

## The Study of Genetic Diversity in Canola Cultivars of Kashmar-Iran Region

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**Abstract :** To study the genetic diversity in rapeseeds and agronomic traits, an experiment was conducted using multivariate statistical methods at Agricultural Research Station of Kashmar in 2012-2013. In this experiment, ten genotypes of rapeseed in a Randomized Complete Block designs with three replications were evaluated. The following traits were studied: seed yield, number of days to the fifty percent of flowering, plant height, number of pods on main stem, length of the pod, seed yield per plant, number of seed in pod, harvest index, weight of 100 seeds, number of pods on lateral branch, number of lateral branches. In analyzing the variance, differences between cultivars were significant. The average comparative revealed that the most valuable variety was Licord regarding to the traits while the least valuable variety was Opera. In stepwise regression, harvest index, grain yield per plant and number of pods per lateral branches were entering to model. Correlation analysis showed that the grain yield with the number of pods per lateral branches and seed yield per plant have positive and significant correlation. In the factor analysis, the first five components explained more than 83% of the variance in the data. In the first factor, seed yield and the number of pods per lateral branches were of the highest importance. The traits, seed yield per plant, and pod per main stem were of a great significance in the second factor. Moreover, in the third factor, plant height and the number of lateral branches were more important. In the fourth factor, plant height and one hundred seeds weight were of the highest variance. Finally, days to fifty percent of flowering and one hundred seeds weight were more important in fifth factor.

**Keywords :** rapeseed, variance analysis, regression, factor analysis

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