

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1997

[Full Table of Content](#)



97/R/EX/4 Exhaustion Land - W. Wheat

Rothamsted Research

Rothamsted Research (1998) *97/R/EX/4 Exhaustion Land - W. Wheat* ; Yields Of The Field Experiments 1997, pp 24 - 26 - DOI: <https://doi.org/10.23637/ERADOC-1-53>

97/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 142nd year, w. wheat.

For previous years see 'Details' 1977, 1973 and 74-96/R/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 | 97 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 RES | Residues of phosphate (kg P) applied annually from 1986, as single superphosphate in 1986 and 1987, triple superphosphate from 1988 until 1992, none since: |
| O | None |
| P1 | 44 |
| P2 | 87 |
| P3 | 131 |

plus

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

- | | |
|---------|---|
| OLD RES | Residues of manures applied annually 1876-1901: |
| O | None |
| D | Farmyard manure at 35 t |
| N* | 97 kg N as nitrate of soda |
| PK | 34 kg P as superphosphate, 137 kg K as sulphate of potash |
| N*PK | N, P and K as above |

Experimental diary:

K test:

26-Sep-96 : T : Muriate of potash at 167 kg.

P test:

26-Sep-96 : T : Triple superphosphate at 319 kg.

97/R/EX/4

Experimental diary:

All plots:

05-Oct-96 : B : Ploughed.
 08-Oct-96 : B : Spring-tine cultivated, rotary harrowed, Hereward,
 dressed Beret Gold, drilled at 380 seeds per m².
 17-Mar-97 : B : Topik at 1.25 l with Sprayprover at 1.0 l in 200 l.
 07-Apr-97 : B : 34.5% N at 556 kg.
 16-Apr-97 : B : Dow Shield at 0.35 l with Deloxil at 1.5 l in 200 l.
 30-May-97 : B : Folicur at 0.5 l with Pointer at 0.5 l in 300 l.
 14-Aug-97 : B : Combine harvested.

NOTE: Samples of grain and straw were taken for chemical analysis.

P TEST

GRAIN TONNES/HECTARE

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

P RES	O	P1	P2	P3	Mean
OLD RES					
O	1.28	5.01	6.86	7.25	5.10
D	4.78	6.61	7.60	7.47	6.61
N	1.68	5.71	7.40	7.46	5.56
P	4.58	6.69	7.71	7.44	6.61
NPKNAMG	4.09	6.56	7.33	7.70	6.42
Mean	3.28	6.12	7.38	7.46	6.06

GRAIN MEAN DM% 86.9

STRAW TONNES/HECTARE

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

P RES	O	P1	P2	P3	Mean
OLD RES					
O	0.31	2.02	2.82	2.81	1.99
D	1.61	2.66	3.01	2.58	2.46
N	0.66	2.07	2.99	2.90	2.16
P	1.50	2.41	2.96	2.78	2.41
NPKNAMG	1.46	2.49	3.09	2.89	2.48
Mean	1.11	2.33	2.97	2.79	2.30

STRAW MEAN DM% 89.9

PLOT AREA HARVESTED 0.00614

97/R/EX/4

K TEST

GRAIN TONNES/HECTARE

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

OLD RES

O	6.55
D	7.18
N*	7.27
PK	7.84
N*PK	7.47
Mean	7.26

GRAIN MEAN DM% 87.3

STRAW TONNES/HECTARE

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

OLD RES

O	2.59
D	2.84
N*	2.89
PK	3.00
N*PK	2.73
Mean	2.81

STRAW MEAN DM% 89.3

PLOT AREA HARVESTED 0.00614