

EFFECT OF ROW SPACINGS AND WEED CONTROL METHODS ON YIELD AND OTHER AGRONOMIC CHARACTERISTICS OF SUNFLOWER (HELIANTHUS ANNUUS L.)

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Experiment was conducted to study the effect of different row spacings i.e. 30,45,60,75 and 90 cm and also the effect of weed control methods i.e., hand weeding, application of fusilade herbicide and no weeding on the seed yield of sunflower variety NK-212 during autumn 1986 and spring 1987. Row spacing treatments did not affect the days to flower initiation, (DFI) days to flower completion (DFC) and plant height (PH). Increase in row spacing from 30 to 90 cm increased days to maturity (DMT) and head diameter.

Autumn 1986: It was observed that higher yields were obtained in hand weeding method as compared to herbicide application and no weeding (Fig.1). Maximum yield in both cases (hand weeding and herbicide application) was recorded in the row spacing of 75 cm with 2398 kg/ha and 2124 kg/ha respectively but in no weeding, seed yield of 1553 kg/ha was obtained in row spacing of 60 cm closely followed by 75 cm row spacing with 1526 kg/ha.

In general seed yield of 60 and 90 cm was not significantly different from each other, however, those were significantly more than the yields obtained from 30 and 45 cm row spacing treatments (Fig. 1).

Spring 1987: During this season also the experiment was laid out in the same way as in autumn 1986. Maximum yield of 2268 kg/ha was recorded in 75 cm row spacing in hand weeding method as compared to 75 cm row spacing of herbicide application and no weeding (weedy check treatment) with the seed yield of 2073 and 1587 kg/ha, respectively. Sunflower responded differently for seed yield in different row spacings during autumn 1986 and spring 1987 (Fig. 2).

Hand weeding, herbicide application and no weeding treatments did not affect significantly the DFI, DFC, DMT and plant height. Effect of different seasons was very pronounced on the characteristics, because sunflower crop planted in spring took more DFI, DFC, DMT and taller in height during spring than autumn.

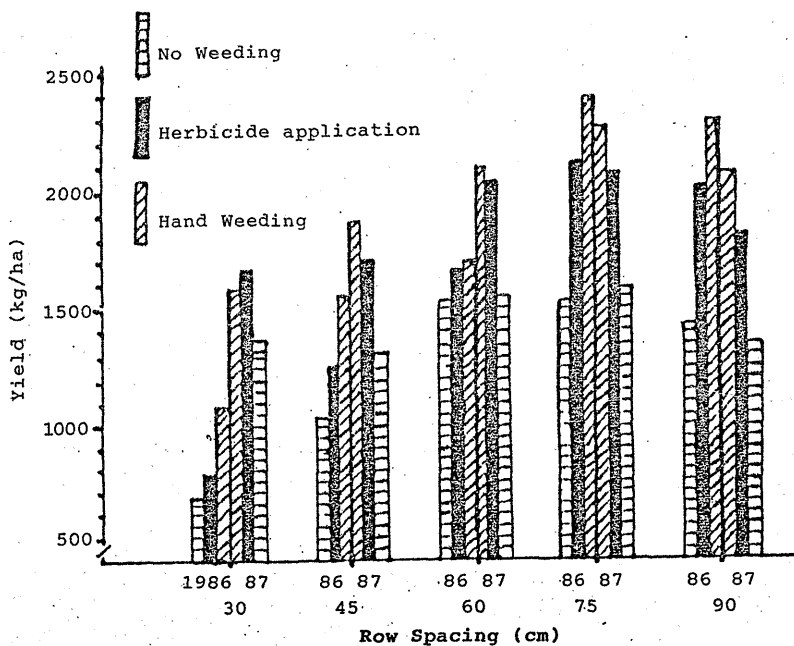


Fig.1. Sunflower seed yield as affected by different row spacings and weed control methods during Autumn 1986 and Spring 1987.

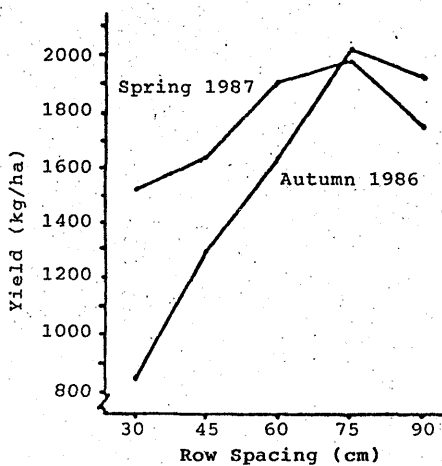


Fig.2. Response of sunflower seed yield to different row spacings during Autumn 1986 and Spring 1987.