ABSTRAK

PENGARUH SISTEM TANAM PADA VIGOR DAYA SIMPAN BENIH SORGUM (*Sorghum bicolor* [L] Moench) VARIERTAS NUMBU DALAM RUANG BERSUHU RENDAH

Oleh

Rahmawati Eka Widya Putri

Tanaman sorgum monokultur dan tumpangsari dengan tanaman lain, seperti tanaman buncis. Penelitian ini bertujuan untuk mengetahui pengaruh sistem tanam monokultur dan tumpangsari pada vigor daya simpan ruang simpan bersuhu rendah rendah 16,62 ± 0,69 ℃. Penelitian ini menggunakan Rancangan Acak Kelompok (RAK) dalam *split plot in time* dengan perlakuan faktorial dan 3 ulangan. Faktor pertama adalah sistem tanam (s) monokultur sorgum(s_1), tumpangsari sorgum-buncis tegak (s_2), tumpangsari sorgum-buncis rambat (s_3). Faktor kedua adalah lama simpan antara lain ls_1 (lama simpan 27 bulan), ls_2 (lama simpan 29 bulan), ls_3 (lama simpan 31 bulan). Data penelitian dianlisis dengan analisis ragam dan uji lanjutan menggunakan Uji Beda Nyata Jujur (BNJ) dengan $\bar{\alpha} = 0,05$. Hasil penelitian menunjukkan bahwa tanaman sorgum dalam pertanaman monokultur dan tumpangsari menyebabkan perbedaan vigor daya simpan pada variabel kecambah normal kuat, kecambah normal lemah, bobot kering kecambah normal dan benih mati. Lama simpan benih dapat menurunkan vigor daya simpan benih sorgum ditunjukkan oleh variabel daya berkecambah, daya hantar listrik dan benih mati. Pengaruh interaksi antara sistem tanam dan lama simpan hanya terlihat pada variabel daya hantar listrik.

Kata Kunci : benih sorgum, sistem tanam, lama simpan, vigor daya simpan.

ABSTRACT

THE EFFECT OF PLANTING SYSTEMS ON THE STORAGE VIGOR OF SORGHUM (Sorghum bicolor [L] Moench) SEEDS OF THE NUMBU VARIETY IN LOW-TEMPERATURE STORAGE

By

Rahmawati Eka Widya Putri

Sorghum plants can be cultivated as monoculture or intercropped with other plants, such as beans. This study aims to determine the effect of monoculture and intercropping planting systems on seed storage vigor in a low-temperature storage environment of 16.62 ± 0.69 ℃. The research employed a Randomized Block Design (RBD) in a split-plot in time with factorial treatments and three replications. The first factor was the planting system (s): monoculture sorghum (s_1), intercropped sorghum-upright beans (s_2), and intercropped sorghum-creeping beans (s_3). The second factor was the storage duration: ls_1 (27 months), ls_2 (29 months), and ls_3 (31 months). The data were analyzed using analysis of variance (ANOVA), followed by the Honest Significant Difference (HSD) test at $\alpha = 0.05$. The results showed that the planting systems (monoculture and intercropping) caused differences in seed storage vigor as indicated by variables such as strong normal seedlings, weak normal seedlings, dry weight of normal seedlings, and dead seeds. Seed storage duration reduced the storage vigor of sorghum seeds, as indicated by germination ability, electrical conductivity, and dead seed variables. The interaction effect between planting systems and storage duration was observed only in the electrical conductivity variable.

Keywords: sorghum seeds, planting system, storage duration, storage vigor