Intisari

Padi beras merah telah dibudidayakan di Kecamatan Ngombol, Purworejo sejak lama tetapi mempunyai fenotipe yang beragam baik morfologi maupun berasnya. Seleksi massa dan galur murni dilakukan untuk memilih genotipe terbaik dalam populasi tersebut. Penelitian ini bertujuan untuk mengetahui kemajuan seleksi pada seleksi massa dan seleksi galur murni padi beras merah lokal Purworejo dan mendapatkan genotipe hasil seleksi yang lebih baik daripada populasi asal. Penelitian menggunakan 20 perlakuan yang terdiri atas genotipe padi beras merah lokal Purworejo sebanyak 18 galur hasil seleksi galur murni (G1-G18), hasil seleksi massa oleh petani (G20) dan populasi asal atau sebagai kontrol (G19). Percobaan lapangan menggunakan rancangan RCBD dengan tiga ulangan.Pengamatan dilakukan pada morfologi dan komponen hasil.Nilai kemajuan seleksi diperoleh dari selisih atau perbedaan antara populasi keturunan tanaman terpilih (galur/seleksi masa) dengan populasi asal. Hasil penelitian menunjukkan bahwa kemajuan seleksi tertinggi pada persentase gabah isi yaitu G8 dan G11 (-1%) range yaitu dari -13% hingga -1%, persentase gabah hampa (lebih sedikit) G8 (9%), bobot per rumpun G6 (53%), sertabobot 1000 gabah G16 (21%). Hasil analisis warna menunjukkan G17 mempunyai warna paling merah karena nilai a* tinggi (a*=14.84) dan b* tidak terlalu tinggi (b*=20.89) sedangkan L* rendah (L*=41.11).Berdasarkan hasil seleksi, G3,G5, G7, dan G10 merupakan genotipe yang paling baik (mendasarkan warna beras dan produktivitasnya).

Kata kunci : kemajuan seleksi, padi beras merah,seleksi galur murni, seleksi massa.

Abstract

Red rice has been cultivated in Ngombol district, Purworejo, since a long time ago, but still diverse phenotypically both plant's morphology and its dehulled rice. Mass and pure line selections were performed to select the best genotypes in the population. This study aimed to determine the advance of selection on mass selection and pure line selection of Purworejo landrace red rice and to get the better selected genotype than the origin population. The study used 20 treatments consisted of Purworejo local red rice genotypes which were 18 lines of pure line selection (G1-G18), the mass selected population by farmers (G20) and the original population as a control (G19). The field trial of 20 populations used RCBD design with three repetitions. Observations conducted on the morphology and yield components. Value of selection advances were obtained from the difference between the improved breed populations (line/mass selection) and an origin population. The results showed that the highest selection advance of percentage of filled grain was G8 and G11 (-1%) ranged from -13% to -1%, the percentage of barrenness G8 (9%), weight per hill G6 (53%), and the weight of a 1000 grain G16 (21%). Color analysis indicated the G17 had a red color due to the high value of a* (a*=14.84) and b* was not too high (b*=20.89) while the L* was low (L*=41.11). Based on the results of the selection, G3, G5, G7, and G10 were the best genotypes (based on dehulled rice color and productivity).

Keywords: mass selection, pure line selection, red rice, selection advance.