

PERFORMANCE OF YUGOSLAVIAN SUNFLOWER (*HELIANTHUS ANNUUS* L.) HYBRIDS AT NARC, ISLAMABAD, PAKISTAN DURING LATE SPRING AND AUTUMN, 1987.

M. A. Rana, M. A. Khan* and S. Masirevic**

* National Agricultural Research Centre, Islamabad, Pakistan and

** Institute of Field and Vegetable crops, Faculty of Agriculture, Novisad, Yugoslavia.

Thirteen cultivars (10 Yugoslavian and 3 locally adapted varieties) were compared during late spring and autumn seasons. In spring season 10 Yugoslavian, NK-212 and Record varieties while during autumn Record was replaced by an Australian hybrid Hysun-33. This experiment was conducted with the idea to compare the seed yield, oil content and other agronomic characters and selection of those hybrids with high seed yield and other desirable characters to grow on commercial scale in different agro-ecological zones of Pakistan during two seasons i.e., spring and autumn.

Hybrids NSH-43 and NSH-44 were top yielding during spring season with the seed yield of 3404 and 3182 kg/ha, respectively (Fig.1). Other hybrids such as NSH-64, NSH-70, NSH-17 and NSH-45 were also promising ones giving significantly more seed yield of 3056, 2958, 2854 and 2797 kg/ha, respectively than the NK-212 and Record. NSH-68 and NSH-60 were the early maturing hybrids which matured in 95 and 96 days respectively while NSH-44 was the latest, maturing in 106 days. Maximum height of 169 and 166 cm was also recorded in the two top yielding varieties NSH 43 and NSH 44 respectively. The highest oil content of 45.5% was recorded in NSH-27 while the lowest oil content of 37.6% was recorded in NSH-15 (Fig.2). The most susceptible varieties against charcoal rot (*Macrophomina phaseolina*) and Rhizopus head rot (*Rhizopus oryzae*) were NSH-68 and NSH-15.

During autumn season NK-212 (check variety) was the highest yielding variety with 2198 kg/ha (Fig.1). NSH-44, NSH-70 and NSH-43 had given 1953, 1887 and 1844 kg/ha seed yield respectively. Lowest yield of 653 kg/ha was recorded in NSH-68, but it was the earliest maturing variety, which matured within 80 days. While NSH 70 and NSH 43 were latest maturing varieties. Maximum oil content of 43.04% was recorded in NK-212, followed by NSH-27 and NSH 44 with 41.34 and 38.96% oil content respectively (Fig.2). No pronounced difference was recorded in the oil content of NK-212 (check variety) during both seasons. During this season also maximum attack of diseases was recorded in NSH-68 and NSH-15. Plant to plant spacing did not significantly affect plant height and days to maturity. Spacings of 25 and 30 cm gave significantly higher yields than 35 cm. However, maximum head diameter was recorded in spacing of 35 cm, which was significantly more than other two plant spacings. The results discussed are the average of three plant spacings (25, 30, and 35 cm).

Very pronounced differences in all agronomic characteristics were recorded in both seasons. Ranges of plant height, head diameter and days to maturity were 80 to 125 cm, 11.0 to 16.5 cm and 78 to 95 days respectively.

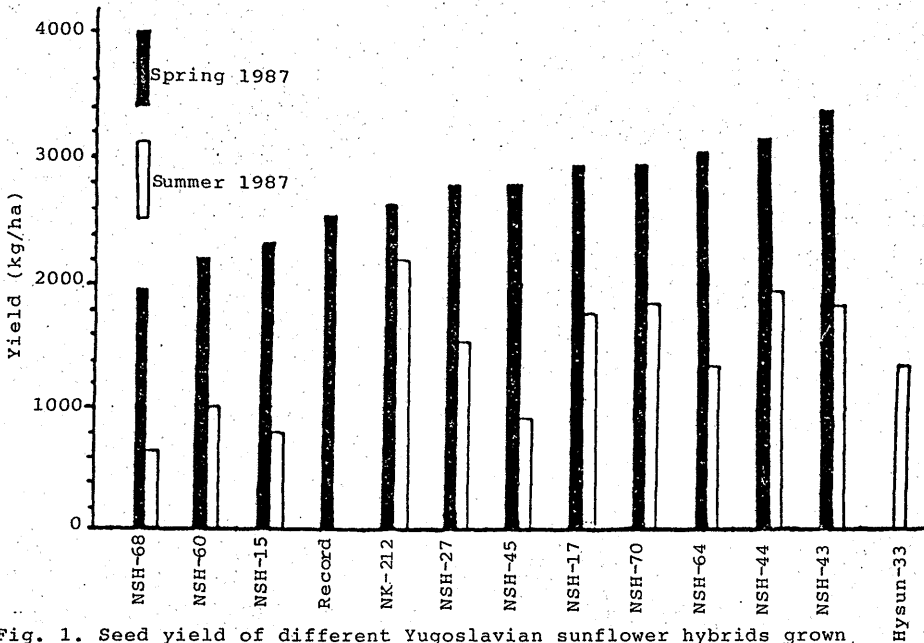


Fig. 1. Seed yield of different Yugoslavian sunflower hybrids grown during Spring and Summer 1987 except Record and Hysun-33.

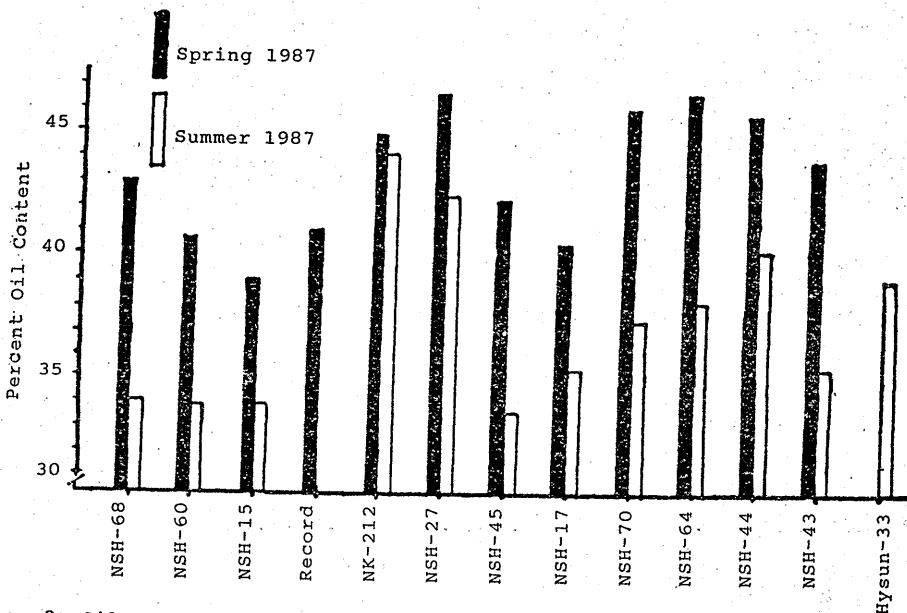


Fig. 2. Oil content of different Yugoslavian sunflower hybrids grown during Spring and Summer 1987 except Record and Hysun-33.