

ABSTRAK

STUDI VIABILITAS BENIH LIMA GENOTIPE SORGUM (*Sorghum bicolor* [L.] Moench) PASCASIMPAN 33 BULAN DAN 57 BULAN DALAM RUANG SIMPAN BER-AC BERSUHU $15,9 \pm 0,92^{\circ}\text{C}$

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Penyediaan benih sorgum bermutu merupakan upaya untuk mendukung diversifikasi pangan. Salah satu kriteria benih bermutu adalah benih tetap mempunyai viabilitas yang tinggi setelah periode penyimpanan. Penelitian ini bertujuan untuk mengetahui viabilitas benih lima genotipe sorgum pascasimpan 33 bulan dan 57 bulan dalam ruang simpan ber-AC bersuhu $15,9 \pm 0,92^{\circ}\text{C}$. Penelitian ini dilakukan di Laboratorium Benih dan Pemuliaan Tanaman, Fakultas Pertanian, Universitas Lampung, pada Mei 2024 sampai Juli 2024. Penelitian ini menggunakan 2 faktor yang diterapkan dalam *split plot* dan diulang 6 kali dalam 6 kelompok. Faktor pertama adalah genotipe, yaitu v_1 = P/I 150-21-A Cymmit, v_2 = Kawali, v_3 = Mandau, v_4 = Samurai-2, dan v_5 = Suri. Faktor kedua adalah lama simpan, yaitu t_1 = 57 bulan dan t_2 = 33 bulan. Data dianalisis dengan analisis ragam dan uji BNJ 5%. Hasil penelitian menunjukkan bahwa viabilitas benih lima genotipe sorgum berbeda antar genotipe yang ditunjukkan oleh variabel persentase kecambah normal total, kecepatan perkecambahan, kecambah normal kuat, benih mati, dan daya hantar listrik. Viabilitas benih sorgum pascasimpan 33 bulan lebih tinggi dibandingkan pascasimpan 57 bulan pada semua variabel yang diamati. Pengaruh interaksi antara genotipe dan lama simpan nyata pada viabilitas benih sorgum yang ditunjukkan oleh: (a) persentase kecambah normal total pada Kawali, Suri, dan Samurai-2, (b) kecepatan perkecambahan pada Suri, Kawali, dan Samurai-2, (c) benih mati pada Kawali, Suri, dan Samurai-2, (d) kecambah normal kuat pada Kawali, Samurai-2, dan Suri, (e) bobot kering kecambah normal kuat pada P/I 150-21-A Cymmit, Kawali, dan Samurai-2, serta (f) daya hantar listrik pada P/I 150-21-A Cymmit, Kawali, dan Suri.

Kata Kunci: benih sorgum, genotipe, lama simpan, viabilitas benih.

ABSTRACT

VIABILITY STUDY OF SEEDS FROM FIVE SORGHUM (*Sorghum bicolor* [L.] Moench) GENOTYPES AFTER 33 AND 57 MONTHS OF STORAGE IN AN AIR-CONDITIONED ROOM AT $15,9 \pm 0,92^{\circ}\text{C}$

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The provision of high-quality sorghum seeds is an effort to support food diversification. One of the criteria for high-quality seeds is the ability to maintain high viability after a storage period. This study aimed to determine the viability of seeds from five sorghum genotypes after 33 months and 57 months of storage in an air-conditioned storage room at a temperature of $15.9 \pm 0.92^{\circ}\text{C}$. The research was conducted at the Seed and Plant Breeding Laboratory, Faculty of Agriculture, University of Lampung, from May 2024 to July 2024. A split-plot design was applied with two factors and six replications arranged in six blocks. The first factor was genotype, consisting of v_1 = P/I 150-21-A Cymmit, v_2 = Kawali, v_3 = Mandau, v_4 = Samurai-2, and v_5 = Suri. The second factor was storage duration, consisting of t_1 = 57 months and t_2 = 33 months. Data were analyzed using analysis of variance (ANOVA) followed by the Least Significant Difference (LSD) test at the 5% significance level. The results showed that the viability of seeds from the five sorghum genotypes differed among genotypes, as indicated by total normal seedling percentage, germination speed, percentage of vigorous normal seedlings, percentage of dead seeds, and electrical conductivity. Seed viability after 33 months of storage was higher than after 57 months for all observed variables. A significant interaction between genotype and storage duration was observed in the following variables: (a) total normal seedling percentage in Kawali, Suri, and Samurai-2; (b) germination speed in Suri, Kawali, and Samurai-2; (c) percentage of dead seeds in Kawali, Suri, and Samurai-2; (d) percentage of vigorous normal seedlings in Kawali, Samurai-2, and Suri; (e) dry weight of vigorous normal seedlings in P/I 150-21-A Cymmit, Kawali, and Samurai-2; and (f) electrical conductivity in P/I 150-21-A Cymmit, Kawali, and Suri.

Keywords: sorghum seeds, genotype, storage duration, seed viability.