

3000 (.) .

cotton

Saw gin 1840
 Whitney Roller gin (McCarthy) ginning 1793
 .(1995)
 1- 980
 .(2007) 24

(2007) Bauer Campbell ; (2009) Rajikumari

(2008) Hallikeri ; (2009) Onder ; (2010) Feng

(2006) Kipling ; (2008) Gwathmey

()

2010 2009 (120)
 Split-Plots RCBD
 Main plots ()
 Sub Plots (- -)
 0.75 5 (3×5)
 . 0.25 (5 - 4)
 (P₂O₅) %46 1- . P₂O₅ 240
 (N %46) 1- N 400
 45

16.22 15.93
1- 14.57 14.50 1-

(2008) Ernest

(2007 Bauer Campbel ; 2009 Rajikumari)

1- .1

. 2010 2009

2009				
20.12	20.41	19.23	20.73	
21.62	21.82	20.75	22.31	
	21.11	19.99	21.52	
	×			LSD
	1.33	1.12	0.93	0.05
2010				
20.34	19.12	20.23	21.67	
22.07	21.33	21.74	23.15	
	20.22	20.98	22.41	
	×			LSD
	1.21	1.03	0.87	0.05

1- 17.57 16.91
1- 14.02
1- 13.93
(2002)

1- . 18.82 18.10

13.16

1- . 13.53

1-

جدول 2. تأثير طريقة الزراعة والأصناف على متوسط عدد الجوز المتفتح . نبات¹ لمحصول القطن تحت الري بالتنقيط للسنتين 2009 و 2010 .

2009				
14.50	14.25	13.53	15.73	
15.93	15.20	14.51	18.10	
	14.72	14.02	16.91	
	×			LSD
	1.32	1.11	0.87	0.05
2010				
14.57	13.16	14.24	16.33	
16.22	14.71	15.13	18.82	
	13.93	14.68	17.57	
	×			LSD
	1.15	0.83	0.69	0.05

1- .

-3

(3)

4.11 4.36

1-

1-

4.83 5.15

Jared ; (2008)

Ernest

(3) (2008).

1- 3.32 3.65

1- 3

. 2010 2009

2009				
5.15	6.24	5.13	4.1	
4.36	5.37	4.53	3.2	
	5.80	4.83	3.65	
	×	0.45	0.31	LSD 0.05
	0.62			
2010				
4.83	5.71	5.03	3.75	
4.11	5.12	4.31	2.9	
	5.41	4.67	3.32	
	×	0.37	0.28	LSD 0.05
	0.56			

5.41 5.80

1- .
(2010) Feng ; (2010)1- 2.9 3.2
1- 5.71 6.24

-4
(4)

1- .
1- .
1- .
1- .
1- .
1.0
1.34 1.35

(; 2002 ; 2007)

1- . 0.33

1- . 0.33

جدول 4. تأثير طريقة الزراعة والأصناف في متوسط عدد الجوز المصاب . نبات¹⁻ لمحصول القطن تحت الري بالتنقيط للسنتين 2009 و 2010 .

2009				
0.67	1.0	0.67	0.33	
0.67	1.0	0.33	0.67	
	1.0	0.50	0.50	
	×	0.22	N.S.	LSD 0.05
	0.43			
2010				
1.12	1.37	1.67	0.33	
1.11	1.33	1.0	1.0	
	1.35	1.34	0.67	
	×	0.37	N.S.	LSD 0.05
	0.49			

-5 ()

()
 1- . 3.46 3.69 . (5) ()
 1- . 3.21 3.17 . (2008) Gwathmey ; (2009)
 1- . 3.54 3.77
 1- . 3.17 3.25

جدول 5. تأثير طريقة الزراعة والأصناف على متوسط حاصل الجوزة (غم) لمحصول القطن تحت الري بالتنقيط للسنتين 2009 و 2010 .

2009				
3.17	3.14	2.93	3.45	
3.69	3.39	3.58	4.10	
	3.27	3.25	3.77	
	×	0.24	0.13	LSD 0.05
	0.38			
2010				
3.21	3.40	2.98	3.27	
3.46	3.21	3.37	3.81	
	3.30	3.17	3.54	
	×	0.17	0.11	LSD 0.05
	0.32			

1- . 3.81 4.10
2.93

1- . 2.98

(6) .(1- .) -6

1- . 2.66 2.77
1- . 2.40 2.54

· :
· (5 2 1)
· Gwathmey ; (2009)

1- . 1-

·(2008) Ernest ; (2008)

1- . 3.12 3.26

1)
·(2007) ; (2002)
1- . 2.18 2.26

·(5 2

1- . 3.26 3.41

1- . 2.06 2.18

(1- .)

.6

. 2010 2009

2009				
2.54	2.18	2.32	3.11	
2.77	2.33	2.57	3.41	
	2.26	2.45	3.26	
	× 0.27	0.23	0.15	LSD 0.05
2010				
2.40	2.06	2.17	2.98	
2.66	2.29	2.42	3.26	
	2.18	2.30	3.12	
	× 0.33	0.26	0.16	LSD 0.05

.1995 .

. 340 .

.2009 .

. 59- 48 :(2) 7 .

.2009 .

.10 - 1 :(2) (14) ()

.2010 .

.1999 .

.()

.2007 .

.2002 .

. 46 – 38 :(2) (7) () .

- Brain, M. S. and C. Smith. 2008. Genetic gain in Fiber Properties of upland cotton under varying Plant densities. *Crop Sci* . 84: 1328 – 1336.
- Campbel, B. T. and M. E. Bauer. 2007. Genetic variation For yield and Fiber quality response to supplement irrigation within the Pee dee upland cotton germplasm collection . *Crop Sci* . 47 : 591 – 597.
- Erenest , L .C .,J.T. Cothorn. D.C. Blauin and J.L. Satterwhite .2008.Timiny of maturity in ultra- narrow and conventional row cotton as affected by nitrogen fertilizer rate. *Agron. J.* 100 :421- 431.
- Feng ,L., V.B. Bufon , C.I. Mills , E. Hequet , J.P. Bordovsky , W. Keeling , R. Roman and C.W. Bendnarz . 2010. Effects of irrigation, cultivar and plant density on cotton within boll fiber quality . *Agron. J.* 103 (2) :297 – 303.
- Gwathmey, C. O., L.E. Steckel and J.A. Larson. 2008. Solid and Skip – row spacings for irrigated and non irrigated upland cotton. *Agron .J.* 100: 672 – 680.
- Hallikeri, S.S. 2008. Effect of sowing time, nitrogen and irrigation levels on yield , fiber quality and protein concentration . Ph. D. thesis, Department of Agronomy. College of Agriculture, Dharwad. PP. 220.
- Jared R.W., G.L. Ritchie, C. W. Bendnarz and C. I. Mills. 2008. Cotton subsurface drip and over head irrigation efficiency, maturity, yield and quality. *Agron. J.* 100: 1763 – 1768.
- Kipling, S. B, D. W. Reeves, J. N. Shaw, C. H. Burmester and L. M. Curtis . 2006. Cotton yield and fiber quality from irrigated tillage system in the tennessee Valley. *Agron. J.* 98: 596 – 602.
- Onder, D., Y. Akiscan, S. Onder and M. Mert . 2009. Effect of different irrigation water level on cotton yield and yield components . *African. J. of Biotechnology.* 8 (8): 1536 – 1544.
- Rajikumari, Y., J.W. Nusz, K. F. Bronson, A. D. Booker, R. L. Nichols and T.L. Thompson. 2009. Nitrogen management for subsurface drip irrigated Cotton. *Soil Sci. Soc. Am. J.* 73:589 – 597.

**RESPONSE EVALUATION OF THREE COTTON VARIETIES
(*Gossypium hirsutum* L.) FOR WEST IRAQ CONDITION UNDER TWO
PLANTING METHODS AND DRIP IRRIGATION SYSTEM.**

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ABSTRACT

This experiment was conducted in Cotton experiment location in Haditha local (120 Km west of Ramadi city) during 2009 and 2010 years. The objective of the study were to know the effect of planting methods (Rows and Furrows) and varieties on yield and yield components of cotton under drip irrigation. A split plot arrangement in (RCBD) design was used with three replicates. Number of all bolls, opening bolls, un opening bolls, bolls infection per plant, one boll yield (gm) and Cotton yield ($t. ha^{-1}$) were determined.

Results showed that furrows planting method have a significant results in all studied characters in the two years, such as number of all boll / plant (21.62 and 22.07 boll), number of opening boll / plant (15.93 and 16.22 boll), individual boll weight (3.69 and 3.46 gm) and Cotton yield (2.77 and 2.66 $t. ha^{-1}$) at the year 2009 and 2010 respectively. Ashoor variety surpassed the others by 21.52 and 22.41 boll, 16.91 and 17.57 boll, 3.77 and 3.54 gm and 3.26 and 3.12 $t. ha^{-1}$ for the same above characters for the two years respectively. And the results showed that there were significant effects of the interaction between planting method and varieties in all studied characters at the two years.

Key words: RESPONSE , COTTON , DRIP IRRIGATION