Çifci, E.A. ve K. Yağdı. 2012. Study of genetic diversity in wheat (*Triticum aestivum*) varities using random amplified polymorphic DNA (RAPD) analysis.Turkish Journal of Field Crops. 17(1):91-95.

Abstract

In this study the molecular variation of 16 bread wheat varities was assessed using RAPD markers. On the basis of RAPD-PCR analysis, out of 45 primers 17 primers were found polymorphic. A total of 142 bands were amplified with 17 primers out of which 110 were polymorphic. Fragment size ranged from 300-2800 bp and fragments produced by various primers varied from 3 to 14 with an average of 8.35 fragments per primer. Genetic similarity between the genotypes ranged from 0.316 to 0.860. Polymorphic Information Content (PIC value) calculated the informativeness of each marker and it ranged from 0.11 to 0.93, with average of 0.59. Sixteen bread wheat varieties grouped in two clusters using dendogram analysis. The result of this analysis indicated that the highest similarity was observed between Gerek-79 and Basribey-95 varieties while Sagittario and Gönen-98 varieties were the lowest similiar genotypes. As a result of Principal Component Analysis (PCA), used for detecting the genetic variation among wheat varieties, 5 groups were determined. The result of the study indicated that the registered varieties in our country, possesed relatively narrow genetic variation.