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# Yields of the Field Experiments 1983

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## 83/R/EX/4 Exhaustion Land - S. Barley

### Rothamsted Research

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83/R/EX/4

EXHAUSTION LAND

Object: To study the residual effects of manures, applied 1856-1901, on the yield of continuous s. barley - Hoosfield.

The 128th year, s. barley.

For previous years see 'Details' 1967, 1973 and 74-82/R/EX/4.

Treatments: All combinations of:-

Whole plots

1. PLOTFERT(01) Plot numbers and manuring 1876-1901:

1-	Plot 1 None
2-	Plot 2 None
3D	Plot 3 D
4D	Plot 4 D
5N	Plot 5 N
6N*	Plot 6 N*
7NMIN	Plot 7 N P K Na Mg
8N*MIN	Plot 8 N* P K Na Mg
9P	Plot 9 P
10MIN	Plot 10 P K Na Mg

N - 96 kg N as ammonium salts  
N\* - 96 kg N as nitrate of soda  
P - 34 kg P as superphosphate  
K - 137 kg K as sulphate of potash  
Na - 16 kg Na as sulphate of soda  
Mg - 11 kg Mg as sulphate of magnesia  
D - Farmyard manure at 35 tonnes  
MIN - P K Na Mg

Sub plots

2. N Nitrogen fertilizer (kg N) as 'Nitro-Chalk' (basal until 1975, on a cyclic system since 1976):

0  
48  
96  
144

For a fuller record of treatments see 'Details' 1967 etc.

Basal applications: Weedkillers: Glyphosate at 1.4 kg in 250 l. Dicamba, mecoprop and MCPA (as 'Herrisol' at 5.0 l) in 500 l applied with the fungicide. Fungicide: Tridemorph at 0.52 kg.

Seed: Georgie, dressed ethirimol, sown at 160 kg.

Cultivations, etc.: - Glyphosate applied: 28 Oct, 1982. Ploughed: 1 Dec. Rotary harrowed, seed sown: 10 Mar, 1983. N treatments applied: 5 May. 'Herrisol' with the fungicide applied: 8 June. Combine harvested: 8 Aug.

83/R/EX/4

GRAIN TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.97	1.65	1.32	1.68	1.40
2-	0.63	1.32	1.28	1.70	1.23
3D	2.00	3.46	4.50	4.51	3.62
4D	0.99	3.01	3.66	4.01	2.92
5N	0.80	1.94	1.46	1.99	1.55
6N*	0.49	1.18	0.36	0.58	0.65
7NMIN	1.67	2.92	4.05	3.79	3.11
8N*MIN	0.56	2.14	2.10	2.54	1.83
9P	2.77	2.76	3.24	4.56	3.33
10MIN	0.99	2.01	1.79	2.67	1.87
MEAN	1.19	2.24	2.38	2.80	2.15

GRAIN MEAN DM% 85.1

STRAW TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.21	0.58	0.59	0.81	0.55
2-	0.22	0.40	0.43	0.59	0.41
3D	0.22	0.94	2.01	2.73	1.47
4D	0.42	0.90	1.12	2.41	1.21
5N	0.15	0.51	0.55	0.80	0.50
6N*	0.14	0.48	0.14	0.27	0.26
7NMIN	0.49	1.10	1.56	2.71	1.47
8N*MIN	0.15	0.93	0.61	0.87	0.64
9P	0.36	1.03	1.48	3.01	1.47
10MIN	0.14	0.76	0.58	0.96	0.61
MEAN	0.25	0.76	0.91	1.52	0.86

STRAW MEAN DM% 88.7

SUB PLOT AREA HARVESTED 0.00728