

Khofifah Rosyadi. 220311100021. Pertumbuhan, Biomassa, Kandungan Karotenoid, Serta Kandungan Klorofil Tanaman Kailan (*Brassica Oleracea*) Pada Interval Umur Panen. Dibimbing oleh Ir. Sinar Suryawati, M.Si. dan Choirul Umam S.TP., M.T.

ABSTRAK

Penentuan waktu panen yang tepat akan mempengaruhi kuantitas, kualitas fisik, dan kandungan nutrisi tanaman yang dibudidayakan. Waktu panen yang tidak tepat dapat menurunkan nilai jual, dan mempengaruhi hasil serta kandungan bioaktif tanaman. Penelitian ini bertujuan mengetahui pengaruh umur panen terhadap pertumbuhan serta hasil tanaman kailan (*Brassica oleracea*), penelitian dilaksanakan di Desa Telang Kabupaten Bangkalan menggunakan Rancangan Acak Kelompok dengan interval satu minggu sekali sehingga terdapat 5 taraf umur panen, yaitu; P1 (3 MST), P2 (4 MST), P3 (5 MST), P4 (6 MST), dan P5 (7 MST), masing-masing diulang lima kali. Data hasil pengamatan diuji dengan Analisis Sidik Ragam taraf 5% dan uji lanjut Duncan Multiple Range Test 5%. Hasil penelitian menunjukkan bahwa umur panen berpengaruh nyata terhadap tinggi tanaman, jumlah daun, luas daun, bobot basah, bobot kering, volume akar, kandungan klorofil b, kandungan klorofil total, dan kandungan karotenoid, tetapi tidak berpengaruh terhadap indeks panen dan kandungan klorofil a. Perlakuan P5 (7 MST) menghasilkan pertumbuhan vegetatif dan biomassa tertinggi, sedangkan kandungan karotenoid tertinggi diperoleh pada P4 (6 MST). Dengan demikian Umur 7 MST direkomendasikan untuk memperoleh biomassa maksimum, sedangkan umur panen 6 MST lebih sesuai apabila tujuan budidaya adalah memperoleh kandungan karotenoid yang lebih tinggi.

Kata Kunci: Kailan, Karotenoid, Klorofil, Pertumbuhan, Umur panen

Khofifah Rosyadi. 220311100021. Growth, Biomass, Carotenoid Content, and Chlorophyll Content of Kailan Plants (*Brassica Oleracea*) at Different Harvest Ages. Supervised by Ir. Sinar Suryawati, M.Si. and Choirul Umam S.TP., M.T.

ABSTRACT

Determining the optimal harvest time affects the quantity, physical quality, and nutritional content of cultivated plants. An inopportune harvest time can reduce market value and affect crop yield and bioactive content. This study aimed to determine the effect of harvest age on the growth and yield of kailan (*Brassica oleracea*). The study was conducted in Telang Village, Bangkalan Regency, using a randomized block design with one-week intervals, resulting in five harvest age levels: P1 (3 WAP), P2 (4 WAP), P3 (5 WAP), P4 (6 WAP), and P5 (7 WAP), each repeated five times. The observational data were analyzed using Analysis of Variance (ANOVA) at the 5% significance level, followed by Duncan's Multiple Range Test at the 5% level. The results showed that harvest age had a significant effect on plant height, number of leaves, leaf area, fresh weight, dry weight, root volume, chlorophyll b content, total chlorophyll content, and carotenoid content, but had no effect on the harvest index and chlorophyll a content. Treatment P5 (7 WAP) produced the highest vegetative growth and biomass, while the highest carotenoid content was obtained in P4 (6 WAP). Thus, a harvest age of 7 WAP is recommended to obtain maximum biomass, whereas a harvest age of 6 WAP is more suitable if the cultivation objective is to obtain higher carotenoid content.

Keywords: *Carotenoid, Chlorophyll, Growth, Harvest age, Kailan*