

## **Evaluation of Morphological, and Agronomical Characteristics and Classify of Iranian Landraces of Onion (*Allium cepa* L.).**

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In order to evaluate morphological and agronomical characteristics of 19 landraces of onions and one foreign cultivar (Yellow Sweet Spanish) and to classify them, this experiment was conducted at the Research Farm of the College of Agriculture of Isfahan University of Technology, in 1998. The results of analysis of variance showed significant differences among genotypes for all of the morphological and agronomical traits. Dry weight and number of days to emergence had the highest and lowest coefficients of genetic variability, respectively. Plant fresh weight, yield of 30 plants and total yield also had high coefficients of variability. Broadsense heritability estimates were high for all of the traits, indicating low environmental effects on them. Based on cluster analysis and plot of the first two canonical variables, the genotypes were classified in 4 groups with different agronomic traits. Canonical discriminant analysis based on 9 agronomic traits introduced 3 canonical variables which justified 99.9 percent of the total variation among characters. Principal component analysis revealed 4 principale and factor analysis showed 3 factors which explained 87.3 and 95.5 percent of the total variation among characters respectively. The first and second factors were related to adaptation and assimilate translocation, respectively. In third factor bulb diameter, bulb height and bulb weight in positive directions and sensitivity to *fusarium* in negative direction had greater loads.