

عنوان مقاله:

Identification of Promising Oilseed Rape Genotypes for the Tropical Regions of Iran Using Multivariate Analysis

محل انتشار:

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خلاصه مقاله:

Releasing new adapted oilseed rape cultivars among the available resources of rapeseed would be a valuable method

to increase the cultivar diversity in the tropical regions. Low adaptable and high yield cultivars resources of oilseed rapes are now available in the tropical regions of Iran. The current research aimed to identify new high yield and adaptable genotypes adaptable across various tropical regions. To this end, ۲۰ new genotypes and a check variety (Dalgan) were cultivated in the five tropical regions of Iran based on a randomized complete block design (RCBD) with three replications during the ۲۰۱۹ to ۲۰۲۰ cropping season. The experimental sites are composed of five locations in Iran, including Gorgan, Sari, Rasht, Borazjan and Zabol. During the growth season, several phenological and quantitative traits were recorded. Combined ANOVA revealed significant genotype by environment interaction for all studied quantitative traits. Days to start flowering and days to end flowering showed the highest heritability. Correlation analysis showed a significant positive relationship between yield and flowering period, the number of sub-branches and also the number of pods per plant, but a negative and significant correlation with the days to maturity. Path analysis showed that the days to maturity had the most negative direct effect on yield and the days to start flowering, while the number of sub-branches had the most positive direct effect on yield. Canonical correlation showed that yield is correlated positively with phenological traits. The principal component analysis showed that the two first components covered ۶۸.۰۷% of all data variations which ۱۲ genotypes were correlated with these two components. Cluster analysis categorized evaluated genotypes into three main groups. Finally, eight genotypes were selected in the current study, which had high yield and adaptability in the tropical regions of Iran

کلمات کلیدی:

Brassica napus, Correlation, Cluster Analysis and Path analysis, Oilseed Rape

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