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## Yields of the Field Experiments 1979

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### 79/R/EX/4 Exhaustion Land - Barley

#### Rothamsted Research

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79/R/EX/4

EXHAUSTION LAND

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

The 124th year, barley.

For previous years see 'Details' 1967, 1973 and 74-78/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: Bromoxynil and ioxynil (as 'Oxytril CM' at 1.4 kg) and mecoprop at 1.7 kg in 220 l. Fungicide: Tridemorph at 0.53 kg in 220 l.

Seed: Julia, sown at 160 kg.

Cultivations, etc.: - Ploughed: 15 Dec, 1978. Spring-tine cultivated, seed sown: 18 Apr, 1979. N applied: 17 May. Weedkillers applied: 15 June. Fungicide applied: 18 June. Combine harvested: 1 Sept.

79/R/EX/4

GRAIN TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.44	0.86	1.28	1.22	0.95
2-	0.31	0.63	0.73	1.03	0.67
3D	1.50	3.54	4.57	4.62	3.56
4D	1.00	3.15	2.80	4.08	2.76
5N	0.51	0.95	1.19	1.60	1.06
6N*	0.40	0.57	0.33	0.65	0.49
7NMIN	1.37	2.71	3.93	4.27	3.07
8N*MIN	0.59	2.29	1.05	1.96	1.47
9P	1.29	3.17	4.15	3.89	3.12
10MIN	0.50	2.08	1.32	2.33	1.56
MEAN	0.79	2.00	2.13	2.57	1.87

GRAIN MEAN DM% 81.6

STRAW TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.37	0.22	0.51	0.51	0.40
2-	0.14	0.15	0.22	0.37	0.22
3D	0.30	1.76	2.64	2.73	1.86
4D	0.15	1.33	1.17	2.05	1.18
5N	0.15	0.44	0.52	0.74	0.46
6N*	0.15	0.15	0.15	0.22	0.17
7NMIN	0.29	1.25	1.97	2.76	1.57
8N*MIN	0.29	0.88	0.36	0.73	0.57
9P	0.30	1.24	2.04	2.44	1.50
10MIN	0.22	0.81	0.43	1.02	0.62
MEAN	0.23	0.82	1.00	1.36	0.85

STRAW MEAN DM% 90.9

SUB PLOT AREA HARVESTED 0.00728