INTISARI

Analisis keragaan delapan galur harapan sorgum manis (*Sorghum bicolor* L. Moench) di lahan kering hasil pemuliaan Balai Penelitian Tanaman Serealia telah dilaksanakan Februari sampai Juni 2018 di Kebun Percobaan Tridharma Fakultas Pertanian Universitas Gadjah Mada, Banguntapan, Yogyakarta. Percobaan bertujuan untuk memperoleh deskripsi keragaan karakter agronomis galur-galur harapan sorgum manis, mengidentifikasi galur yang memiliki potensi hasil lebih baik dari varietas pembandingnya (Numbu dan Super 1), serta menduga nilai heritabilitas karakter komponen hasil galur-galur harapan sorgum manis. Kegiatan yang dilakukan adalah membandingkan delapan galur harapan sorgum manis, yaitu SRM 11-2, SRM 42-3, SRM 47- 1, SRM 48-1, SRM 51-2, SRM 52-3, SRM 70-1, dan SRM 71-2, dengan dua varietas pembanding yaitu Numbu dan Super 1. Percobaan disusun menggunakan rancangan acak kelompok (RAK) dengan empat ulangan. Tanaman ditanam dengan jarak 75 x 20 cm pada petak percobaan berukuran 3 x 5 m, selanjutnya diamati sepuluh tanaman perpetak sebagai sampel. Data kuantitatif dianalisis variansnya dan diuji lanjut dengan uji HSD Tukey pada taraf 5%. Galur-galur harapan sorgum manis di lahan kering memiliki perbedaan keragaan karakter tinggi tanaman, umur panen, bobot malai basah, volume nira, bobot malai kering, bobot biji/malai kering, dan bobot 1000 biji. Galur SRM 11-2 dan 52-3 memiliki potensi hasil lebih tinggi dibandingkan dengan varietas pembandingnya. Nilai heritabilitas umur panen, bobot malai basah, volume nira, tinggi tanaman, bobot malai kering, bobot biji/malai kering, dan bobot 1000 biji dikategorikan tinggi, sedangkan nilai heritabilitas umur berbunga 50 %, kadar brix nira, diameter batang, dan panjang malai dikategorikan sedang, serta nilai heritabilitas bobot biomassa dikategorikan rendah.

Kata kunci: keragaan, heritabilitas, sorgum manis

ABSTRACT

*Performance analysis of eight sweet sorghum (*Sorghum bicolor *L. Moench) promising lines tolerate to dryland of the Cereals Crop Research Institute was carried out from February to June 2018 at Tridharma Experimental field, Faculty of Agriculture, University Gadjah Mada, Banguntapan, Yogyakarta. The experiment aims to obtain a description of the agronomic traits of sweet sorghum promising line, identify lines yielding potential higher than control varieties (Numbu and Super 1), and estimate the heritability value of the component characteristics of the sweet sorghum promising lines. Activities carried out were comparing eight promising lines of sweet sorghum, namely SRM 11-2, SRM 42-3, SRM 47-1, SRM 48-1, SRM 51-2, SRM 52-3, SRM 70-1, and SRM 71 -2, with two control varieties namely Numbu and Super 1. The experiment was arranged using a randomized block design (RBD) with four replications. Plants were planted with a distance of 75 x 20 cm in a 3 x 5 m trial plot, then ten plot plants were observed as samples. The quantitative data were analyzed for variance and tested further by the Tukey HSD test at 5% level. Sweet sorghum promising lines tolerate to dryland have differences in the characteristics of plant height, harvesting date, fresh panicle weight, sap volume, dry panicle weight, dry seed weight/panicle, and weight of 1000 seeds. SRM lines 11-2 and 52-3 have higher yielding potential compared to control varieties. Heritability value of harvesting date, fresh panicle weight, sap volume, plant height, dry panicle weight, dry seed weight/panicle, and weight of 1000 seed were categorized into high, while heritability value of flowering date, sap brix content, stem diameter, and panicle length categorized as medium, and heritability value of biomass weights is categorized as low.*

Key words: performance, heretability, sweet sorghum.