which inhibits gibberellin biosynthesis to suppress vegetative growth and accelerate the generative phase. This study aims to determine the effect of different application timings of paclobutrazol on the growth and flowering of purple eggplant plants and to identify the most optimal application timing. The study was conducted at the Trunojoyo University of Madura Greenhouse from December 2025 to April 2026, using a Randomized Block Design with six treatment levels for paclobutrazol application timing at a dose of 150 ppm, applied by direct irrigation to the plants, namely: P1 (25 days after sowing), P2 (29 DAP), P3 (33 DAP), P4 (37 DAP), P5 (41 DAP), and P6 (45 DAP), each repeated four times. The data were analyzed using Analysis of Variance (ANOVA) at the 5% significance level, followed by Duncan's Multiple Range Test at the 5% significance level. The results showed that the timing of paclobutrazol application had a significant effect on vegetative parameters (plant height, number of leaves, leaf area, stem diameter, root length, number of shoots, fresh weight, and dry weight of plants) and on the generative parameter, namely the number of flowers. The application of paclobutrazol at 33 days after sowing (P3) resulted in the longest roots and the highest fresh and dry plant weights; however, flowering occurred most rapidly when the application was made between 29 days after sowing (P2) and 33 days after sowing (P3).

Keywords: *Application Timing, Flowering, Growth, Paclobutrazol, Purple Eggplant.*