AMYLOSE CONTENT
IMPROVEMENT OF OM576 RICE GENOTYPE AIDED BY SSR MOLECULAR MARKER

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OM576 is an improved rice variety that was released by selection from the lines derived from a cross between indica genotypes as IR84 and Hungary for high grain yield, pest and disease resistance, well adatability to the Southern rice cultivation areas, especially in Mekong River Delta. However, this cultivar exhibited low quality properties due to its high amylose. The amylose content is aware of controlling gene, which locates at the waxy locus on short arm on chromosome 6. The amylose content of OM576 is improved by introgressing the waxy gene of VD20 genotype, which evolved its low amylose content. Marker-assisted backcrossing (MAB) was applied to quickly select the decisive inviduals carrying donor allele from VD20. Accordingly, RM190 and RM510 exhibited their polymorphism and demonstrated their close linkage to the waxy gene among 100 individuals of BC_2F_1. Of 53 individuals carrying intermediate amylose content, 35 and 12 ones espressed their high and low amylose content, respectively. In case of RM190, heterozygous genotype as Aa accounted for 81.63%, and RM510 for 76.07%. This may be a useful tool (marker-assisted backcrossing) to improve the intermediate and low amylose content in rice breeding.