

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 1971

[Full Table of Content](#)



71/R/CS/44 Break Crops and Wheat - Barley

Rothamsted Research

Rothamsted Research (1972) *71/R/CS/44 Break Crops and Wheat - Barley ; Yields Of The Field Experiments 1971*, pp 178 - 179 - DOI: <https://doi.org/10.23637/ERADOC-1-97>

71/R/CS/44

BREAK CROPS AND WHEAT

Object: To study the effects of different break crops on yields and soil-borne pathogens of a following sequence of cereals - Long Hoos III.

The third year, barley.

For previous years see 69/R/CS/44(t) and 70/R/CS/44(t).

Design: 3 randomised blocks of 12 plots, split into 4.

Whole plot dimensions: 4.27 x 39.3. Sub plot area harvested: 0.00258.

Treatments:

Whole plots: Crops and nitrogen 1969:- Spring beans (2 plots per block) (BE), clover (2 plots per block) (CL) and all combinations of:-

1. Crops: Barley (B), oats (O).
2. Nitrogen: 50 (R1), 100 (R2) kg as 'Nitro-Chalk' in the seedbed.
3. Undersowing: None (O), trefoil (T).

Sub plots:

4. Nitrogen 1970 and 1971: None, 50, 100, 150 kg as 'Nitro-Chalk'.

Basal applications: 314 kg (0:20:20) combine drilled. Weedkiller: Ioxynil octanoate, bromoxynil octanoate and the iso-octyl ester of dichlorprop ('Oxytril P' at 1.4 l in 225 l).

Cultivations, etc.: Ploughed: 1 Oct, 1970. Seed combine drilled at 157 kg: 12 Mar, 1971. N applied: 24 Mar. Weedkiller applied: 4 May. Combine harvested: 17 Aug. Variety: Julia.

NOTE: Estimates were made of take-all (*Ophiobolus graminis*).

Standard errors per plot. Grain, tonnes/hectare.

Whole plot: 0.169 or 3.4% (14 d.f.)

Sub plot: 0.550 or 11.2% (47 d.f.)

71/R/CS/44

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	N: KG/HA 1969				N: KG/HA 1970 & 71				Mean
	50	100	O	T	O	50	100	150	
	(±0.069)		(±0.069)		(1) and (2)				(±0.049)
B	5.01	4.87	4.87	5.01	3.49	4.93	5.83	5.51	4.94
O	4.85	4.96	4.91	4.89	3.59	5.16	5.50	5.36	4.90
	N: KG/HA 1969		(±0.069)		(1) and (2)				(±0.049)
	50		4.84	5.01	3.54	5.14	5.67	5.35	4.93
	100		4.94	4.89	3.53	4.95	5.66	5.51	4.91
					(1) and (2)				(±0.049)
					O	3.46	4.86	5.73	4.89
					T	3.61	5.22	5.60	4.95
Mean (±0.112)					3.54	5.04	5.67	5.43	4.92

(3) and (4)

BE	3.11	5.27	5.70	5.40	4.87
CL	3.82	3.51	5.73	5.45	5.10

(1) (±0.146) (3) (±0.206) For use in vertical and diagonal comparisons only
 (2) (±0.159) (4) (±0.224) For use in horizontal and interaction comparisons only

General mean: 4.94

Mean D.M. % all plots: 84.4