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Chrysanthemum *Citrus sinensis* L. *Eucalyptus camaldulensis* L.
Dimorphothica aurantiaca L.)
(*Gaillardia pulchella* L. *Calendula officinalis* L. *carinatum* L.

The Effect of Eucalyptus and Orange Leaves Added to the Soil on Germination and Growth of Four Ornamental Plants

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ABSTRACT

The experiment was conducted on green house to investigate the addition effect of fresh leaves of Eucalyptus (*Eucalyptus camaldulensis* L.) and Orange (*Citrus sinensis* L.) on seed germination and growth of four species of the ornamental plants (*Dimorphothica aurantiaca* L., *Chrysanthemum carinatum* L., *Calendula officinalis* L. and *Gaillardia pulchella* L.).

The results showed that the effects of fresh leaves of *Eucalyptus* and Orange which added to the soil (Separately) caused the reduction in the percentage of seed germination of the plants. As for growth a decrease in plants planted in soils containing fresh *Eucalyptus* leaves, while an increase in plants planted in soils containing Orange leaves.

The results also showed different in the responses of the ornamental plants species to the allelopathic effect of Eucalyptus and Orange leaves added to the soil, it appeared that *Dimorphothica aurantiaca* L. and *Chrysanthemum carinatum* L. were more sensitive to the allelopathic effect for these trees, while *Calendula officinalis* L. and *Gaillardia pulchella* L. were less sensitive for these trees.

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.(Torres et al., 1996)

) *Dimorphothica aurantiaca* L.

Calendula officinalis L. ()

Compositae

Chrysanthemum carinatum L. ()

Gaillardia pulchella L. ()

(4)

:

$$100 \times \frac{\quad}{\quad} =$$

(ISTA, 1976)

:

$$\text{Reduction\%} = 100 - A/B \times 100$$

$$\text{Stimulation\%} = 100 - A/B \times 100$$

= A

= B

(1996)

:

(C.R.D.)

5%

SAS

.(Steel and Torrie, 1980)

(1)

: (5%)

(43.92%)

(25.73%)

(93.33%)

(75.27%)

(85.71%)

.(-1)

(27.44%)

(5%)

(76.50%)

(-1)

(93.71%)

(80%) (43.91%)

(27.63%)

(53.33%)

.(35.34%)

: 1

()	()	()	()	%		
					5%	
0.01 b	3.64 b	14.26 b	0.14 b	42.33 c*	5%	
0.12 a	14.44 a	27.26 a	1.47 a	51.33 b	5%	
0.15 a	14.72 a	25.43 a	0.98 ab	57.00 a	()	
0.03 c	6.82 c	8.11 c	0.11 b	39.66 c	5%	
0.23 a	15.52 a	27.10 b	2.70 a	48.66 b	5%	
0.15 b	12.16 b	34.52 a	1.75 a	54.66 a	()	
0.38 a	18.61 a	13.62 c	0.70 b	32.33 c	5%	
0.52 a	16.77 b	27.69 a	2.09 a	42.33 b	5%	
0.46 a	16.91 b	22.86 b	1.78 a	50.00 a	()	
0.16 c	17.99 b	20.41 c	1.35 b	33.33 c	5%	
0.67 a	15.22 c	36.06 a	5.08 a	42.00 b	5%	
0.55 b	20.66 a	32.71 b	2.43 b	55.33 a	()	

5%

*

(-2)

(60.67%)

(40.41%)

(17.41%)

(21.12%)

(10.05%)

(39.76%)

(37.60%)

(-2)

(44.44%)

(70.90%)

(109%)

(10.24%)

(21.81%)

(26.33%)

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(

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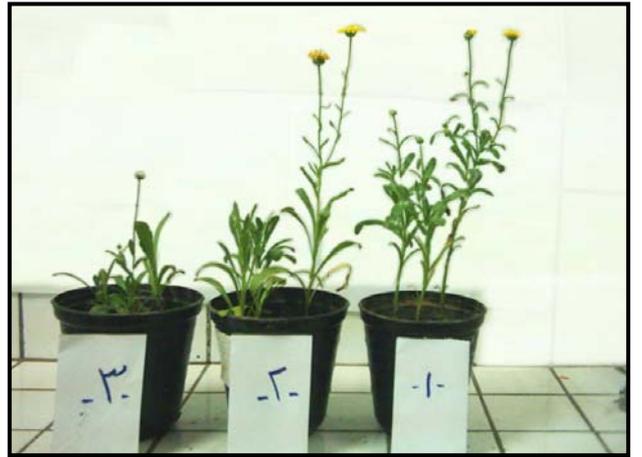
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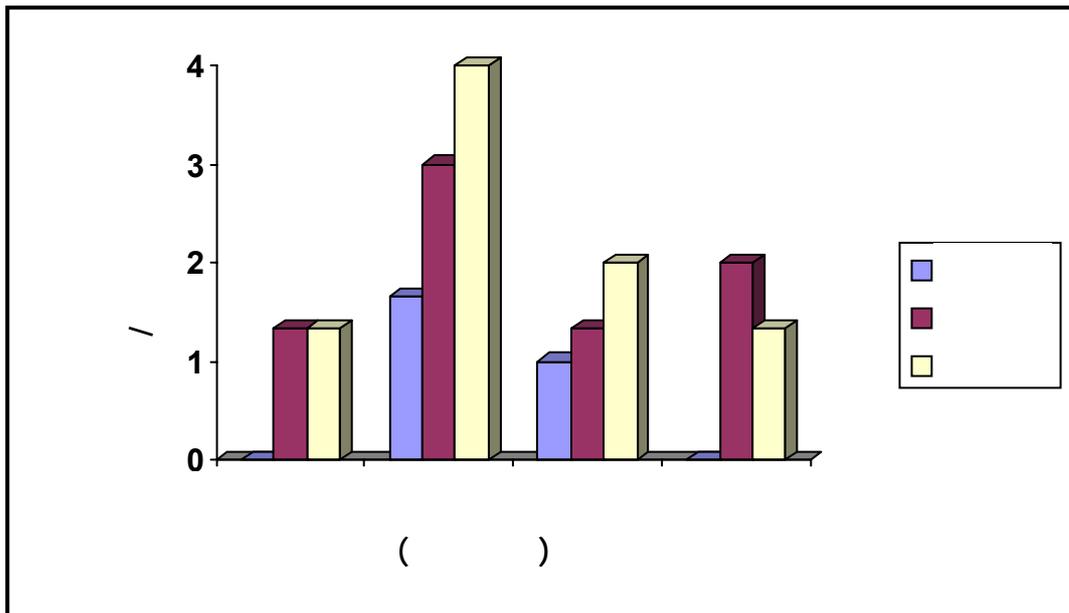
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(1)

(5%)

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/ : 5% : 1

: (5%)

(4)

(Rice, 1984)

.()

(1982a)

Ballester

Eucalyptus globulus L.

(GC)

(PC)

Catechol gentisic gallic Coumaric Caffeic)

(*Eucalyptus* spp.)

.(Sadhna et al., 1996) (Vanillic acid Syringic hydroxybenzoic

Eucalyptus microtheca L.

AL-Mousawi (1974)

Terpenes

Camphore α -pinene

(EL-Khawas and Shehata, 2005)

Eucalyptus rostrata L.

Acacia nilotica L.

(1999)

.(3)

(Chou, 1993)

.(Wang et al., 1967)

(1977)

Chou

Ferulic

:

Ferulic

Ferulic acid \rightarrow Vanillic acid \rightarrow Protocatechuic \rightarrow β -Keto adipic

.1996

.1999

Triticum aestivum L.

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