

Effect of water stress and Planting Date on Thyme yield and essence percentage

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III. RESULTS AND DISCUSSION

A. Figures and Tables

thyme yield: Study factor A (irrigation period) shows that

between treatments in the 1% level is significant and likely to differ between the 99 percent average yield chamomile shoots was created under the influence of different levels of irrigation period and the factor B (planting date) shows indicate significant at 1% level to the different levels, and the significant from planting date on yield of chamomile shoots. Treatment comparison showed that the highest performance level of irrigation period is 5 days and 10 days and we have different ignificant of other irrigation. Comparison of treatment showed the highest yield on the first planting date and then the second planting date and we have had a significant difference with the third planting dates. analysis of variance table data:

mean squares	Total squares SS	degrees of freedom	Source of .B variation	Row
50123.521 ns	101567.04 2	2	replications(block)	1
87056.917**	265843.75	3	(A)water stress	2
63121.083**	145682.25	3	(B) Planting date	3
14563.769**	129652.91 7	9	interaction A * B	4
2658.365	86532.958	30	error	5
	63256.917	47	Total	

Abstract— thyme is an annual plant, short height, Height of up to 60 cm, with green leaves like dill with small flower. thyme plants has many applications on pharmaceutical industry and used be as a bactericide and anti-fungal. Experiment conducted spilet plot design with two sub-plots in a randomized complete block design. A main factor in this project was irrigation period (A) with 4 level : 5 days, 10 days, 15 days and without irrigation and sub-plots planting dates (B) was considered at three levels : 10 April, 25 April, 10 May. In all plots shoot yield (fresh weight) were measured. The dry matter for each plot, the number of flowering branches, and other parameters measured and a sample of each treatment were selected to determine the percentage of essential oil.the yield treatment were compared by a 99 percent probability Duncan test (alpha = 1%). Based on the results obtained between the mean 10-day yield irrigation treatments and irrigation 5 days there is no significant difference from other traetment have better performance. March 25 and March 10 were significant differences of all other treatment yield better performance than their May 10 date has. Percent essential oil treatment between stress treatments and planting significant difference was observed at 1% level.

thyme, essential oil percent, drought stress.

Keywords— thyme, essential oil percent, drought stress.

I. INTRODUCTION

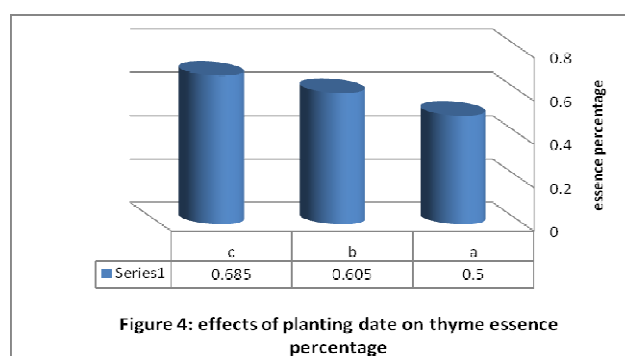
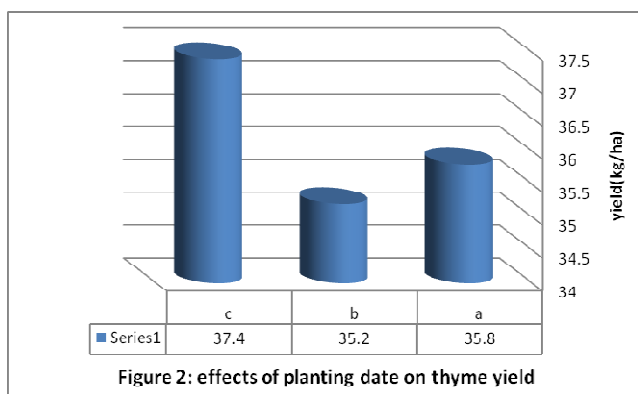
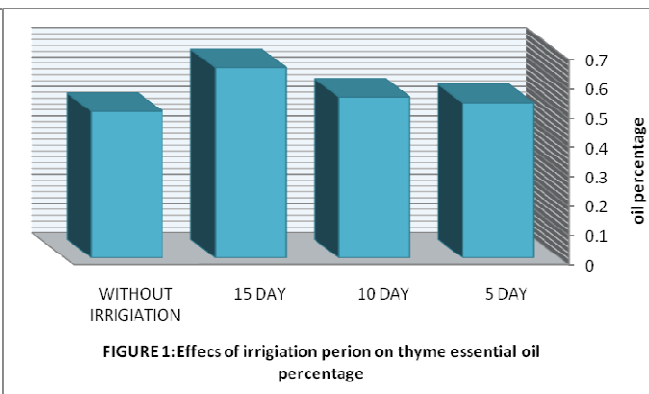
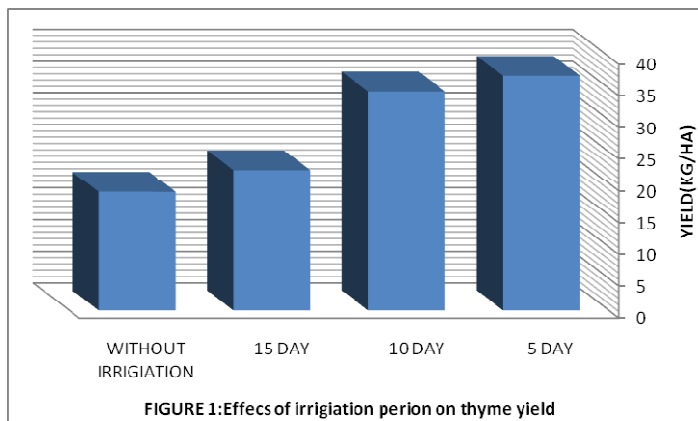
THIS thesis illustrate that what is effective on yield of medical plant. thyme is an annual plant, short and the maximum height of 60 cm Height with green leaves were cut leaves like dill and on the small round, each of the two types of flowers, white flowers part outside the circle and oriented and flowers hanging down and tube sap-brown or yellow in the middle of the circle are central.

II. MATERIALS AND METHODS

Experiment conducted spilet plot design with two sub-plots in a randomized complete block design was used. A main factor in this project irrigation period (A) with 4 level 5 days, 10 days, 15 days without irrigation sub-plots and three levels of planting B: 10 April, 25 April, 10 May was considered. In all plots shoot yield (fresh weight) were measured. The dry matter for each plot, the number of flowering branches, and other parameters measured and a sample of each treatment were selected to determine the percentage of essential oil. treatment yield were compared by a 99 percent probability Duncan test (alpha = 1%) were compared.

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C. Results

This chapter shows that the best irrigation period for this soil position is 5 days and after that 10 days is better than two other irrigation periods.

The treatment without irrigation isn't economical for this plant in field because we don't have enough yield for this treatment.

This chapter shows that at 10 May we have the best yield to compare with other planting dates. Extracted and measured based on percent oil by weight of dry matter and method with water and steam distillation was performed. Chart 3 shows that the highest mean percentage of oil treatment was 15 days. The 15-day irrigation treatment had the highest percentage of essential oil 0.632 percent, which means that the amount of oil is higher in Iran and the lowest percentage of essential oil is also related to the treatment which we have no irrigation (5).

IV. CONCLUSION

The highest percentage of essential oil planting date is May 10 and the lowest is in April 10, which can be concluded that the temperature at the time of plant emergence and percentage of essential oils can be effective on chamomile.

The results of this research show that chamomile plant essential oil in Arak, Iran, compared to performance in other areas and the percentage of chamomile essential oil is suitable and we suggested this plant cultivation in Arak to researchers.

V. REFERENCES

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