عنوان مقاله:

Effect of Sowing date and plant density on yield and yield components of three maize (Zea mays L.) genotypes in Takhar climatic conditions of Afghanistan

محل انتشار:

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خلاصه مقاله:

Crops are the main source of human food supply and among them, grains are more important, among cereals, corn (Zea mays L.) is an important crop due to its high grain and forage yield potential. The research experiment was conducted on maize to find out the effect of different sowing dates and plant density among three genotypes on the performance of maize, in the spring of the ۲۰۲۰ growing season in the Bagh-e-Zakhirah Research Farm of Takhar province Afghanistan. The experiment was laid out as a split-plot factorial in a randomized complete block design (RCBD) with three replications. Three planting dates (May ۵, May ۲۱, and June ۵) as the main factor, three plant densities of ۶.۵, ۸, and ۱۰ plants/m۲, and three genotypes, SC۲۶۰, SC۶۰۰, and SC۳۰۲ were considered as sub-factors. All treatments sowing date, plant density, genotype, and only interaction effect of sowing date × plant density showed significantly different effects ($p < ۰.۰۱$) on yield and yield components. The results of the present investigation revealed that the highest grain yield ۶.۹۹ ton/h was obtained from the sowing date (May ۵) and plant density of ۶.۵ plants/m۲ and the lowest grain yield ۶.۲۱ ton/h was obtained from the sowing date (June ۵) and plant density of ۱۰ plants/m۲. In general, the results showed that the sowing on the ۵th of May is superior to the ۵th of June in terms of grain yield and yield components, and among the three corn genotypes, the SC۲۶۰ genotype is more batter than the SC۶۰۰ and SC۳۰۲ genotypes under the environment condition. Therefore considering all results the first week of May as the sowing date and ۶۵۰۰۰ plants/h with SC۲۶۰ genotype could be recommended to the maize grower for the most effective for producing maize.

کلمات کلیدی:

Corn, Cultivar, Grain yield, planting date, plant population, Yield component