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# Yields of the Field Experiments 1981

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

### Rothamsted Research

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81/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 126th year, s. barley.

For previous years see 'Details' 1967, 1973 and 74-80/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: Weedkillers: Dicamba with mecoprop and MCPA (as 'Banlene Plus' at 5.0 l) in 250 l applied with the fungicide.  
Fungicide: Tridemorph at 0.53 kg.

Seed: Georgie, sown at 160 kg.

Cultivations, etc.: - Ploughed: 5 Dec, 1980. Spring-tine cultivated, seed sown: 18 Feb, 1981. N applied: 16 Apr. Weedkiller applied: 30 May. Combine harvested: 18 Aug.

81/R/EX/4

GRAIN TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.82	1.29	1.03	1.64	1.19
2-	0.15	0.49	0.37	0.61	0.40
3D	3.58	3.75	4.16	3.46	3.74
4D	2.54	3.05	2.99	3.81	3.10
5N	0.87	1.21	0.70	1.07	0.96
6N*	0.20	0.49	1.24	0.30	0.56
7NMIN	2.44	3.06	3.26	2.83	2.90
8N*MIN	1.22	1.32	1.92	2.72	1.80
9P	2.66	4.37	3.42	3.47	3.48
10MIN	1.05	1.70	2.45	2.38	1.90
MEAN	1.55	2.07	2.15	2.23	2.00

GRAIN MEAN DM% 88.7

STRAW TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.29	0.44	0.29	0.66	0.42
2-	0.07	0.22	0.22	0.29	0.20
3D	0.65	1.99	2.27	1.91	1.71
4D	0.51	1.24	1.10	1.54	1.10
5N	0.22	0.44	0.29	0.29	0.31
6N*	0.00	0.15	0.22	0.15	0.13
7NMIN	0.51	1.25	1.55	1.47	1.20
8N*MIN	0.22	0.65	0.81	0.89	0.64
9P	0.59	1.68	1.83	1.77	1.47
10MIN	0.36	0.73	0.87	1.09	0.76
MEAN	0.34	0.88	0.94	1.01	0.79

STRAW MEAN DM% 92.1

SUB PLOT AREA HARVESTED 0.00728