

RINGKASAN

Produksi padi mengalami fluktuasi dalam lima tahun terakhir, sementara kebutuhan terus meningkat. Upaya peningkatan produksi dapat dilakukan melalui pemuliaan varietas unggul yang adaptif terhadap berbagai kondisi lingkungan, khususnya perbedaan ketinggian tempat. Keberhasilan program pemuliaan dipengaruhi oleh keragaman genetik, nilai heritabilitas, kemajuan genetik, dan hubungan antar karakter penting. Oleh karena itu, penelitian ini bertujuan untuk mengkaji keragaman genetik, heritabilitas, kemajuan genetik, tanggap umur berbunga dan panen, serta korelasinya terhadap beberapa karakter lain.

Penelitian ini dilaksanakan pada bulan Juni 2024 hingga Februari 2025. Delapan varietas padi diuji menggunakan rancangan acak kelompok (RAK) faktorial dengan tiga ulangan di dua ketinggian tempat berbeda, yaitu dataran medium dengan ketinggian tempat 744 m dpl (Kelurahan Kramatan, Wonosobo) dan dataran tinggi dengan ketinggian tempat 1.049 m dpl (Desa Gununglangit, Banjarnegara). Variabel yang diamati meliputi komponen hasil dan hasil tanaman padi.

Hasil penelitian menunjukkan karakter gabah total per malai memiliki KKG dan KKF sedang, heritabilitas arti luas yang tinggi, kemajuan genetik tinggi, berkorelasi nyata dan positif serta berpengaruh langsung terhadap hasil sehingga karakter ini dapat dijadikan kriteria seleksi untuk menghasilkan padi berdaya hasil tinggi. Penelitian ini menunjukkan umur panen, persentase gabah isi per malai, dan gabah total per malai berpengaruh langsung secara positif terhadap hasil. Peningkatan ketiga karakter tersebut berdampak pada kenaikan bobot gabah kering giling.

SUMMARY

Rice production has fluctuated in the last five years, while demand continues to increase. Efforts to increase production can be carried out through the breeding of superior varieties that are adaptive to various environmental conditions, especially differences in place height. The success of breeding programs is influenced by genetic diversity, heritability values, genetic advancement, and relationships between important characters. Therefore, this study aims to examine genetic diversity, heritability, genetic progress, flowering age and harvest response, as well as their correlation with several other characters.

This research was carried out from June 2024 to February 2025. Eight rice varieties were tested using a factorial randomized block design (RBD) with three replications at two different altitudes, medium land with altitude of 744 m above sea level (Kramatan Village, Wonosobo) and a high land with altitude of 1,049 m above sea level (Gununglangit Village, Banjarnegara). The variables observed included yield components and rice crop yields.

The results of the study showed that the character of total grain per panicle has a medium KKG and KKF, high heritability of broad meaning, high genetic progress, real and positive correlation and has a direct effect on the results so that this character can be used as a selection criterion to produce rice with high yield. This study shows that the harvest age, the percentage of grain content per panicle, and total grain per panicle have a direct positive effect on yields. The increase in the three characters has an impact on the increase in the weight of milled dry grain.

