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# Yields of the Field Experiments 2001

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Yields of the  
Classical  
and other  
Long-term Experiments  
2001

1428 - Rothamsted

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## 01/R/EX/4 - Exhaustion Land

### Rothamsted Research

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01/R/EX/4

EXHAUSTION LAND

**Object:** To study the residual effects of manures applied 1876-1901, and of additional phosphate applied since 1986, on the yield of continuous s. barley up to 1991, w. wheat since - Hoosfield.

The 146th year, s. wheat.

For previous years see 'Details' 1977, 1973 and 74-00/EX/4.

**Treatments:** All combinations of:-

Whole plots (P test)

1. **OLD RES** Residues of manures applied annually 1876-1901:

O	None
D	Farmyard manure at 35 t
N	96 kg N as ammonium salts
P	34 kg P as superphosphate
NPKNAMG	N and P as above plus 137 kg K as sulphate of potash, 16 kg Na as sulphate of soda, 11 kg Mg as sulphate of magnesia
  
2. **P** Maintenance P (20 kg P) applied annually from 2000 to maintain existing levels of available P in the soil. (P1) (P2) and (P3) are residues of P applied annually 1986-1992:

	2000-01	1986-92
O	None	None
P(P1)	20 kg P	44 kg P
P(P2)	20 kg P	87 kg P
P(P3)	20 kg P	131 kg P

**NOTE:** P treatments were applied at 61.5 kg P in error in 2000.

plus

Whole plots (K test, previously N test until 1991)

- |                |  |
|----------------|--|
| <b>OLD RES</b> | Residues of manures applied annually 1876-1901:              |
| O              | None   |
| D              | Farmyard manure at 35 t                                      |
| N*             | 96 kg N as nitrate of soda                                   |
| PK             | 34 kg P as superphosphate, 137 kg K as sulphate of<br>potash |
| N*PK           | N, P and K as above  |

**Experimental diary:**

- K test:  
17-Oct-00 : T : : P basal:(triple superphosphate at 98 kg), plots 2,  
4, 6, 8 & 10.
- P test:  
17-Oct-00 : T : P : P test:(triple superphosphate at 98 kg), plots  
011-013, 031-033, 051-053, 071-073, & 091-093.  
18-Oct-00 : T : K : K basal/100 kg (muriate of potash at 250 kg),  
plots 1, 3, 5, 7 & 9.
- All plots:  
20-Oct-00 : B : : Ploughed.  
26-Oct-00 : B : : Combination drilled, Hereward, tr. Sibutol, at 450  
seeds/m<sup>2</sup> with the Accord drill.  
21-Jan-01 : B : : Ploughed.



01/R/EX/4

**K TEST**

**GRAIN TONNES/HECTARE**

\*\*\*\*\* Tables of means \*\*\*\*\*

**OLD RES**

O	2.47
D	3.20
N*	1.43
PK	0.91
N*PK	1.94

Mean	1.99
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GRAIN MEAN DM% 84.0

**STRAW TONNES/HECTARE**

\*\*\*\*\* Tables of means \*\*\*\*\*

**OLD RES**

O	1.68
D	1.69
N*	1.54
PK	1.05
N*PK	1.28

Mean	1.45
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STRAW MEAN DM% 65.2

PLOT AREA HARVESTED 0.00614