

RINGKASAN

Cekaman kekeringan dapat menyebabkan penurunan produksi padi. Keberadaan kultivar padi lokal toleran cekaman kekeringan dapat menjadi salah satu alternatif untuk mengantisipasi dampak kekeringan. Penelitian ini bertujuan untuk mengetahui perbedaan keragaan kultivar padi lokal berdasarkan karakter agronomik pada kondisi cekaman kekeringan, mengetahui ketahanan kultivar padi lokal terhadap cekaman kekeringan serta mengetahui keeratan hubungan antara karakter agronomik dengan ketahanan kekeringan.

Penelitian ini dilaksanakan pada bulan Maret 2020 sampai September 2020 di *screen house* Fakultas Pertanian Universitas Jenderal Soedirman, Kelurahan karawangkal, Kecamatan Purwokerto Utara, pada ketinggian tempat ± 110 mdpl. Rancangan penelitian yang digunakan adalah Rancangan Acak Kelompok (RAK) dengan dua faktor. Faktor pertama yaitu pemberian air (P) yang terdiri dari 2 taraf, yaitu P₁= kondisi optimum dan P₂= kondisi tercekam kekeringan. Faktor kedua yaitu kultivar padi lokal (V) yang terdiri dari 10 taraf yaitu V₁= Duyung, V₂= Inpago Unsoed-1, V₃= IR-64, V₄= Kalimutu, V₅= Mentik Wangi, V₆= Pandan Putri, V₇= Poso, V₈= Salumpikit, V₉= Srijaya, dan V₁₀= Towuti. Variabel yang diamati yaitu tinggi tanaman, panjang daun, lebar daun, umur berbunga, umur panen, jumlah anakan produktif, panjang malai, jumlah gabah per malai, bobot gabah per malai, bobot gabah per rumpun, bobot kering akar dan panjang akar. Data yang diperoleh dari hasil pengamatan dianalisis menggunakan Uji F. Apabila terdapat keragaman dilanjutkan dengan uji *Duncan Multiple Range Test* (DMRT) pada taraf 5%. Evaluasi ketahanan terhadap cekaman kekeringan didasarkan pada *Standard Evaluation System* (SES) dari *International Rice Research Institute* (IRRI) dan didukung Indeks Sensitifitas Kekeringan (ISK), sedangkan keeratan hubungan antara karakter agronomik dengan ketahanan dianalisis menggunakan korelasi.

Hasil penelitian menunjukkan bahwa semua kultivar padi lokal mengalami perubahan karakter agronomik pada kondisi tercekam kekeringan. Kultivar Duyung dan Inpago Unsoed-1 memiliki kemampuan adaptasi paling baik pada kondisi cekaman kekeringan berdasarkan pengamatan skoring SES pada saat fase pertumbuhan dan didukung oleh nilai rata-rata Indeks Sensitifitas Kekeringan (ISK), sedangkan yang memiliki kemampuan peka terhadap kondisi cekaman kekeringan adalah Kultivar IR-64 dan salumpikit. Panjang daun, jumlah gabah per malai, bobot gabah per malai, dan bobot gabah per rumpun secara konsisten menunjukkan keeratan hubungan dengan ketahanan terhadap cekaman kekeringan.

Kata kunci: Cekaman kekeringan, karakter agronomik, ketahanan, kultivar padi lokal.

SUMMARY

Drought stress can cause a decrease in rice production. The existence of local rice cultivars that are tolerant of drought stress can be an alternative to anticipate the impact of drought. This study aims to determine differences in the performance of local rice cultivars based on agronomic characters in drought stress conditions, to determine the resistance of local rice cultivars to drought stress and to determine the closeness of the relationship between agronomic characters and drought resistance.

This research was conducted from March 2020 to September 2020 at the screen house of the Faculty of Agriculture, Jenderal Soedirman University, Karawangkal Village, North Purwokerto District, at an altitude of ± 110 masl. The research design used was a randomized block design (RBD) with two factors. The first factor is the provision of water (P) which consists of 2 levels, P1 = optimum conditions and P2 = drought-stressed conditions. The second factor is the local rice cultivar (V) which consists of 10 levels, V1 = Duyung, V2 = Inpago Unsoed-1, V3 = IR-64, V4 = Kalimutu, V5 = Mentik Wangi, V6 = Pandan Putri, V7 = Poso, V8 = Salumpikit, V9 = Srijaya, and V10 = Towuti. The variables observed were plant height, leaf length, leaf width, flowering age, harvest age, number of productive tillers, panicle length, number of grain per panicle, grain weight per panicle, grain weight per hill, root dry weight and root length. The data obtained from the observations were analyzed using the F test. If there is diversity, it is followed by the Duncan Multiple Range Test (DMRT) at the 5% level. The evaluation of resistance to drought stress was based on the Standard Evaluation System (SES) from the International Rice Research Institute (IRRI), while the closeness of the relationship between agronomic characters and resistance was analyzed using correlation.

The results showed that all local rice cultivars experienced changes in their agronomic characters under drought-stressed conditions. Duyung and Inpago Unsoed-1 cultivars have the best adaptability to drought stress conditions based on the observation of SES scoring during the growth phase and supported by the average ISK value, while those that have the ability to be sensitive to drought stress conditions are Cultivar IR-64 and Salumpikit. Leaf length, total grain per panicle, grain weight per panicle, grain weight per hill consistently showed a close relationship with drought resistance resistance.

Key words: agronomic character, drought stress, local rice cultivar, resistance.