

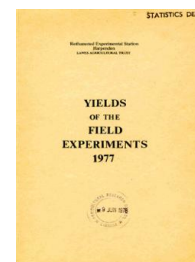
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1977

[Full Table of Content](#)



77/W/CS/99 Effects of Breaks on Take-all - Barley, Beans

Rothamsted Research

Rothamsted Research (1978) 77/W/CS/99 *Effects of Breaks on Take-all - Barley, Beans* ; Yields Of The Field Experiments 1977, pp 161 - 164 - DOI: <https://doi.org/10.23637/ERADOC-1-29>

77/W/CS/99

EFFECTS OF BREAKS ON TAKE-ALL

Object: To study the phenomenon of take-all (*Gaeumannomyces graminis*) decline in barley - Woburn Butt Furlong.

Sponsor: D. Hornby.

The sixth year, barley, spring beans.

For previous years see 72/W/CS/99(t) and 73-76/W/CS/99.

Design: 2 blocks of 9 plots.

Whole plot dimensions: 5.33 x 15.2.

Treatments: Previous crops:-

PREVCROP	1968-71	1972	1973	1974	1975	1976	
BBBBB	B	B	B	B	B	B	(2 plots/block)
FBBBB	B	F	B	B	B	B	
FBE BBB	B	F	BE	B	B	B	
BFBE BB	B	B	F	BE	B	B	
BBFBEB	B	B	B	F	BE	B	
BBBBFBE	B	B	B	B	F	BE	

B = Barley, BE = Beans, F = Fallow

Standard applications:

Barley: Manures: (20:14:14) at 420 kg combine drilled. Weedkiller: Ioxynil at 0.53 kg plus mecoprop at 1.6 kg in 220 l.

Spring beans: Manures: (0:14:28) at 400 kg. Insecticide: Pirimicarb at 0.14 kg in 340 l.

Seed: Barley: Julia, dressed with ethirimol, sown at 160 kg.
Spring beans: Minden, sown at 220 kg.

Cultivations, etc.:-

All plots: Ploughed: 1 Nov, 1976. Spring-tine cultivated: 7 Mar, 1977.
Spring-tine cultivated with crumbler attached: 8 Mar.

Barley: Seed sown: 9 Mar, 1977. Weedkiller applied: 15 May. Combine harvested: 15 Aug.

Spring beans: Spring-tine cultivated: 17 Aug, 1976. PK applied: 30 Mar, 1977. Fine-tooth harrowed: 10 May. Tractor hoed: 30 May. Insecticide applied: 20 July. Combine harvested: 12 Sept.

Fallow: Rotary cultivated: 4 May, 1977. Spring-tine cultivated: 30 May. Rotary cultivated: 8 July.

- NOTES: (1) Soil samples were taken before sowing and after harvest and plant samples in July for incidence of take-all (*Gaeumannomyces graminis*).
- (2) Yields of spring beans were not taken.
- (3) An examination of the results showed a fertility trend coinciding with the contours of the field. The yields presented have been adjusted for this trend. The yields for the years 1972-76 have also been adjusted and the revised figures are presented.

77/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	BBBBB	FBBBB	FEBBBB	BFEBBB	BBFBEB	BBBBFBE	MEAN
	3.14	3.91	3.47	3.92	4.26	4.03	3.79

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PREVCROP
SED	0.245 MIN REP 0.212 MAX-MIN

PREVCROP
MAX-MIN BBBBB V ANY OF REMAINDER
MIN REP ANY OF REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	6	0.229	6.2
GRAIN MEAN DM%	79.7		
PLOT AREA HARVESTED	0.00434		

76/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	B/B/B/B	F/B/B/B	F/BE/B/B	B/F/BE/B	B/B/F/BE	MEAN
	1.71	2.03	1.93	2.13	2.61	1.98

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PREVCROP
SED	0.311 MIN REP 0.254 MAX-MIN

PREVCROP
MAX-MIN B/B/B/B V ANY OF REMAINDER
MIN REP ANY OF REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	7	0.299	15.1

75/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	B/B/B/B	B/F/B/B	B/F/BE/B	B/B/F/BE	MEAN
	1.49	2.02	2.20	1.94	1.73

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PREVCROP
SED	0.216 MIN REP 0.170 MAX-MIN

PREVCROP
MAX-MIN B/B/B/B V ANY OF REMAINDER
MIN REP ANY OF REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	8	0.207	12.0

74/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	B/B/B	B/F/B	B/F/BE	MEAN
	4.00	4.26	4.18	4.06

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PREVCROP
SED	0.287 MIN REP 0.223 MAX-MIN

PREVCROP
MAX-MIN B/B/B V ANY OF REMAINDER
MIN REP ANY OF REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	9	0.284	7.0

73/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PREVCROP	B/B	B/F	MEAN
	3.86	4.49	3.95

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PREVCROP
-----	-----
SED	0.202

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.263	6.7

72/W/CS/99

BARLEY

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

CS	1	4	5	6	7	8	9	MEAN
	3.67	4.28	3.86	3.57	4.05	4.30	4.12	3.98

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	CS
-----	-----
SED	0.577

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	5	0.492	12.4