

## **Abstract**

The baking quality of wheat is a complicated trait, influenced by several factors such as quality and quantity of glutene content. Wheat glutenins are divided in to two subgroups, high molecular weight glutenins (HMW) and low molecular weight glutenins (LMW), of which HMWs have more important role in baking quality. To investigate the variation among Iranian wheat cultivars with regards to Glu-1 gene (HMW), 100 cultivars of Iranian imported and native cultivars collected and studied using STS-PCR method. Fourteen-days-old plants from pots were used to extract DNA. Four pairs of specific primers used on Glu- D1, Glu-B1 and Glu-A1 locus to perform PCR. The observed polymorphism were analyzed by multivariate methods. Three principal components explained 61.41% of the variation among the studied population. Cultivars were divided into 12 main groups, at the level of 0.63 using Jaccard's similarity coefficient. Results indicated that it is a significant variation in Glu-1 locus among Iranian wheat cultivars. Furthermore, a correlation between the studied polymorphism and geographic distribution of the cultivars were observed.

**Key words:** Genetic distance, Glutenin, Baking quality, STS polymorphism



University of Zabol  
Graduate school  
Faculty of Agriculture  
Department of Plant Breeding and Biotechnology

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**Supervisors:**

Dr. M. Solouki  
Dr. M. Forootan

**Advisors:**

Dr. B. Siah sar

**By:**

Y. Shiri

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