

Ratria Resti Khoirani 170311100037. Evaluasi Kemurnian Genetik Galur Harapan Kacang Bambara (*Vigna subterranea* L. Verdcourt) Hasil Seleksi Berdasarkan Karakter Kualitatif dan Kuantitatif. Di bimbing Oleh: Dr. Ir. Siti Fatimah, M.Si dan Nurholis, S.P., M.Si.

ABSTRAK

Evaluasi Kemurnian Genetik pada galur harapan kacang bambara sangat penting dilakukan untuk menjaga kemurnian pada setiap tahapan pengujian sebelum dilepas menjadi varietas baru. Penelitian ini bertujuan untuk menguji 12 galur harapan kacang bambara hasil seleksi. Penelitian ini terdiri atas 12 unit percobaan, masing-masing unit percobaan ditanam 30 tanaman. Pengamatan dilakukan terhadap karakter kualitatif dan kuantitatif, selanjutnya karakter kualitatif dianalisis menggunakan uji *cluster* untuk menguji kemurnian masing-masing galur harapan. Pengamatan karakter kuantitatif digunakan untuk mengevaluasi keragaman dari masing-masing galur harapan dengan cara menghitung nilai rerata, ragam, standar deviasi dan koefisien keragaman. Hasil penelitian menunjukkan bahwa 7 populasi galur harapan sudah seragam karena memiliki nilai matriks kemiripan diatas 0,80 dan 5 populasi galur harapan sisanya dinyatakan belum seragam karena memiliki nilai matriks kemiripan dibawah 0,80. Hasil analisis data terhadap karakter kuantitatif menunjukkan bahwa umur berkecambah, umur berbunga, umur panen, panjang dan lebar daun terminal, jumlah ruas, dan jumlah cabang memiliki keragaman rendah. Karakter jumlah daun dan, diameter tajuk pada umur 3, 4, 5, 6, 7 dan 10 MST, panjang petiole, panjang internode, bobot brangkasan basah, bobot brangkasan kering, panjang dan lebar biji memiliki keragaman sedang Karakter bobot polong basah, bobot polong kering, tebal kulit, jumlah biji dan bobot biji memiliki keragaman tinggi hingga sangat tinggi.

Kata Kunci: Kacang Bambara, Kemurnian Genetik, Uji *cluster*, Koefisien Keragaman

Ratria Resti Khoirani 170311100037. Evaluation of Genetic Purity of Hope Strains in Bambara (*Vigna subterranea* L. Verdcourt) Results of Selection Based on Qualitative and Quantitative Characters. Guided by: Dr. Ir. Siti Fatimah, M.Si dan Nurholis, S.P., M.Si.

ABSTRACT

Evaluation of Genetic Purity in the Bambara groundnut hope line is very important to maintain genetic purity at each stage of testing before being released into new varieties. The purpose of this research is to examine 12 lines of hope of local Bambara beans. The experiment consisted of 12 experimental unit, each containing 30 plants. The data results are analysed of using a cluster test for observational variables qualitative, meanwhile quantitative observational variables by counting the mean, variance, standard deviation and coefficient of diversity. Observations were made on the qualitative and quantitative characters, then the qualitative characters were analyzed using the cluster test to test the purity of each expected line. Observation of quantitative characters was used to evaluate the diversity of each expected line by calculating the mean, variance, standard deviation and coefficient of variance. The results showed that the 7 populations of lines of hope were uniform because they had a similarity matrix value above 0.80 and the remaining 5 populations of lines of hope were not uniform because they had a similarity matrix value below 0.80. The results of data analysis on quantitative characters showed that germination age, flowering age, harvest age, terminal leaf length and width, number of internodes, and number of branches had low diversity. Character number of leaves and, diameter of the crown at the age of 3, 4, 5, 6, 7 and 10 WAP, petiole length, internode length, weight of wet stover, weight of dry stover, length and width of seeds had moderate diversity. Characters of wet pod weight, pod weight dryness, skin thickness, number of seeds and seed weight varied from high to very high.

Keywords: Bambara Groundnuts, Genetic Purity, Cluster Test, Diversity Coefficient