

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

Numerical Results of the Field Experiments 1968

[Full Table of Content](#)



68/B/7 Intensive Cereals - Ley, Potatoes, Wheat, Barley

Rothamsted Research

Rothamsted Research (1970) *68/B/7 Intensive Cereals - Ley, Potatoes, Wheat, Barley* ; Numerical Results Of The Field Experiments 1968, pp 111 - 118 - DOI:

<https://doi.org/10.23637/ERADOC-1-58>

68/B/7.1

INTENSIVE CEREALS

(WIC)

Woburn Stackyard Classical Site 1968 - the third year

For treatments, and previous years' results, see 'Results' 66/B/9 and 67/B/9.

Area of each sub-plot: 0.0103. Area harvested: Ley - 0.0022, wheat - 0.0033, barley - 0.0066, potatoes - 0.0034.

Wheat blocks only: A test of magnesium was introduced on eighth plots: None (0), 162 lb MgO as Epsom salts (MG).

Basal applications:

All crops: 1.0 cwt P2O5, 2.0 cwt K2O, half ploughed in, half worked into the seedbed.

Potatoes: 1.2 cwt N as 'Nitro-Chalk'.

Ley: 0.4 cwt N as 'Nitro-Chalk'.

Cultivations, etc.:

All plots: Half PK applied: 14 Sept, 1967. Ploughed: 15 - 16 Sept.

Ley: Mg and remaining PK applied, seeds sown at 29 lb: 20 Sept.

'Nitro-Chalk' applied: 27 Mar, 1968. Cut twice: 5 June, 6 Aug.

Potatoes: Sprayed with paraquat at 0.5 lb in 33 gals on the permanent

barley blocks: 2 Mar. Remaining PK, 'Nitro-Chalk', and Mg

applied: 26 Mar. Rotary cultivated, potatoes planted: 27 Mar.

Earthed up: 22 May. Grubbed, rotary ridged: 13 June. Sprayed

with mancozeb at 1.2 lb plus demeton-s-methyl at 3.5 oz in 38

gals on the permanent wheat blocks only: 12 July. Sprayed with

mancozeb at 1.2 lb in 38 gals: 18 July, 30 July. Sprayed with

undiluted BOV at 15 gals: 4 Sept. Lifted: 24 Sept.

Wheat: Remaining PK and Mg applied, seed drilled at 170 lb:

13 Oct, 1967. 'Nitro-Chalk' applied: 9 Apr, 1968. Sprayed with

ioxynil/mecoprop (Actril C at 6 pints in 25 gals): 25 Apr.

Combine harvested: 22 Aug.

Barley: Sprayed with paraquat at 0.5 lb in 33 gals: 2 Mar.

Remaining PK applied: 4 Mar. Seed drilled at 140 lb: 6 Mar.

'Nitro-chalk' applied 15 Mar. Sprayed with ioxynil/mecoprop

(Actril C at 5 pints in 25 gals): 26 Apr. Combine harvested:

20 Aug.

68/B/7.2

NOTE: (1) Estimates of eyespot (*Cercospora herpotrichoides*) and take-all (*Ophiobolus graminis*) were made in May and June on barley and in April and July on wheat.

Standard errors per plot:

Ley, dry matter: Wheat blocks 1/4 plot
1st cut: 4.56 or 11.1% (4 d.f.)
2nd cut: 1.06 or 8.6% (4 d.f.)
Total of 2 cuts: 4.28 or 8.0% (4 d.f.)
Wheat, grain:
1/4 plot: 2.02 or 8.4% (12 d.f.)
1/8 plot: 1.63 or 6.8% (16 d.f.)
Barley, grain:
1/4 plot: 2.16 or 7.7% (12 d.f.)
Potatoes, total tubers: Wheat blocks
1/4 plot: 1.528 or 14.3% (4 d.f.)

68/B/7.3

SUMMARY OF RESULTS

LEY (C4)

PERMANENT WHEAT BLOCK

N in 1966

	N1	N2	N3	N4	Mean
1ST CUT					
(±3.22)*					(±1.61)
O	35.2	42.4	43.1	42.2	40.7
MG	39.5	40.3	41.7	44.5	41.5
Mean	37.3	41.4	42.4	43.4	41.1
2ND CUT					
(±0.75)*					(±0.38)
O	9.0	9.8	9.9	12.4	10.3
MG	14.3	14.2	14.1	14.4	14.3
Mean	11.7	12.0	12.0	13.4	12.3
TOTAL OF 2 CUTS					
(±3.02)*					(±1.51)
O	44.2	52.3	53.0	54.6	51.0
MG	53.8	54.5	55.8	58.9	55.8
Mean	49.0	53.4	54.4	56.8	53.4
Mean D.M. %:	1st cut:	22.7			
	2nd cut:	22.4			
	Total of 2 cuts:	22.5			

* For use in vertical and interaction comparisons only

68/B/7.4

LEY (C4)

PERMANENT BARLEY BLOCK

N in 1966

N1	N2	N3	N4	Mean
1ST CUT				
49.7	46.0	46.6	46.9	47.3
2ND CUT				
14.8	14.6	16.0	17.1	15.6
TOTAL OF 2 CUTS				
64.4	60.6	62.6	64.0	62.9

Mean D.M. %: 1st cut: 22.7
 2nd cut: 20.4
 Total of 2 cuts: 21.6

68/B/7.5

WHEAT (C1, C2, C3, C6)

GRAIN

Crop in		N1	N2	N3	N4	O	MG	Mean
1966	1967							
		(± 1.43)*				(± 0.58)*		(± 1.48)
L	P	28.2	34.5	32.6	29.0	31.2	31.0	31.1
P	W	21.8	27.2	28.4	28.9	25.7	27.4	26.6
W	W	13.2	18.5	24.5	22.1	19.2	19.9	19.6
W	W	17.2	17.7	20.3	20.7	18.0	19.9	19.0
						(1) and (2)		(± 0.71)
				N1		20.3	19.9	20.1
				N2		23.7	25.2	24.4
				N3		25.8	27.1	26.4
				N4		24.5	25.9	25.2
Mean (± 0.29)						23.5	24.6	24.0

(1) (± 0.82) For use in vertical and diagonal comparisons only

(2) (± 0.58) For use in horizontal and interaction comparisons only

* For use in horizontal and interaction comparisons only

Mean D.M. %: 85.0

68/B/7.6

WHEAT (C1, C2, C3, C6)

STRAW

Crop in		N1	N2	N3	N4	O	MG	Mean	
1966	1967								
L	P	31.9	40.0	39.0	36.6	36.5	37.2	36.9	
P	W	26.4	36.6	36.0	37.6	33.2	35.1	34.1	
W	W	19.3	27.0	32.6	31.0	27.3	27.7	27.5	
W	W	20.5	24.8	28.3	26.7	24.3	25.8	25.1	
						N1	23.9	25.1	24.5
						N2	31.6	32.6	32.1
						N3	33.6	34.4	34.0
						N4	32.2	33.7	33.0
						Mean	30.3	31.5	30.9

Mean D.M. %: 80.2

68/B/7.7

BARLEY (C1, C2, C3, C6)

PERMANENT BARLEY BLOCKS

GRAIN

Crop in 1966	Crop in 1967	N1	N2	N3	N4	Mean
		(±1.53)*				(±1.56)
L	P	30.2	34.3	29.1	26.8	30.1
P	B	25.5	31.6	29.3	25.5	27.9
B	B	21.8	28.8	27.0	25.9	25.9
B	B	24.4	31.2	28.9	27.8	28.1
Mean (±0.76)		25.5	31.5	28.6	26.5	28.0

* For use in horizontal and interaction comparisons only

Mean D.M. %: 81.0

68/B/7.8

POTATOES (C5)

PERMANENT WHEAT BLOCKS

N in 1967

	N1	N2	N3	N4	Mean
TOTAL TUBERS					
	(±1.080)*				(±0.540)
□	11.17	9.51	12.02	9.23	10.48
MG	11.72	9.79	11.94	10.08	10.88
Mean	11.45	9.65	11.98	9.66	10.68
% WARE					
□	94.9	96.4	95.2	94.9	95.4
MG	96.2	96.2	96.9	96.1	96.3
Mean	95.6	96.3	96.0	95.5	95.9