

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 1985

[Full Table of Content](#)



85/R/CS/10 and 85/W/CS/10 Long-term Liming - S. Barley

Rothamsted Research

Rothamsted Research (1986) *85/R/CS/10 and 85/W/CS/10 Long-term Liming - S. Barley* ; Yields Of The Field Experiments 1985, pp 96 - 98 - DOI: <https://doi.org/10.23637/ERADOC-1-19>

85/R/CS/10 and 85/W/CS/10

LONG TERM LIMING

Object: To study the effects of different amounts of lime and phosphate on the yields and compositions of a sequence of crops. Rothamsted (R) Sawyers I and Woburn (W) Stackyard C.

Sponsor: S.P. McGrath.

The 24th year, s. barley.

For previous years see 'Details' 1967, 1973 and 74-84/R&W/CS/10.

Design: 2 randomised blocks of 16 plots.

Whole plot dimensions: 6.40 x 18.3.

Treatments: All combinations of:-

1. CHALK Residual effects of ground chalk (tonnes CaCO₃) (total applied 1962-83):

		Rothamsted total		Woburn total	
		1962-78	1982-83	1962-78	1982-83
R	W				
0	0	0	0	0	0
14	8	7	7	6	2
23	24	15	8	14	10
50	43	30	20	23	20

2. P Residual effects of P fertilizer applied:

	Until 1978	1981	1982	1983	
	R & W	R & W	R & W	R	W
0	0	0	0	0	0
P1	0	P1	P1	0	P2
P2	P	P1	0	P2	P2
P3	P	P3	P1	P2	P4

Rates 1981-83 P1, P2, P3, P4 = 25, 50, 75, 100 kg P as superphosphate

NOTES: Until 1978 test P was applied cumulatively, rates varied with crop, K was also applied cumulatively, to P1 and P3 plots. Since 1981 K has been applied basally.

Basal applications:-

Sawyers I (R): Manures: (25:0:16) at 450 kg. Weedkillers: Mecoprop at 1.6 kg with bromoxynil at 0.20 kg and ioxynil at 0.20 kg with fungicide in 200 l. Fungicide: Tridemorph at 0.52 kg.

Stackyard C (W): Manures: (25:0:16) at 490 kg. Weedkillers: Mecoprop at 1.2 kg with bromoxynil at 0.26 kg and ioxynil at 0.26 kg in 250 l.

Seed: Sawyers I (R): Klaxon, sown at 160 kg.
Stackyard C (W): Klaxon, sown at 150 kg.

85/R/CS/10 and 85/W/CS/10

Cultivations, etc.:-

Sawyers I (R): Ploughed: 3 Jan, 1985. NK applied, spring-tine cultivated, rotary harrowed, seed sown: 18 Mar. Weedkillers with fungicide applied: 16 May. Combine harvested: 23 Aug.

Stackyard C (W): Ploughed: 13 Mar. Spring-tine cultivated, NK applied, harrowed, seed sown: 18 Mar. Weedkillers applied: 16 May. Combine harvested: 28 Aug.

NOTE: On Sawyers I (R) plots with treatment CHALK 0 gave no measurable yield.

85/R/CS/10 SAWYERS I (R)

GRAIN TONNES/HECTARE

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

P	0	P1	P2	P3	MEAN
CHALK					
0	*	*	*	*	*
14	3.87	5.34	7.15	7.93	6.08
23	6.27	7.36	8.16	8.26	7.51
50	7.02	7.67	8.22	8.19	7.78
MEAN	5.72	6.79	7.84	8.13	7.12

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

TABLE	CHALK	P	CHALK P
SED	0.416	0.480	0.831

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

STRATUM	DF	SE	CV%
BLOCK.WP	11	0.831	11.7

GRAIN MEAN DM% 76.7

PLOT AREA HARVESTED 0.00373

85/W/CS/10 STACKYARD C (W)

GRAIN TONNES/HECTARE

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

P	0	P1	P2	P3	MEAN
CHALK					
0	0.40	0.56	1.27	0.87	0.78
8	5.00	6.54	6.92	7.14	6.40
24	6.92	7.67	7.67	7.51	7.44
43	7.25	7.71	7.53	7.30	7.45
MEAN	4.89	5.62	5.85	5.70	5.52

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

TABLE	CHALK	P	CHALK P
-----	-----	-----	-----
SED	0.213	0.213	0.426

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.426	7.7

GRAIN MEAN DM% 83.0

PLOT AREA HARVESTED 0.00503