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# FROM SEED TO PASTA III

A SUSTAINABLE DURUM WHEAT CHAIN  
FOR FOOD SECURITY AND HEALTHY LIVES

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## FROM KAZAKHSTAN BASED ON MICROSATELLITE MARKERS

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Durum wheat (*Triticum durum* Desf.) is an important crop both in the world and in Kazakhstan. Effective breeding strategies require knowledge of the genetic diversity level of local cultivars. Polymorphism of the 92 durum accessions, including 29 local accessions, was analyzed using 10 microsatellite markers. The average polymorphic information content (PIC) values for studied DNA markers was 0.3658 and ranged from 0.1267 in Xgwm219 to 0.5457 in Xgwm247. The average genetic diversity indices of Shannon and Nei were equal to 0.7174, 0.4243, respectively. The level of genetic diversity of local accessions was relatively high in comparison to the rest of the studied samples. The genetic distance between cultivars was calculated. Also, with the help of microsatellite markers, a cluster analysis of the studied cultivars was conducted. Polymorphic markers were selected for future studies on the durum genetic diversity. The obtained information will be used in local breeding programs.

ABSTRACT