

**DETERMINATION OF SOME AGRONOMICAL CHARACTERISTICS
AND HYBRID VIGOR OF NEW IMPROVED SYNTHETIC VARIETIES
IN SUNFLOWER (*Helianthus annuus L.*)**

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ABSTRACT

This study was conducted in order to improve new synthetic varieties with high yielding ability and to evaluate hybrid vigor for certain agronomical traits of these synthetics. Three Syn 1s, each composed of four inbred lines, (Syn 1A, Syn 1B, Syn 1C) and one Syn 1 derived from twelve lines (Syn 1D) were formed artificially by inter crossing. Four experimental Syn 1s, their parentel mixtures (Syn 0's) and two check varieties (open pollinated Vnimik-8931 and commercial hybrid Sunbred-281) were evaluated in the replicated field trials under Bursa conditions without irrigation in 1995, 1996 and 1997. The rates of heterosis observed for plant height, head diameter, seed number/head, 1000-seed weight, seed weight/plant (head) and seed yield/ha were found as 11.2, 14.7, 35.8, 15.7, 59.4 and 65.7 % respectively.

Key words: Sunflower, sythetics and hybrid vigor.