

RINGKASAN

Brokoli (*Brassica oleracea* var. *italica*) merupakan tanaman hortikultura. Brokoli memiliki kandungan nutrisi yang diperlukan oleh manusia karena memiliki kandungan, mineral dan vitamin. Produksi brokoli di Indonesia tergolong masih rendah baik secara kualitas maupun kuantitas. Adanya beberapa keterbatasan dalam budidaya brokoli oleh karena itu sangat diperlukan pengembangan intensif dalam upaya budidaya tanaman brokoli. Oleh karena itu, kegiatan uji daya hasil terhadap beberapa varietas brokoli introduksi yang berpotensi memiliki daya hasil tinggi perlu dilakukan. Pertumbuhan dan daya hasilnya perlu diketahui secara akurat agar dapat dievaluasi untuk pengembangan lebih lanjut yang dapat diharapkan menjadi calon varietas unggul baru untuk dilepas dipasaran. Dengan demikian, penelitian ini bertujuan untuk mempelajari daya hasil varietas brokoli introduksi di daerah dataran tinggi Pratin Desa Serang, Kabupaten Purbalingga ini sesuai dengan arah pengembangan varietas Brokoli di Indonesia.

Penelitian ini dilaksanakan di dataran tinggi (1.250 m di atas permukaan laut) Desa Serang, Kecamatan Karangreja, Kabupaten Purbalingga pada bulan Juli hingga Oktober 2022. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK). Perlakuan terdiri atas 4 varietas brokoli introduksi berupa Chevalier (8), Legacy (9), Tie Mountain (10), dan Eiffel (11); serta 2 varietas brokoli pembanding berupa Hibrida lucky (33) dan Valencia/BL 14001 (34). Variabel yang diamati ialah variabel kuantitatif dan variabel kualitatif. Variabel kuantitatif terdiri dari parameter pertumbuhan berupa tinggi tanaman, jumlah daun, diameter batang, lebar dan panjang daun, umur muncul bunga, diameter, panjang dan lingkaran bonggol bunga (*curd*), umur panen, berat kotor, dan berat bersih. Selain itu, variabel kualitatif berupa warna bonggol bunga. Data hasil pengamatan dianalisis dengan menggunakan Uji F pada taraf kesalahan 5%, apabila hasil yang didapat menunjukkan pengaruh nyata maka dilanjutkan uji DMRT (*Duncan Multiple Range Test*).

Hasil penelitian menunjukkan bahwa varietas brokoli introduksi mampu beradaptasi pada kondisi lingkungan di lokasi penelitian terbukti semua varietas brokoli mampu menghasilkan bunga brokoli yang cukup baik. Respon pertumbuhan dan hasil varietas brokoli introduksi bervariasi yaitu pada parameter tinggi tanaman, jumlah daun, diameter batang, lebar dan panjang daun, umur muncul bunga, diameter, panjang dan lingkaran bonggol bunga, umur panen, berat kotor, dan berat bersih. Varietas Tie Mountain menunjukkan potensi hasil yang tinggi dibandingkan dengan varietas Chevalier, Legacy, Eiffel, dan varietas pembandingnya yaitu Hibrida Lucky dan Valencia. Namun, waktu panen varietas pembanding lebih cepat dari varietas brokoli introduksi. Varietas yang cepat berbunga yaitu Eiffel, namun hasil (bobot bunga) rendah dan waktu panen lebih lama.

SUMMARY

Broccoli (*Brassica oleracea* var. *italica*) is a horticultural plant. Broccoli contains nutrients needed by humans because it contains minerals and vitamins. Broccoli production in Indonesia is still relatively low both in quality and quantity. There are several limitations in broccoli cultivation, therefore intensive development is needed in efforts to cultivate broccoli plants. Therefore, yield testing activities on several introduced broccoli lines that have the potential to have high yields need to be carried out. Growth and yield need to be known accurately so that it can be evaluated for further development which can be expected to become a candidate for new superior varieties to be released on the market. Thus, this research aims to study the yield of introduced broccoli lines in the Pratin highland area of Serang Village, Purbalingga Regency by the direction of development of Broccoli varieties in Indonesia.

This research was carried out in the highlands (1,250 m above sea level) in Serang Village, Karangreja District, Purbalingga Regency from July to October 2022. This research was conducted using a Randomized Block Design (RBD) using four introduced cauliflower lines: Chevalier, Legacy, Tie Mountain, and Eiffel; and two comparison broccoli varieties, namely Hybrid Lucky and Valencia/BL 14001. The variables observed are quantitative variables and qualitative variables. Quantitative variables consist of growth parameters in the form of plant height, number of leaves, stem diameter, width, and length of leaves, age at flower emergence, diameter, length, and circumference of flower heads (curd), age at harvest, gross weight, and net weight. Apart from that, the qualitative variable is the color of the flower bulb. The observation data was analyzed using the F test at an error level of 5%. If the results obtained showed a real effect, the DMRT test (Duncan Multiple Range Test) was continued.

The research results showed that the introduced broccoli varieties were able to adapt to the environmental conditions at the research location. It was proven that all broccoli varieties were able to produce quite good broccoli flowers. The growth response and yield of introduced broccoli varieties varied, namely in the parameters of plant height, number of leaves, stem diameter, leaf width, and length, age at flower emergence, diameter, length and circumference of flower heads, harvest age, gross weight, and net weight. The Tie Mountain variety shows high yield potential compared to the Chevalier, Legacy, and Eiffel varieties, and the comparison varieties, namely the Lucky and Valencia hybrids. However, the harvest time for the comparison varieties was faster than the introduced broccoli varieties. The variety that flowers quickly is Eiffel, but the yield (flower weight) is low and the harvest time is longer.