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Effect of Different Doses of Gamma Radiation on Yield and It's Components for Two Varieties of Cotton

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ABSTRACT

The study was carried out during the summer of 2000, as (2×4) factorial experiment according to randomize complete block design, with three replicates, using two cotton varieties. The first factor consists of two varieties, Ashor and coker 310, while the second factor consists of four levels of gamma radiation (0 , 10 , 20 and 40 Krad).

Ashore cultivar was significantly superior than coker 310 in: boll weight and seeds index, while coker 310 cultivar was significantly superior in: No. of days to first boll opening. No significant difference between the two cultivars were appeared in: no. of vegetative and fruiting branches, no. of nodes following first fruiting branches, no. of days to first flower opening, no. of bolls/plant, no. of seeds/boll, seed cotton yield/plant and ginning out-turn.

Different doses of gamma ray showed significant difference in: no. of fruit branches/plant, the nodes following first flower and boll opening, bolls weight, no. of seeds/boll, seed index, and seed cotton yield/plant. The two factors showed some significant interactions in some traits.

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(Kuliev and Kuliev, 1978)

(Narimov, 1971)

(Selim et al., 1985)

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(Al-Oudat and Khalifa, 1996)

(Sayed et al., 1998b)

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Sayed et al.,)

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	3.28	2.08	1.84	1.83		
16.67 15.52	12.50b 12.36b	17.26ab 13.88ab	18.25ab 18.90a	18.66ab 16.95ab	310	/
	12.43b	15.57ab	18.57a	17.80a		
5.48 5.34	5.50ab 5.33ab	5.76a 5.80a	5.31ab 5.10b	5.35ab 5.11b	310	
	5.41ab	5.78a	5.20b	5.23b		
61.75 60.50	69.00a 70.00a	61.00b 59.00b	57.00b 57.00b	60.00b 56.00b	310	
	69.50a	60.00b	57.00b	58.00b		
101.50a 98.50b	111.00a 105.00a	100.00b 94.00bc	97.00c 94.00bc	98.00bc 95.00bc	310	
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3.16a 2.11b	3.30ab 1.54c	2.76c 2.20d	2.85bc 2.23d	3.74a 2.48cd	310	()
	2.42b	2.48b	2.54b	3.11a		
16.22 16.03	11.42e 12.49de	15.94cd 14.85cde	16.82bc 16.47cd	20.73a 20.30ab	310	/
	11.96c	15.40b	16.65b	20.52a		
13.85a 9.58b	16.29a 9.92c	13.10b 9.99c	13.23b 9.54c	12.79b 8.85c	310	()
	13.10a	11.54b	11.38b	10.82b		
38.82 32.16	48.46a 22.44c	23.70bc 27.23bc	36.21abc 38.72abc	46.90a 40.24ab	310	/
	35.45a	25.47b	37.47a	43.57a		
31.50 30.00	31.00ab 29.00b	32.00a 29.00b	32.00a 31.00ab	31.00ab 31.00ab	310	
	30.00	30.50	31.50	31.00		

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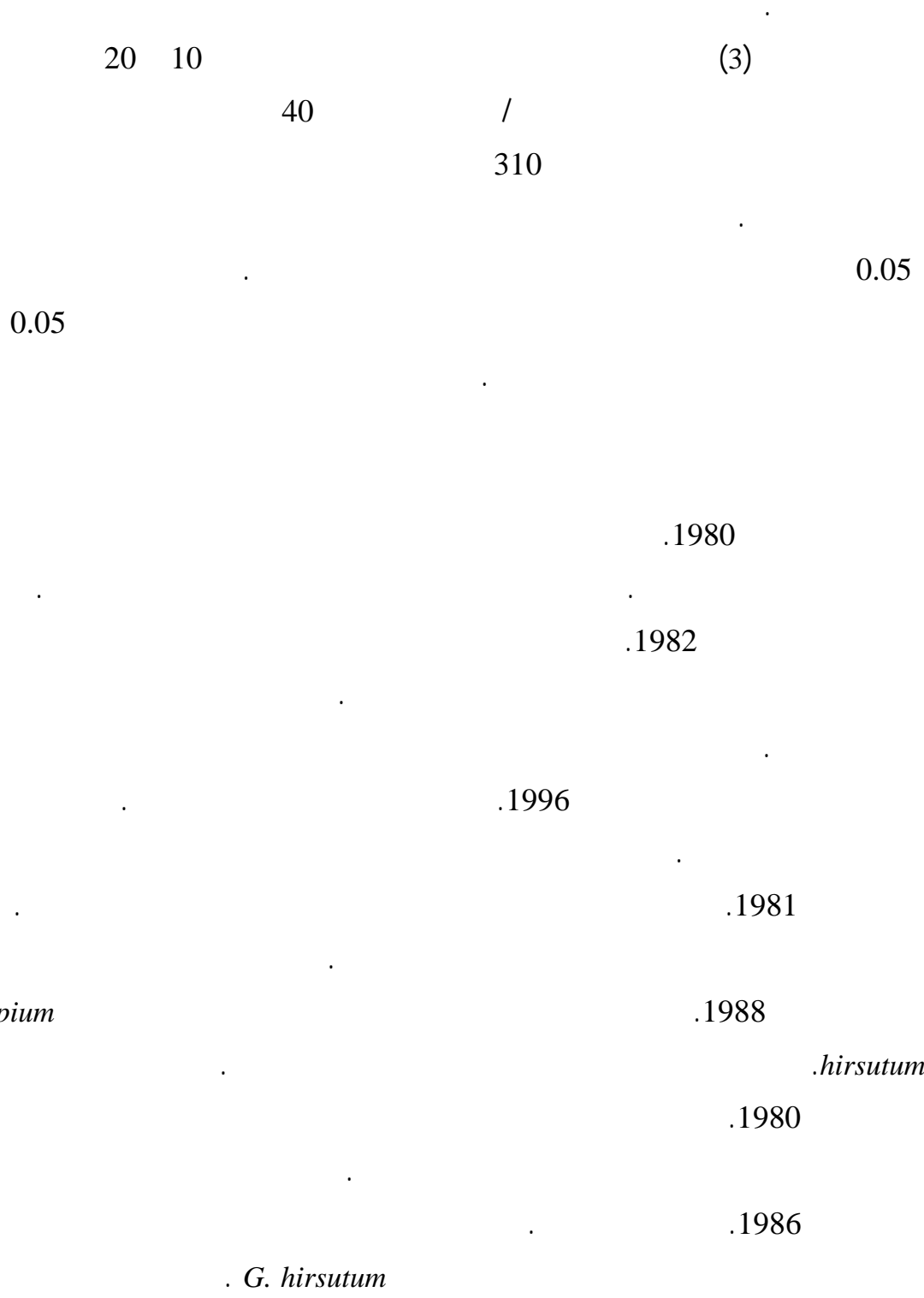
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(Al-Garbawi et al., 1984)

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