

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1973

[Full Table of Content](#)



73/R/BE/11 - Irrigation, N F!: Carbohydrate - Beans

Rothamsted Research

Rothamsted Research (1974) 73/R/BE/11 - Irrigation, N F!: Carbohydrate - Beans ; Yields Of The Field Experiments 1973, pp 363 - 365 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

73/R/BE/11

SPRING BEANS

IRRIGATION, N AND CARBOHYDRATE

Object: To study the effects of nitrogen fertiliser, sucrose and irrigation applied at flowering time, on yield and its components in field beans - Long Hoos VI.

Sponsor: J. McEwen.

Design: 4 randomised blocks of 2 plots split into 6.

Whole plot dimensions: 2.03 x 3.05. Area harvested: 0.00019.

Treatments: All combinations of:-

Whole plots:	1. Irrigation (mm of water, applied during 3-week flowering period)	IRRIGN
	None	0
	11	11
Sub plots:	2. Nitrogen fertiliser (kg N) just before flowering, 7 June	N
	None	0
	150	150
	3. Sucrose (kg) divided equally between three foliar sprays during flowering	SUCROSE
	None	0
	150	150
	450	450

Irrigation: 3 mm on 16 June, 8 mm on 20 June. Sucrose was applied in 1000 l: 10, 17 and 30 June.

Basal applications: Manures: (0:20:20) at 780 kg. Weedkiller: Simazine at 0.84 kg in 340 l. Insecticide: Demeton-s-methyl 0.25 kg in 290 l. Fungicide: Benomyl at 1.5 kg in 1000 l (applied with sucrose on plots receiving it).

Seed: Minor, sown at 220 kg.

Cultivations, etc.: PK applied: 29 Nov, 1972. Ploughed: 18 Dec. Power harrowed, seed sown: 12 Mar, 1973. Insecticide applied: 6 June. Benomyl applied: 10 June. Hand harvested: 12 Sept. Previous crops: Maize 1971, fallow 1972.

73/R/EE/11

NOTE: Counts were made of the numbers of stems and pods. 1000 grain weights and % N in grain were measured.

Standard error per sub plot.

Grain, tonnes/hectare: 0.315 or 5.9% (30 d.f.)

73/R/BE/11

TABLES OF MEANS

GRAIN: TONNES/HECTARE

	N		SUCROSE			Mean
	0	150	0	150	450	
IRRIGN						
0	5.18	5.66	5.70	5.51	5.05	5.42
11	5.28	5.24	5.20	5.29	5.30	5.26
		N				
		0	5.34	5.24	5.10	5.23
		150	5.56	5.55	5.24	5.45
Mean			5.45	5.40	5.17	5.34
N		0			150	
SUCROSE	0	150	450	0	150	450
IRRIGN						
0	5.48	5.31	4.74	5.92	5.71	5.36
11	5.20	5.17	5.47	5.20	5.40	5.13

STANDARD ERRORS OF DIFFERENCES

N	SUCROSE	IRRIGN*	IRRIGN*	N	IRRIGN*
		N	SUCROSE	SUCROSE	N
					SUCROSE
0.091	0.111			0.157	
					0.222

Except when comparing means with same level of IRRIGN

* Within the same level of IRRIGN only

Mean D.M. % 85.3