

عنوان مقاله:

Genetic diversity of triticale and bread wheat genotypes based on principle component analysis

محل انتشار:

پنجمین کنگره بین المللی توسعه کشاورزی، منابع طبیعی، محیط زیست و گردشگری ایران (سال: 1400)

تعداد صفحات اصل مقاله: 10

نویسندگان:

Sara Farokhzadeh - *PhD of Plant Breeding, Department of Plant Production, Shiraz University, Collage of Agriculture and Natural Resources of Darab, Darab, Iran*

Zahra Zinati - *Assistant Professor, Department of Agroecology, Shiraz University, Collage of Agriculture and Natural Resources of Darab, Darab, Iran*

.Elham Sadat Mobasseri Pour - *Department of Agronomy, Darab Agricultural Jihad, Darab, Iran*

Mahdiyeh Rajaei - *PhD of Agroecology, Research Institute of Plant Production Technology, Shahid Bahonar University of Kerman, Kerman, Iran*

خلاصه مقاله:

Genetic diversity plays a key role in the germplasm improvement which is directly associated with the crop production. To study the genetic variation of ۴ triticale lines in comparison with ۶ bread wheat cultivars, an experiment based on randomized complete block design with three replications was conducted in the field of agricultural research station of Darab, Iran. The highest phenotypic and genotypic coefficient of variation was recorded for grain yield (GYLD), harvest index (HI), stem weight (STMW), tiller number per plant (TN/P), fertile spike number per plant (FSN), straw weight (SW), grain number per spike (GN/S) and biological yield (BY), respectively. GYLD was significant correlated with HI, BY, ۱۰۰۰-grain weight (TGW), GN/S, spikelet number per spike (SN/S), leaf number (LN) and plant height (PHT). Based on principal component analysis (PCA), the first six components explained over ۹۳% of genetic variation among the ۱۰ genotypes. The most of the variability in the data are justified by the first PC, which was correlated with GYLD, TGW, GN/S, SN/S, LN and main leaf width (MLW) in the positive direction; and FSN and TN/P in the negative direction. Therefore, the selection may be done according to the first PC, and it is helpful for a good breeding program .for development of high-yielding cultivars

کلمات کلیدی:

Genetic diversity, Heritability, Correlation, PCA, Grain yield

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1276151>



