

عنوان مقاله:

Agro-physiological parameters for improving drought tolerance in rapeseed genotypes to cultivate in saline soils

محل انتشار:

دوفصلنامه تحقیقات کشاورزی ایران، دوره 39، شماره 2 (سال: 1400)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Bahman Pasban Eslam - Associate Professor of Horticulture and Crops Research Department, East Azarbaijan
, Agricultural and Natural Resources Research and Education Center, AREEO, Tabriz

Amir Hossein Shirani Rad - Professor of Seed and Plant Improvement Institute, AREEO, Karaj, Iran

خلاصه مقاله:

ABSTRACT- This study was conducted to introduce agro-physiological traits for improving drought tolerant rapeseed winter genotypes for cultivation in saline areas. Eighteen rapeseed genotypes were evaluated under non-stressed and drought-stressed conditions from flowering and seed filling stages to seed maturity for two years (۲۰۱۲-۲۰۱۴) at the saline soils ($EC=۶.۷$ dS m^{-1}) in Agricultural and Natural Resources Research and Education Center of East Azarbaijan, Iran. Drought stress significantly decreased pod length, plant height, seed yield, yield components and stomatal conductance and increased canopy temperature. Among the genotypes, significant differences were observed for pod length, the number of seeds in a pod, seed and oil yields, and stomatal conductance. The correlations among the traits were significantly positive. According to the results of genotypes grouping, HW_{۱۰۱}, L_{۱۸۳}, LY_۳, and LY_۲ having higher pod length, the number of seeds in a pod, stomatal conductance, seed and oil yields, which were recognized as the promising ones. The results of this study indicated that, the pod length, the number of seeds in a pod and stomatal conductance as simple and easy parameters can be used to select late season drought tolerant rapeseed winter genotypes for cultivation in saline areas. Also, the cluster analysis method was able to discriminate productive genotypes. Water deficit during flowering and seed filling stages, decreased the mean of seed yields by ۸۰۰ and ۵۸۴ Kg h^{-۱} during the first year and ۱۷۶۴ and ۱۱۵۴ Kg h^{-۱} during the second year of the experiment, of this study respectively. Thus, it was concluded that the evaluated rapeseed genotypes at the flowering stage were more sensitive to drought compared to the seed filling stage.

کلمات کلیدی:

cluster analysis, Pod length, Seed yield, Stomatal conductance

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1186308>

