

عنوان مقاله:

Effect of Irrigation Interval, N Fertilizer Rate and Plant Density on Yield and Chemical Composition of Fenugreek (*Trigonella foenum-gracum* L)

محل انتشار:

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خلاصه مقاله:

In order to study the effect of irrigation interval, N fertilization and plant density on yield and yield components of fenugreek, a split-split-plot experiment was conducted in Darmian, Iran in spring ۲۰۱۰. The experiment was conducted in randomized complete block design with three replications. The main plots were subjected to different irrigation intervals of ۵ and ۱۰ days. The sub-plots were treated with N fertilization at three different rates of ۰, ۷۵ and ۱۵۰ kg N ha⁻¹ from urea source and the sub-sub-plots were assigned with three varied plant density levels of ۲۲, ۳۳ and ۶۶ plants m^{-۲} respectively. Analysis of variance showed that the effect of irrigation interval on all measured traits was not significant. Also application of ۱۵۰ kg N ha⁻¹ had ۳۳.۹ and ۶۶.۱% higher pod number per plant, ۳۷.۵ and ۶۸.۱% higher pod number per m^۲, ۳۱.۷ and ۶۷.۱% higher seed yield, ۳۱.۷ and ۶۵.۹% higher single-plant seed yield, ۳۱.۱ and ۶۸.۹% higher single-plant biomass yield and ۳۰.۶ and ۶۷.۸% higher biological yield than the application of ۷۵ and ۰ kg N ha⁻¹, respectively. Moreover, the results showed that increase in population from ۲۲ to ۳۳ plants m^{-۲} decreased single-plant seed and biomass yields by ۳۲.۱ and ۳۳.۶%, respectively. Conclusively, considering the results of the present study and the importance of water saving, it is recommended to use an irrigation interval of ۱۰ days with the application of ۱۵۰ kg N ha⁻¹ and a population of ۶۶ plants m^{-۲} for the cultivation of fenugreek in Darmian, Iran

کلمات کلیدی:

Trigonella foenum-gracum L, Irrigation interval, population, yield

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