

RINGKASAN

Padi (*Oryza sativa* L.) merupakan tanaman pangan yang dikonsumsi lebih dari setengah jumlah penduduk dunia. Beras sebagai bahan makanan pokok selain berfungsi sebagai sumber energi, protein, vitamin dan mineral, juga dapat dimanfaatkan sebagai pangan fungsional. Gaya hidup dan pola konsumsi pangan masyarakat yang kurang memperhatikan tingkatan indeks glikemik (IG), telah berdampak terhadap peningkatan penyakit diabetes melitus (DM). Penderita diabetes sering mengurangi, bahkan pantang makan nasi, dan mengganti dengan umbi-umbian. Hal ini karena anggapan bahwa nasi merupakan pangan yang dapat menaikkan kadar gula darah secara cepat dan tinggi. Padahal tidak semua jenis beras bersifat hiperglikemik. Beberapa varietas padi unggul dengan indeks glikemik rendah telah dilepas oleh Balai Besar Penelitian Tanaman Padi. Namun kebanyakan dari padi dengan indeks glikemik rendah memiliki tekstur nasi yang pera, sehingga mempengaruhi penerimaan dan pemilihan beras oleh konsumen. Padi varietas Cisokan memiliki indeks glikemik 34, kadar amilosa yang tinggi yaitu 26,7%, dan tekstur nasi pera yang kurang disukai oleh konsumen. Padi varietas Ciherang memiliki indeks glikemik yaitu 54, kadar amilosa sedang yaitu 22,9%, dan tekstur nasi pulen sehingga banyak disukai oleh konsumen.

Penelitian ini bertujuan untuk mengkaji keragaan karakter agronomik dan korelasi karakter agronomik dengan hasil famili F₂ hasil persilangan padi varietas Cisokan dan Ciherang, serta mendapatkan genotip-genotip F₂ terbaik untuk dilanjutkan seleksi tahap berikutnya. Penelitian telah dilaksanakan di lahan sawah, Desa Pasir Kulon, Kecamatan Karanglewas, Kabupaten Banyumas pada bulan Desember 2015 sampai April 2016. Penelitian menggunakan Rancangan Acak Kelompok Lengkap dan rancangan perlakuan *Augmented Design* dengan tiga ulangan. Variabel yang diuji terdiri atas: tinggi tanaman, jumlah anakan total, jumlah anakan produktif, umur berbunga, umur panen dan bobot gabah per malai.

Hasil penelitian menunjukkan bahwa karakter agronomik pada famili F₂ beragam berdasarkan pada tinggi tanaman (73,49 cm-158,29 cm), jumlah anakan total (3,68-56,68 anakan), jumlah anakan produktif (3,17-48,17 anakan), umur berbunga (75,49 hss-100,27 hss), umur panen (110,33 hss-117,33 hss) dan bobot gabah per malai (0,27 g-5,37 g). Karakter agronomik yang berkorelasi nyata dan positif dengan hasil adalah tinggi tanaman, jumlah anakan total dan jumlah anakan produktif. Galur-galur yang dapat dilanjutkan pada seleksi generasi F₃ berjumlah 20, yaitu CS X CH1-2-17, CS X CH1-5-64, CS X CH1-6-13, CS X CH1-6-41, CS X CH1-8-13, CS X CH1-9-4, CS X CH1-9-10, CS X CH1-12-6, CS X CH1-13-30, CS X CH1-14-32, CS X CH1-15-66, CS X CH1-16-50, CS X CH1-16-53, CS X CH1-20-1, CS X CH1-20-27, CS X CH1-20-31, CS X CH1-23-59, CS X CH1-24-27, CS X CH1-24-61, CS X CH1-30-9.

SUMMARY

Rice (*Oryza sativa* L.) is food crops consumed by more than half of the world population. Rice as a staple food in addition to functioning as a source of energy, proteins, vitamins and minerals, can also be used as a functional food. The lifestyle and food consumption patterns of society that less attention levels glikemik index (IG), has affected the improvement of diabetes mellitus (DM). Patients with diabetes often reduce, even abstention from eating rice and replace with roots. This is because the assumption that the rice is a food that can raise the blood sugar quickly and high. Though not all types of rice is hiperlikemik. Some of the superior rice variety with low glikemik index has been removed by the porch of the large Research Rice. But most of the rice with low glikemik index has the texture of rice that unflavour, so that affect the acceptance and the selection of rice by consumers. The Rice varieties Cisokan have glikemik index 34, amilosa level that hight 26,7%, and rice texture unflavour that less liked by customers. The Rice varieties Ciherang have glikemik index namely 54, serum amilosa is namely 22, 9%, and texture gives fluffier rice so that many preferred by consumers.

The research aimed to determine agronomic characters and correlation between agronomic characters in F_2 family derived from the crossing of Cisokan and Ciherang, and to select best lines of F_2 to be continued into F_3 . The research was carried out in the paddy field of Pasir Kulon Village, Karanglewas Subdistrick, Banyumas Regency. It was started from December 2015 to April 2016. Randomized completely block design (RCBD) and the basic of Augmented Design with three replications were used in this research. Observed variables were consisted of plant height, total number of tillers, total number of productive tillers, flowering age, harvesting age and grain weight per panicle.

Result of the study showed that agronomic characters in F_2 family were varied based on plant height (73.49 cm-158.29 cm), total number of tilles (3.68-56.68), total number of productive tillers (3.17-48.17), flowering age (75.49 hss-100.27 hss), harvesting age (110.33 hss-117.33 hss) and grain weight per panicle (0.27 g-5.37 g). Plant height, total number of tillers, total number of productive tillers had positive correlation with yield. Selected to be continued to F_3 generation that is 20 lines as followed are: CS X CH1-2-17, CS X CH1-5-64, CS X CH1-6-13, CS X CH1-6-41, CS X CH1-8-13, CS X CH1-9-4, CS X CH1-9-10, CS X CH1-12-6, CS X CH1-13-30, CS X CH1-14-32, CS X CH1-15-66, CS X CH1-16-50, CS X CH1-16-53, CS X CH1-20-1, CS X CH1-20-27, CS X CH1-20-31, CS X CH1-23-59, CS X CH1-24-27, CS X CH1-24-61, CS X CH1-30-9.