

***Vitis vinifera* L.**

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Vitis vinifera L.

**Changes in auxins , gibberellins and trace elements
during occurring growth and development of
buds in certain cultivars of European
grape (*Vitis vinifera* L.)**

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Abstract

This study was carried to investigate some of certain changes in auxins , Gibberellins and trace elements (Zn and Cu) during growth and development of dormant buds in some cultivars of European grape *Vitis vinifera* L. The results showed an increase in levels of Auxins-like substances, Gibberellins-like substances during development and transfer from post dormancy to pre-bud burst, to bud burst. Concentration of trace elements (Zn , Cu) increased after stage of dormancy and increased on stage of bud burst and Leaf emergence.

)

.(2000

.(1985)

Plant hormones

Davies, 1987 ; Wareing and)

. (Phillips, 1983

.

.(Johri and Mitra, 2001)

,

.(2000,)

-:

-1

.

(Zn,Cu)

- 2

300

Fox and)

RNA DNA

"

(Guerimot,1998

(Ribereau-Gayonand Peynaud , 1971)

()

,(Valouike,1978)

,(Christensen,1986)

Walker and Webb,)

.(1981

(2004)

. *Vitis vinifera* L .

()

.

.(1)

ds\ m 3.5	(E. C)
7.73	pH
%5.5	
%30.10	
%64.40	
ppm 16.28	
ppm 21.35	

()

(1)

Cu,Zn

-:

Stage of post dormancy

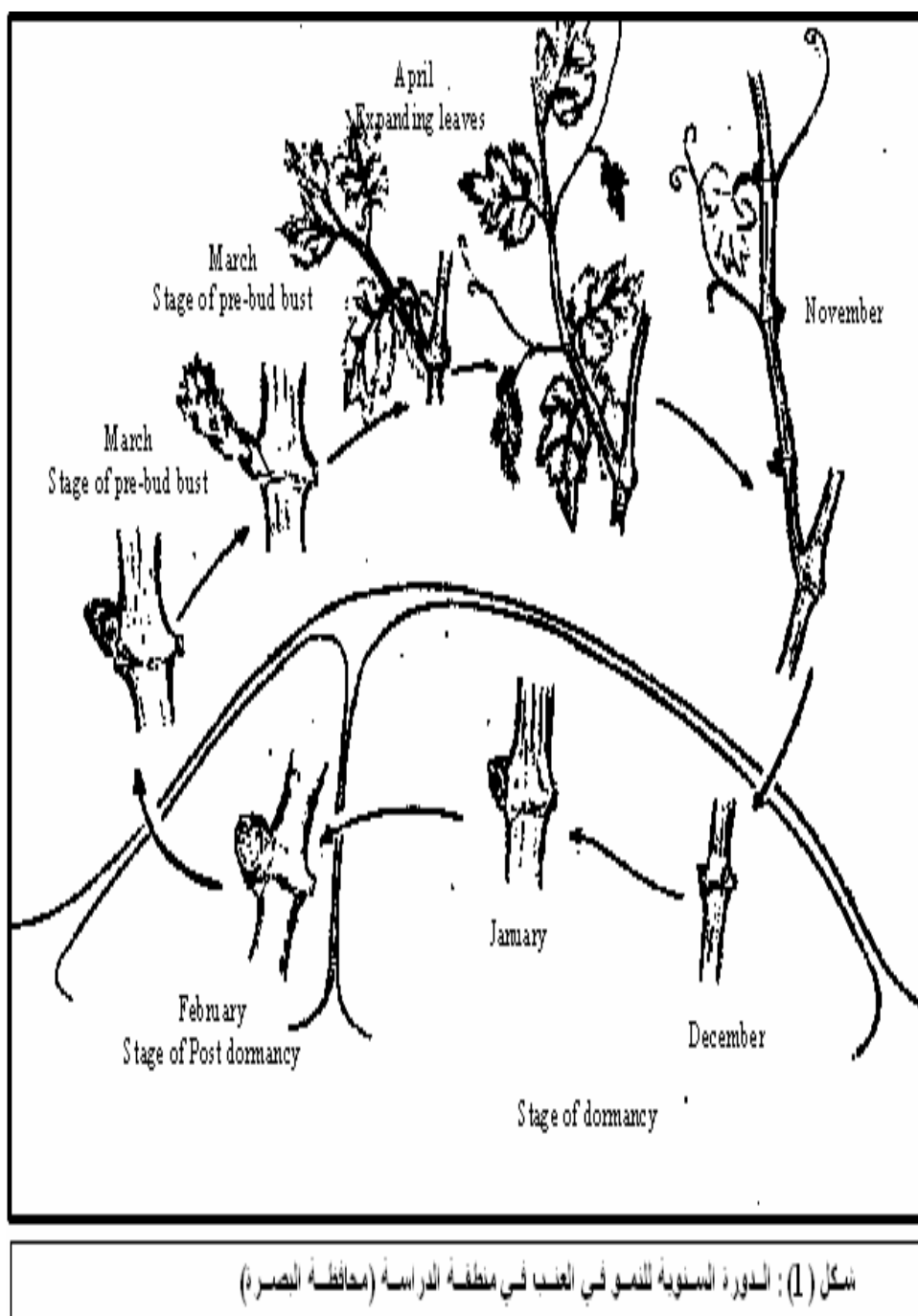
-1

Stage of pre-bud burst ()

-2

Stage of bud burst

-3



(plates)



()



()



()



()

Post dormancy	-
Pre-bud burst	-
initial swelling ()	-
Fully swollen ()	-



()



()



()



()

bud burst

-

expanding leaves

-

Post dormancy
) 7 10
Pre-bud burst (
bud burst
.
-1
Abbas *et al.*
5 . (1995)
24 50 (/) %80
4
Rotary evaporator 100
Aqueous phase 40
50
pH %22 %45
Partitioning (2) 2.5
()
50
5
(1998)
UV-visible
spectrophotometer
280 (IAA)
205 (GA3)
.(Abbas and Fandi, 2001) /
.
(Zn,Cu) -2
Freeze-
dryer

Atomic

(A.O.A.C, 1984)

. Absorption spectrophotometer

-:

(R.C.B.D.)

Factorial Experiment

. (2000

)

0.05

(R.L.S.D)

-1

(2) :

-1.1

/ (45.0)

.

. / (³10×3.50)

. / (24.4)

.(2)

.(1985)

Laufs *et al.* (1998)

.

▪ ()

-2.1

•

. /

•

.(3)

.(1985)

Rinne *et al.* (2001)

: (3)

. ()

R.L.S.D	(/)	
5.62	2.22	
	15.5	
6.74	⁴⁻ 10×4.50	
	³⁻ 10 ×4.75	
	26.6	
9.78		
	⁴⁻ 10× 2.67	
	³⁻ 10 × 1.50	
	6.66	
	⁴⁻ 10× 6.33	
	³⁻ 10 × 8.0	
	46.6	

(Zn,Cu)

-2

:

-1.2

(2)

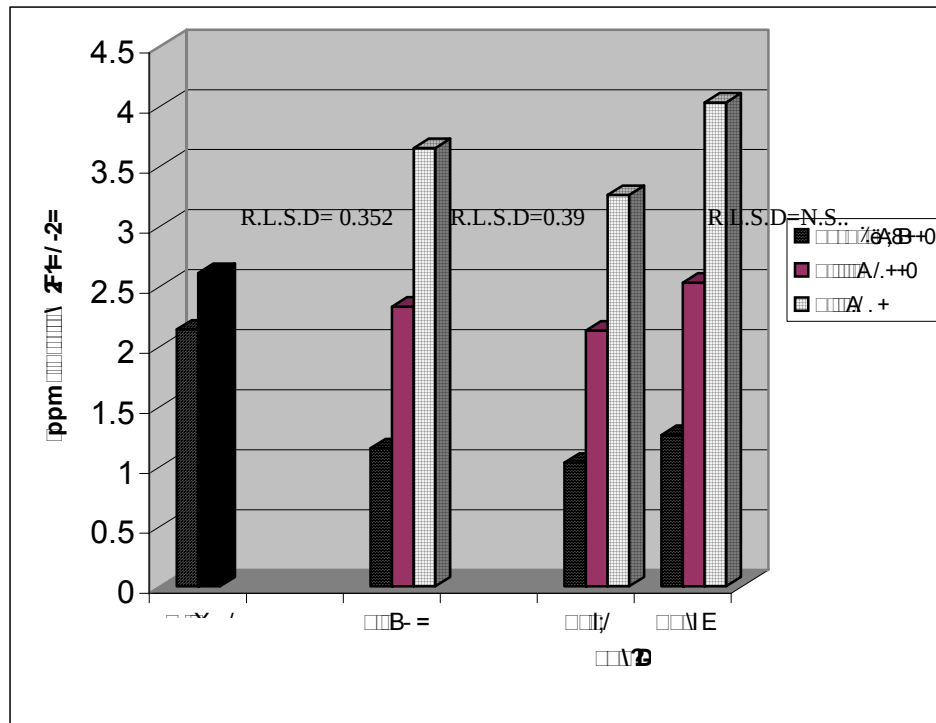
PPM (3.65)

ppm(2.61)

.(Mengel, 2001)

Maischner (2002)

(IAA)



(2)

: -2.2

(3)

ppm(2.58)

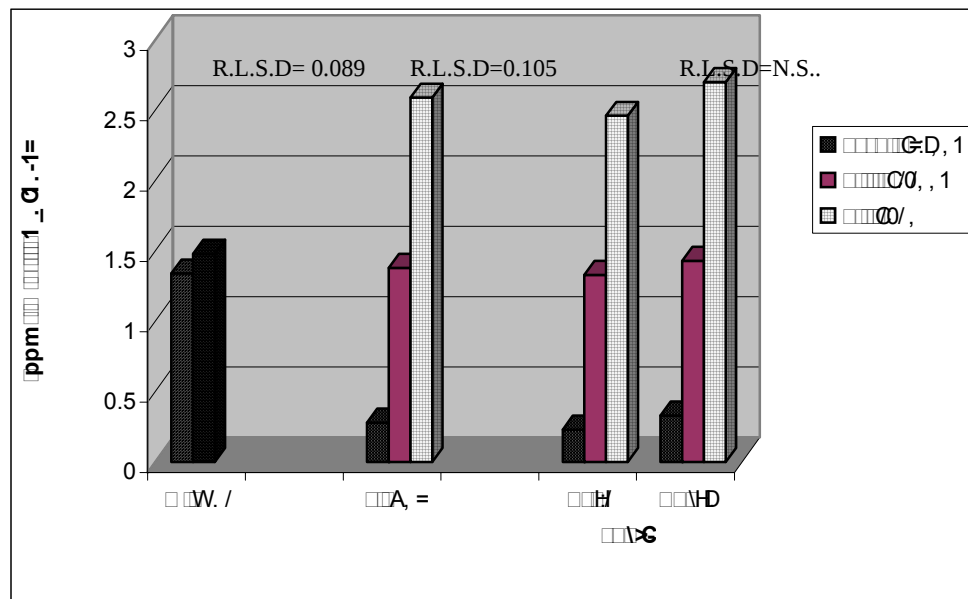
ppm(0.28)

ppm(1.48)

(Arnonn, 1950)

Boardman (1975)

Plastocyanin



(3)

.(1985)
 . (360)
 .(2000)
 . (488) .
 - .(2000)
 . (784)
 .(1998)
 - - . *Vitis vinifera* L.
 . (1447) .(1985)

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