

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 1979

[Full Table of Content](#)



79/W/RN/13 Intensive Cereals - Wheat, Barley

Rothamsted Research

Rothamsted Research (1980) *79/W/RN/13 Intensive Cereals - Wheat, Barley* ; Yields Of The Field Experiments 1979, pp 84 - 87 - DOI: <https://doi.org/10.23637/ERADOC-1-45>

79/W/RN/13

INTENSIVE CEREALS

Object: To study the effects of intensive cereal cropping on yield, incidence of soil-borne pathogens and organic matter in the soil - Woburn Stackyard I.

Sponsors: A.E. Johnston, J. McEwen.

The 14th year, winter wheat, barley.

For previous years see 'Details' 1973 and 74-78/W/RN/13.

Design: For each experiment: 2 randomised blocks of 6 plots, split into 4. DAZOMET tested on blocks.

Whole plot dimensions: 8.53 x 20.4.

Treatments:-

One experiment on winter wheat on part of the site of the classical wheat experiment 1877-1954

One experiment on barley on part of the site of the classical barley experiment 1877-1954

Factors tested on both experiments are the same but crop and nitrogen rates differ. All combinations of:-

Blocks

1. DAZOMET Dazomet (cumulative to a test of none and aldicarb in 1977 & 1978) applied in autumn (kg):

0
336

Whole plots

	Previous crops:						
	1972	1973	1974	1975	1976	1977	1978
P C2	C	C	C	L	P	C	C
P C3	C	C	L	P	C	C	C
P C4	C	L	P	C	C	C	C
P C5	L	P	C	C	C	C	C
L C2	P	C	C	C	L	C	C
C13	C	C	C	C	C	C	C

L = 1 year ley P = Potatoes C = Cereal: wheat or barley. All plots in cereal from 1977.

Sub plots

3. N Nitrogen fertiliser (kg N as 'Nitro-Chalk'):

Wheat	Barley	Wheat		Barley
		Autumn	Spring	
0 + 63	50	0 + 63		50
0 + 126	100	0 + 126		100
0 + 189	150	0 + 189		150
63 + 189	200	63 + 189		200

79/W/RN/13

Standard applications:

Wheat: Manures: (0:20:20) at 310 kg, combine drilled. Weedkillers:
Methabenzthiazuron at 1.5 kg in 220 l.

Barley: Manures: (0:20:20) at 300 kg, combine drilled. Weedkillers:
Bromoxynil with ioxynil ('Oxytril CM' at 2.1 kg in 250 l).

Seed: Wheat: Flanders, sown at 180 kg.

Barley: Porthos, dressed with ethirimol, sown at 160 kg.

Cultivations, etc.:-

All plots: Ploughed: 30 Aug, 1978. Spring-tine cultivated, with crumbler
attached: 31 Aug. Dazomet applied and all plots rotary cultivated:
7 Sept.

Wheat: Rotary cultivated: 11 Oct, 1978. Seed sown: 13 Oct. Autumn N
and weedkiller applied: 18 Oct. Spring N applied: 10 Apr, 1979.
Combine harvested: 30 Aug.

Barley: Heavy spring-tine cultivated: 16 Oct, 1978. Spring-tine cultivated,
with crumbler attached, twice: 16 Apr, 1979, 20 Apr. Seed sown:
23 Apr. N applied: 30 Apr. Weedkiller applied: 5 June. Combine
harvested: 28 Aug.

79/W/RN/13

WINTER WHEAT

GRAIN TONNES/HECTARE

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

PREVCROP	P C2	P C3	P C4	P C5	L C2	C13	MEAN
DAZOMET							
0	4.38	4.37	4.15	4.76	3.96	4.64	4.38
336	5.19	5.15	4.94	5.23	4.64	4.91	5.01
MEAN	4.79	4.76	4.54	5.00	4.30	4.77	4.69

N	0+63	0+126	0+189	63+189	MEAN
DAZOMET					
0	3.50	4.61	4.80	4.60	4.38
336	4.96	5.67	4.95	4.47	5.01
MEAN	4.23	5.14	4.87	4.54	4.69

N	0+63	0+126	0+189	63+189	MEAN
PREVCROP					
P C2	4.00	5.37	4.82	4.96	4.79
P C3	4.25	5.15	5.08	4.56	4.76
P C4	4.17	4.87	4.58	4.55	4.54
P C5	4.47	5.56	5.29	4.68	5.00
L C2	3.80	4.86	4.31	4.23	4.30
C13	4.68	5.01	5.16	4.24	4.77
MEAN	4.23	5.14	4.87	4.54	4.69

N	0+63	0+126	0+189	63+189	
DAZOMET					
PREVCROP					
0	P C2	3.25	4.69	4.69	4.91
	P C3	3.36	4.87	4.55	4.69
	P C4	3.38	3.97	4.64	4.61
	P C5	3.82	5.18	5.23	4.84
	L C2	2.92	4.19	4.43	4.32
	C13	4.26	4.75	5.27	4.27
336	P C2	4.74	6.06	4.96	5.02
	P C3	5.14	5.42	5.61	4.43
	P C4	4.97	5.76	4.53	4.48
	P C5	5.13	5.93	5.35	4.53
	L C2	4.68	5.54	4.20	4.14
	C13	5.10	5.27	5.04	4.21

GRAIN MEAN DM% 86.4

SUB PLOT AREA HARVESTED 0.00277

79/W/RN/13

BARLEY

GRAIN TONNES/HECTARE

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

PREVCROP	P C2	P C3	P C4	P C5	L C2	C13	MEAN
DAZOMET							
0	4.52	4.28	4.72	4.28	4.42	4.03	4.38
336	4.96	4.99	5.06	4.71	4.70	4.86	4.88
MEAN	4.74	4.63	4.89	4.50	4.56	4.44	4.63

N	50	100	150	200	MEAN
DAZOMET					
0	2.61	4.26	5.26	5.37	4.38
336	3.84	5.15	5.23	5.29	4.88
MEAN	3.22	4.71	5.25	5.33	4.63

N	50	100	150	200	MEAN
PREVCROP					
P C2	3.10	4.88	5.35	5.64	4.74
P C3	3.28	4.83	5.11	5.31	4.63
P C4	3.66	4.94	5.44	5.51	4.89
P C5	2.90	4.63	5.24	5.22	4.50
L C2	3.34	4.43	5.18	5.28	4.56
C13	3.06	4.52	5.16	5.03	4.44
MEAN	3.22	4.71	5.25	5.33	4.63

N	50	100	150	200
DAZOMET				
0				
P C2	2.29	4.52	5.58	5.70
P C3	2.52	4.41	5.02	5.18
P C4	3.34	4.53	5.37	5.64
P C5	2.03	4.36	5.30	5.44
L C2	3.09	3.85	5.37	5.38
C13	2.37	3.93	4.92	4.89
336				
P C2	3.90	5.25	5.12	5.58
P C3	4.05	5.25	5.20	5.44
P C4	3.97	5.36	5.52	5.38
P C5	3.78	4.90	5.18	5.00
L C2	3.59	5.02	5.00	5.18
C13	3.75	5.12	5.40	5.17

GRAIN MEAN DM% 85.3

SUB PLOT AREA HARVESTED 0.00277