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Czech J. Genet. Plant Breed.

Bouziani M., Khelifi D.:

Genetic diversity of high and low molecular weight glutenin subunits in Saharan bread and durum wheats from Algerian oases

Czech J. Genet. Plant Breed., 48 (2012): 23-32

Saharan wheats have been studied particularly from a botanical viewpoint. Genotypic identification, classification and genetic diversity studies to date were essentially based on the morphology of the spike and grain. For this, the allelic variation at the glutenin loci was studied in a set of Saharan bread and durum wheats from Algerian oases where this crop has been traditionally cultivated. The high molecular weight and low molecular weight glutenin subunit composition of 40 Saharan bread and 30 durum wheats wa

determined by SDS-PAGE. In Saharan bread wheats 32 alleles at the six glutenin loci were detected, which in combination resulted in 36 different patterns including 17 for HMW and 23 for LMW glutenin subunits. For the Saharan durum wheats 29 different alleles were identified for the five glutenin loci studied. Altogether, 29 glutenin patterns were detected, including 13 for HMW-GS and 20 for LMW-GS. Three new alleles were found in Saharan wheats, two in durum wheat at the *Glu-B* and *Glu-B3* loci, and one in bread wheat at the *Glu-B1* locus. The mean indices of genetic variation at the six loci in bread wheat and at the five loci in durum wheat