

**Heterosis and Combining Ability Analysis for yield
and its Components in Bread Wheat (*Triticum aestivum* L.)**

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A half diallel crosses was practiced among six diversified bread wheat (*Triticum aestivum* L.) cultivars. The F₁ of the fifteen crosses and the six parents were grown in a field experiment at Demo in 2013/2014 season to estimate heterosis and combining abilities. Data revealed that the mean square of genotypes, parents and crosses were significant for all studied characters. Positive and negative heterosis over the better parents was detected for all studied characters indicating that parental genotypes were genetically diversified. The analysis of variance for combining ability showed that mean square due to general (GCA) and specific (SCA) combining ability, were generally significant for all studied characters reflecting the importance of both additive and non-additive gene effects in the inheritance of these characters. Combining ability were higher than those of specific combining ability, consequently the GCA/SCA ratios were more than unity indicating the prevailing of additive gene effect which have considerable roles in the inheritance of these characters. In general, the cultivar Sids 4 was a good combiner for early heading and maturity, long spike and great number of kernels/spike. Giza 168 was good combiner for high grain yield/plant and Gemmiza 10 for heavy 1000-kernel weight. Besides Sakha 94 was a good combiner for tall plant. These results seem to be useful for wheat breeding program in making the proper decision when initiating a crossing plan.