

## عنوان مقاله:

Genetic Variation of Glutenin Subunits and Alleles in Iranian Wheat cultivars

## محل انتشار:

چهارمین کنگره بین المللی و شانزدهمین کنگره ملی ژنتیک (سال: 1399)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

**Background and Aim:** Glutenins and gliadins, gluten proteins, are the most important components of wheat seeds and provide visco-elasticity to the dough, which defines its bread-making quality. The glutenin characteristics of wheat germplasm have a potential value and understanding the allelic distribution in glutenins loci is very important for any wheat breeding program. **Methods:** In the present study, 17 Iranian wheat lines and cultivars were analyzed for diversity in high and low molecular weight glutenin subunits and gene alleles. **Results:** In studied cultivars, 11 different high molecular protein subunits were identified, three of which were related to Glu-A1, five for Glu-B1 and three were related to Glu-D1. The Glu-1 loci scores ranged from 5-10.1 with an average of 6.59 for all cultivars. Three cultivars Gaspard, Saseyon and LineA had the highest allelic scores from 8 to 10. The highest frequency at loci Glu-A1, Glu-B1, Glu-D1 were for subunits Null (76%), Y + 8 or Y + 9 (35%) and Y + 12 (59 %), respectively. It was observed that in Sorkhtokhm cultivar allelic composition at the Glu-D1 locus, the relative mobility in gel electrophoresis (10%) had a behavior similar to Y + 10 subunit, this allelic combination in this research was named Y/1+10\*. **Conclusion:** Low molecular weight glutenin subunit genes were investigated using DNA primer pairs for Glu-3D.3, Gluu, Glu-3D.4 and Glu-D3 loci. One allele was identified by Glu-3D.3 (600 bp), Gluu (600 bp), Glu-3D.4 (700 bp), whereas two alleles were identified by Glu-D3 (300 and 500 bp).

## کلمات کلیدی:

Allelic variation, Glutenin, HMW-GS, LMW-GS

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