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# Yields of the Field Experiments 1980

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## 80/R/EX/4 Exhaustion Land

### Rothamsted Research

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80/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 125th year, s. barley.

For previous years see 'Details' 1967, 1973 and 74-79/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 fertiliser (kg N) (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: Chalk at 2.9 t. Weedkillers: Glyphosate at 1.5 l in 220 l. Mecoprop, bromoxynil, ioxynil and linuron with xylene (as 'Springclene' at 3.5 l) in 250 l applied with the fungicide. Fungicide: Tridemorph at 0.53 kg.

Seed: Georgie, sown at 160 kg.

80/R/EX/4

Cultivations, etc.:- Glyphosate applied: 27 Sept, 1979. Chalk applied:  
7 Nov. Ploughed: 26 Nov. Rotary harrowed, seed sown: 9 Apr, 1980.  
N applied: 9 May. 'Springclene' and tridemorph applied: 9 June.  
Combine harvested: 2 Sept.

GRAIN TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	1.37	1.77	1.58	1.18	1.48
2-	0.77	0.74	1.17	1.15	0.96
3D	2.20	3.40	3.84	3.58	3.26
4D	2.24	2.51	2.98	2.67	2.60
5N	1.01	1.52	1.71	0.98	1.30
6N*	0.40	0.35	1.00	1.05	0.70
7NMIN	1.66	2.92	3.16	2.98	2.68
8N*MIN	1.73	1.67	2.27	2.08	1.94
9P	1.71	2.91	3.19	2.92	2.68
10MIN	1.33	1.78	2.43	2.09	1.91
MEAN	1.44	1.96	2.33	2.07	1.95

GRAIN MEAN DM% 81.7

STRAW TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.46	0.68	0.60	0.38	0.53
2-	0.34	0.32	0.53	0.44	0.41
3D	0.84	1.64	2.01	2.07	1.64
4D	0.62	1.25	1.63	1.82	1.33
5N	0.34	0.61	0.68	0.39	0.50
6N*	0.26	0.18	0.56	0.41	0.35
7NMIN	0.70	1.34	1.62	1.68	1.34
8N*MIN	0.62	1.02	1.41	1.37	1.10
9P	0.42	1.08	1.44	1.52	1.11
10MIN	0.49	0.95	1.47	1.56	1.12
MEAN	0.51	0.91	1.19	1.16	0.94

STRAW MEAN DM% 83.6

PLOT AREA HARVESTED 0.00728