Abstract

To study the effects of drought stress and bio fertilizers on quantitative and qualitative characteristics of medicinal plant *Silybummarianum*, a test in the field of education – research, agriculture, University of Zabol in the year ۲۰۱۲ as split plot in completely randomized block design with three replications was performed. Experimental treatments Included different levels of irrigation regimes consist of ۸۰٪ of field capacity(control), ۶۰٪ of field capacity (Mild stress), ۴۰٪ of field capacity (Severe stress), as a major factor and ۵ levels of bio fertilizers included Lack of fertilizer(Control), nitroxin fertilizer rate of ۳۰۰ ml per kilogram of seed, nitroxin fertilizer rate of ۶۰۰ ml per kilogram of seed, super nitroplus rate of ۳۰۰ ml per kilogram of seed, super nitroplus rate of ۶۰۰ ml per kilogram of seed as a minor factor. The results showed that of drought stress has impact on the quantitative characteristics the plant Such as the number of inflorescences per plant, number of tributaries, the number of inflorescences, number of seeds in capitol, thousand grain weight, and grain yield and decreased. The amount and yield of essential oil grain under mild drought stress (۶۰٪ of field capacity) increased. The effect of bio fertilizers on all traits were significant. The interaction of drought stress treatments and bio fertilizers on thousand grain weight, grain yield, percent of essential oil and yield, Ash percentage, organic matter percentage and proline were significant. According to the results this thesis, it appears that use of ۶۰٪ of field capacity and nitroplus bio fertilizer rate of ۶۰۰ ml per kilogram of seed is the best treatment in the production of the active substance of *Silybummarianum* in terms of organic farming

Keyword: Irrigation, super nitroplus, *Silybummarianum*, nitroxin

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Effect of irrigation regimes and bio-fertilizers on quantitative and qualitative characteristics of medicinal plant *Silybummarianum* in Sistan region

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