IDENTIFICATION OF Psy1 GENE ALLELES RESPONSIBLE FOR CAROTENOID ACCUMULATION IN WHEAT GRAINS

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The aim of the research was to select and optimize marker systems for identification of Psy1 genes alleles, which are responsible for different levels of carotenoid pigments accumulation in wheat grains, as well as to screen varieties for the selection of valuable genotypes. 162 wheat samples were analyzed by the polymerase chain reaction method. Among them, varieties and lines with different allelic states of Psy-A1 and Psy-B1 genes were identified. The Psy-D1 gene did not show any polymorphism. As a result, samples with valuable alleles of Psy1 genes, which potentially contain increased carotenoids content in grains, were selected.

Key words: Psy1 genes, carotenoids, molecular markers, Triticum aestivum.

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