

GENETIC LINKAGE DISEQUILIBRIUM FOR DROUGHT TOLERANCE IN ETHIOPIAN DURUM WHEAT

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SSR, durum wheat, germplasm, drought tolerance, linkage disequilibrium, QTL

Ethiopian durum wheat [*Triticum turgidum* ssp. *durum* ($2n = 4x = 28$)] germ plasm shows peculiar characteristics and is a source of many traits, including disease resistance, environmental stability, tolerance to environmental stresses, such as drought and low temperature.

A durum wheat collection of 234 genotypes from nine populations of three Ethiopian regions: (Tigray, Gonder and Shewa) were used to define the linkage disequilibrium in drought tolerances' QTL regions by 60 SSRs markers located closely to these QTL on chromosomes 2, 4 and 6.

The assessment of genetic variation and its components (i.e. among regions, populations/region, and within populations) was variable when different QTL regions were considered. The markers located on chromosome 4 showed statistically significant differences only between regions, whereas those located on chromosome 2 and 6 were significantly different also for the components between and within populations. Some loci were in linkage disequilibrium at all the analysed regions whereas others were in disequilibrium only in a single region, indicating different selection pressures in the analysed regions.