

Studies on DNA Sequence Variation in *Waxy* Gene of Rice¹

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Abstract

To study DNA sequence variation in *waxy* alleles and genetic recombination in early generation for the application of the marker-assisted selection (MAS), eight varieties including TNG 67, TK 8, TK 9, TCS 10, TNG 71, KS 139, KOSH, and TKW 1 were used as materials. DNA sequence variations of eight varieties were analyzed. The copy numbers of CT repeats and one SNP (A / C) on exon 5 were identified from full length of 5000 bp *waxy* alleles of eight varieties. These variations are available for selecting individuals with various *waxy* genotypes. It indicated that applying MAS in F₂ population to accelerate breeding program is a promising strategy. The results of this study could provide information for the improvement of rice quality and early generation selection.

Key words: Rice, *Waxy* gene, Starch, SSR marker.

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