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Abstract

This research was carried out to determine heterosis for grain yield and some of the yield components in 7 x 7 diallel cross of bread wheat (*Triticum aestivum* L.) at Uludag University, Agricultural Faculty, Field Crops Department, Research and Training Center in three years. The 7 parents and 42 F₁ hybrids were grown in a randomized complete block design with 3 replications in the second and third year. Plant height (PH), spike length (SL), spikelet number per spike (SNS), kernel number per spike (KNS), kernel weight per spike (KWS) and thousand kernel weight (TKW) were measured.

The analysis of variance for each component resulted in significant differences among parents and hybrids. The mean of crosses for almost all components except KNS was higher than the mean of parents' and/ or equal to parents. Over 15 crosses exhibited positive significant heterosis for all characters. For grain yield, the out of 42 F₁ s, 27 and 16 crosses showed positive Ht in 2002 and 2003 respectively.

The crosses 1x4, 4x3 and 6x4 had a positive and significant great potential for heterosis at all components studied. Therefore, their use in hybrid programme in the future is suggested.