

Genetic Parameters, Inter-relationship Among Agronomic Traits and Dehulled Rice Morpho-Biochemical Profile of Promising Black Rice x Mentik Wangi Lines

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Abstract	<p>A comprehensive understanding of the genetic parameters and the interrelationship among characters in the breeding population is crucial for selecting low amylose and high antioxidant black rice varieties. Meanwhile, dehulled rice morpho-biochemistry profile can be used to determine the grain quality of F6 and F7 lines of Black Rice x Mentik Wangi var. The objectives of this study were to determine the agronomic traits, figure up the genetic parameters, describe the relationship among agronomic characteristics of the F6 lines, and determine the morpho-biochemical profile of F7 dehulled rice. Agronomic traits showed a difference in each line. Genetic parameters in each trait showed various categories. Path analysis showed that the number of tillers affected the dry weight and grain weight per panicle, but the plant dry weight did not directly affect the weight of 1,000 grain. Directly, the weight of 1,000 grain was only significantly affected by the grain weight per panicle trait. The F7 lines had a difference in grain length and amylose content. The dehulled rice color of the two lines showed the combination of the two parents. Based on the student T-test conducted on F6 and F7 grain, there was no difference in antioxidant content between the two sample groups. The antioxidant activity of all lines was in the range between the antioxidant activities of the two checked varieties. Although further research is still needed, the lines have the potency to be developed as low amylose pigmented rice.</p>
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