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Effect of Date and Sowing Methods on Ear Yield, Water Use Efficiency and some Phenological Characteristics of Sweet Corn in Marvdasht

Mohamad Javad Fereidooni, Sima Abbasi

Yasouj University, Faculty of Agriculture, Department of Agronomy and Plant Breeding, Iran

Abstract

In order to investigate the effect of date and sowing method on ear yield, water use efficiency and some phenological characteristics of sweet corn, an experiment was carried out as the split plot on a randomized complete blocks design with three replications in Marvdasht city of Farce Province in 2016. Sowing date in five levels (4 May, 19 May, 4 June, 19 June, 5 July) consisted as the main plots and planting methods [seed cultivation, transplanting cultivation 15-day (3-leaf stage) and transplanting cultivation 20-day (4-leaf stage)] were allocated to the sub-plots. According to the results, transplanting cultivationn 15-day on May 4^{th} date had the maximum ear yield (16 t ha^{-1}) and 20-day on 5^{th} July date with the minimum ear yield (8.24 t ha^{-1}). The maximum rate of water use efficiency was 2.93 kg m^{-3} on May 4^{th} date and 15-day, which was 66 % higher than the 20-day on 5^{th} July date. The main effect of sowing date and planting method were significant on vegetative period and days from planting to harvest. Delayed in planting causes the vegetative period decreased so that the highest period of vegetative growth was obtained in the first planting date and the lowest in the 5^{th} July date and the vegetative period of the transplanting treatments was less than the period of vegetative growth of the normal seed treatment. The most vegetative period (89.3 days) was observed in seed cultivation treatment, and the lowest (79 days) was in 20-day transplanting treatment. The use of transplanting cultivation led to increased total sugar content. At last, it can be said that using transplanting can accelerate the maturity of the plant and in the unfavorable weather conditions it reduces plant growth period.

Keywords: Canned grain yield, days from planting to harvest, vegetative period, water consumption

Contact Address: Mohamad Javad Fereidooni, Yasouj University, Faculty of Agriculture, Department of Agronomy and Plant Breeding, Department of Agronomy and Plant Breeding Faculty of Agricultural University of Yasouj, 7591874831 Yasouj, Iran, e-mail: fereidooni2010@yahoo.com