



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A Research on the Analysis of Heterotic Effects for Certain Agronomical  
Characters in Cross Population of Sunflower (*Helianthus annuus* L.)

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**Abstract:** This research was carried out to determine the hybrid vigour (heterosis) for certain agronomical characteristics in the new - improved hybrid combinations in sunflower, during the years 1994 - 1995 at the Experimental and Research Centre of Faculty of Agriculture, Uludağ University. In the first year of this research, 7 CMS (female) lines and 4 Restorer (male) testers were crossed in all the possible combinations and 28 F<sub>1</sub> hybrids were obtained. In the second years, 28 F<sub>1</sub> hybrids, 11 parents and a standard variety (a commercial hybrid variety) were tested in a randomized block design with three replications. According to the results, the hybrid vigour of F<sub>1</sub> combinations varied between 3.5% and 43.1% for plant height, 10.0% and 64.5% for head diameter, 12.3% and 93.0% for 1000 seed weight, -7.8% and 98.4% for seed yield per head and 15.9% and 178.1% for seed yield. Hybrid combinations; 4 x 11, 7 x 8, 7 x 9, 1 x 11, 1 x 8, 7 x 10, 2 x 8 and 3 x 8 had the highest hybrid vigour in seed yield and in the other characters observed. Seed yields of these hybrids were 4.2% - 17.5% more as compared to standard variety.

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