

Genetic Characterization of Barley Genotypes via Inter-Simple Sequence Repeat

Authors : Mustafa Yorgancılar, Emine Atalay, Necdet Akgün, Ali Topal

Abstract : In this study, polymerase chain reaction based Inter-simple sequence repeat (ISSR) from DNA fingerprinting techniques were used to investigate the genetic relationships among barley crossbreed genotypes in Turkey. It is important that selection based on the genetic base in breeding programs via ISSR, in terms of breeding time. 14 ISSR primers generated a total of 97 bands, of which 81 (83.35%) were polymorphic. The highest total resolution power (RP) value was obtained from the F2 (0.53) and M16 (0.51) primers. According to the ISSR result, the genetic similarity index changed between 0.64-0.95; Lane 3 with Line 6 genotypes were the closest, while Line 36 were the most distant ones. The ISSR markers were found to be promising for assessing genetic diversity in barley crossbreed genotypes.

Keywords : barley, crossbreed, genetic similarity, ISSR

Conference Title : ICAFE 2016 : International Conference on Agricultural and Food Engineering

Conference Location : Istanbul, Türkiye

Conference Dates : December 19-20, 2016