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82/R/EX/4 Exhaustion Land - S. Barley

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82/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 127th year, s. barley.

For previous years see 'Details' 1967, 1973 and 74-81/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

NOTE: Chalk was applied at 2.9 t to Plot 2 NO and N48, Plot 4 all N rates, Plots 8 and 10 N96; at 5.8 t to Plot 2 N96 and N144, Plot 6 NO and N96, Plots 8 and 10 NO, N48 and N144, at 8.7 t to Plot 6 N48 and N144.

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 'Banlene Plus' at 5.0 l) in 250 l applied with the fungicide. Fungicide: Tridemorph at 0.53 kg.

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

82/R/EX/4

Cultivations, etc.:— Glyphosate applied: 27 Oct, 1981. Ploughed: 20 Nov.
Spring-tine cultivated: 28 Mar, 1982. Rotary harrowed: 29 Mar. Seed
sown: 30 Mar. Dicamba, mecoprop and MCPA applied with the fungicide:
26 May. Combine harvested: 16 Aug.

GRAIN TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.67	0.87	1.06	1.70	1.07
2-	0.28	0.48	0.98	0.98	0.68
3D	2.80	4.36	4.15	4.90	4.05
4D	1.73	2.20	3.89	3.78	2.90
5N	0.72	1.00	1.19	1.62	1.13
6N*	0.45	0.53	0.54	0.32	0.46
7NMIN	1.79	2.47	2.61	3.61	2.62
8N*MIN	0.80	1.32	1.99	2.12	1.56
9P	2.34	3.04	2.40	3.26	2.76
10MIN	0.98	1.52	2.30	2.35	1.79
MEAN	1.26	1.78	2.11	2.46	1.90

GRAIN MEAN DM% 81.9

STRAW TONNES/HECTARE

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

N	0	48	96	144	MEAN
PLOTFERT(01)					
1-	0.29	0.36	0.42	0.71	0.44
2-	0.21	0.27	0.35	0.42	0.31
3D	0.65	1.73	1.94	2.46	1.70
4D	0.50	1.06	1.66	1.37	1.15
5N	0.14	0.28	0.35	0.43	0.30
6N*	0.21	0.33	0.21	0.14	0.22
7NMIN	0.43	0.94	1.00	1.59	0.99
8N*MIN	0.40	0.99	0.99	1.18	0.89
9P	0.43	1.38	1.01	1.36	1.05
10MIN	0.46	1.21	1.29	1.34	1.08
MEAN	0.37	0.85	0.92	1.10	0.81

STRAW MEAN DM% 87.3

SUB PLOT AREA HARVESTED 0.00728