

## عنوان مقاله:

Seed Storage Protein Profile of Grain Legumes Grown in Iran, Using SDS-PAGE

## محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 3، شماره 4 (سال: 1380)

تعداد صفحات اصل مقاله: 6

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## خلاصه مقاله:

Seed protein profiles of ۴۷ accessions belonging to eleven species and four tribes of grain legumes were studied, by extracting the total proteins from ten single seeds in each accession and performing SDS-Polyacrylamide gel electrophoresis. All eleven species were clearly recognizable from their protein banding patterns, but only Phaseolus vulgaris expressed high intraspecific variations, followed by Lathyrus sativus. Variation among accessions of other species was very limited. Cluster analysis, after quantifying the protein bands, using UPGMA procedure, showed phylogenetic relationships which were in a good concordance with species classification based on morphological characters. Accessions of tribe Viciaeae formed one cluster (Vicia faba, Lens culinaris, Pisum sativum, Lathyrus sativus and Vicia ervilia) having nearly equal amounts of three categories of polypeptide: high, moderate and low molecular weight. The second cluster was a small tribe of Cicereae (Cicer arietinum accessions) having moderate and low molecular weight polypeptides. Accessions of Phaseoleae tribe formed the third cluster (Phaseolus vulgaris, Vigna unguiculata and Vigna radiata), having predominantly high molecular weight polypeptides. Finally, the more distinct tribe, Aeschynomeneae (Arachis hypogaea accessions), formed a separate cluster exhibiting a special banding pattern. A unique discrepancy was observed about Glycine max, which belongs to Phaseoleae but was clustered with Cicereae.

## کلمات کلیدی:

SDS-PAGE, Grain legumes, Seed storage protein

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