The Effect of Irrigation Intervals on Yield and Yield Components of Sunflower (Helianthus annus L.) Cultivars

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In order to investigate the effect of irrigation intervals on yield and yield components of four sunflower cultivars, an experiment was done as split plot on the base of randomized complete block design with four replications at the Research Farm of Zanjan University in 2009. Irrigation intervals included every seventh, twelfth and seventeenth days were put in main plots and sunflower cultivars included Azargol, Allstar, Euroflor and Megasun in sub plots. Results showed that with increase intervals, seed yield and its components, bioyield and oil yield were decreased. The maximum of seed yield, biomass and oil yield were obtained in seven day irrigation interval, with 3776.8, 7690.72 and 1820.48 kg/ha, respectively. The highest amount of hollow seeds percentage (18.73) and hull to kernel ratio (0.37) were achieved in seventeen day interval. Azargol and Euroflor had higher values for the studied traits However Allestar cultivar had the highest of harvest index and Megasun had the highest 1000 seed weight (75.87 gr) but it had the minimum amounts for other yield components. Comparison of means of the interaction effect revealed that Azargol and Euroflor cultivars in the seventh day irrigation had highest percentage of full seeds and seed weight in head.

Key words: sunflower, irrigation intervals, seed yield, yield components