

RINGKASAN

Produksi kedelai dalam negeri belum mampu memenuhi kebutuhan kedelai nasional sehingga perlu ditingkatkan, salah satunya melalui pemuliaan tanaman dengan menciptakan varietas unggul. Korelasi antar karakter tanaman memiliki arti yang penting dalam kegiatan seleksi untuk menciptakan varietas unggul. Penelitian ini bertujuan untuk mengetahui karakter morfologi dan fisiologi beberapa genotipe kedelai yang berdaya hasil tinggi dan mengetahui korelasi karakter morfologi dan fisiologi dengan daya hasil kedelai yang dibudidayakan di daerah Banyumas.

Penelitian dilaksanakan di lahan petani Desa Papringan, Kecamatan Banyumas, Kabupaten Banyumas. Penelitian ini dilaksanakan pada bulan Oktober 2016 sampai Januari 2017. Rancangan percobaan yang digunakan Rancangan Acak Kelompok Lengkap (RAKL) non faktorial dengan 5 perlakuan berupa genotipe kedelai (Slamet, Grobogan, G2, G71 dan A343) dengan 8 ulangan. Variabel yang diamati berupa warna daun, bentuk daun, warna trikoma, warna bunga, warna polong, warna biji, bentuk biji, jumlah klorofil, jumlah stomata, laju tumbuh tanaman, tinggi tanaman, jumlah buku utama, jumlah buku total, jumlah cabang, umur pembentukan bunga, umur pengisian polong, umur masak fisiologis, jumlah polong isi, jumlah polong rusak, jumlah biji normal, jumlah biji rusak, bobot biji per tanaman, bobot biji per petak efektif, dan bobot 100 biji.

Hasil penelitian menunjukkan terdapat keragaman karakter morfologi dan fisiologi pada beberapa genotipe kedelai yang diuji, karakter jumlah cabang, jumlah polong isi, dan jumlah biji normal memiliki hubungan positif yang sangat kuat terhadap hasil, sedangkan jumlah buku total memiliki hubungan positif yang kuat dengan hasil dan jumlah buku utama memiliki hubungan positif yang cukup kuat dengan hasil, bobot 100 biji memiliki hubungan negatif yang cukup kuat dengan hasil dan genotipe kedelai G2 dan G71 memiliki potensi hasil tinggi.

SUMMARY

Domestic soybean production has not met the needs of the national soybean. Development of High Yielding Varieties is one of many solutions for fulfilling the national soybean demand. Knowing the correlation between morphological, physiological, agronomical characters and yield of plants is very important in the development of High Yielding Varieties. This research aimed to evaluate morphological and physiological characters of some soybean genotypes which could be used for developing high yielding varieties and to analyze the correlation between morphological, physiological, agronomical characters and yield of some soybean genotypes.

This research was conducted in farmers' fields Papringan Village, Banyumas District. This research was carried out from October 2016 until January 2017. A non factorial experiment consisted of five treatments (soybean genotypes) i e. (Slamet, Grobogan, G2, G71, and A343)and 8 replication arranged in Randomized Completely Block Design (RCBD) was used. The observed variables were shape of leaves and seeds, colour of leaves, trichome, flowers, pods, and seeds, number of chlorophyll, number of stomata, growth rates of plants, plant height, number of major nodes, number of nodes in total, number of branches, time of first flower formation, time of pod filling, time of physiological maturity, number of pods, number of damaged pods, number of seeds, number of damaged seeds, seed weight per plant, grain weight per plot effective, and weight of 100 seeds.

Results showed that the morphological, physiological and agronomical characters of tested soybean genotypes varied; the number of branches, the number of pods and the number of normal seeds had very strong positive correlation to the yield; the total number of nodes had strong positive correlation to yield; the number of major nodes had strong positive correlation with the results, weight of 100 seeds have a fairly strong negative relationship with the yield; G2 and G71 genotypes had a potency to be developed as high yielding varieties.