

## **Abstract:**

To evaluate the effect of nutrition spraying under low irrigation condition on qualitative characteristic of safflower, an experiment was conducted at the Agricultural Research station, Sistan Earm, in 2012-2013 using a split plot arrangement in a randomized complete block design with three replication.

Different irrigation schedules include; full irrigation, cut off time in heading-bud and flowering stage were considered as main factors and different levels of nutrition spraying include; control (no consumption of nutrition spraying) iron sulphate, zinc sulphate, calcium sulphate and combination of them were subsidiary factor.

The results show that, the low irrigation had a significant effect on plant height, number branch and auxiliary branches, harvest index, diameter stem, number of heads, number of grain heads, 1000 grain weight, biological yield, seed yield and chlorophyll the highest content characteristic except 1000 grain weight and seed yield had condition full irrigation the highest content 1000 grain weight and seed yield had in condition cut off time flowering. The effect of different levels spraying nutrition in number branch and auxiliary branches leaf area index diameter stem, number of heads, number of grain heads 1000 grain weight, biological yield, seed yield and chlorophyll and oil had significant. so that highest content this characteristics from combination spraying iron sulphate, zinc sulphate, calcium sulphate. Therefore interaction low irrigation and spraying nutrition on number leaf plant, protein and harvest index had significant highest content number leaf plant and harvest index from full irrigation and combination from spraying nutrition iron sulphate, zinc sulphate, calcium sulphate. The highest content protein in condition cut off irrigation in flowering stage and combination from spraying iron sulphate, zinc sulphate, calcium sulphate based on the results experiment can expression application spraying nutrition in condition low irrigation effective role in increase factors qualitative and quantitative safflower and cause increase yield.

Key words; low irrigation, chlorophyll, nutrition spraying, zinc sulphate, 1000 grain weight



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**Effect of micronutrient spray on qualitative and  
quantitative characteristics of safflower  
(*Carthamus tinctorious* L.) under low irrigation**

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