

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 1994

[Full Table of Content](#)



---

### 94/R/EX/4 Exhaustion Land - W. Wheat

#### Rothamsted Research

Rothamsted Research (1995) *94/R/EX/4 Exhaustion Land - W. Wheat* ; Yields Of The Field Experiments 1994, pp 23 - 25 - DOI: <https://doi.org/10.23637/ERADOC-1-49>

94/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 139th year, w. wheat.

For previous years see 'Details' 1967, 1973 and 74-93/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 tonnes
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 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)

- |                |  |
|----------------|--|
| <b>OLD RES</b> | Residues of manures applied annually 1876-1901:              |
| O              | None   |
| D              | Farmyard manure at 35 tonnes                                 |
| 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:**

P test:

15-Oct-93 : **T** : Muriate of potash at 167 kg.

K test:

15-Oct-93 : **T** : Triple superphosphate at 319 kg.

94/R/EX/4

**Experimental diary:**

All plots:

- 20-Oct-93 : B : Ploughed.
- 22-Oct-93 : B : Spring-tine cultivated twice, rotary harrowed, Mercia, dressed Cerevax, drilled at 380 seeds per m<sup>2</sup>.
- 12-Apr-94 : B : 34.5% N at 568 kg.
- 09-May-94 : B : Ally at 30 g with Cheetah Super at 3.0 l and Starane 2 at 0.75 l in 200 l.  
: B : Halo at 2.0 l with New 5C Cycocel at 2.5 l in 200 l.
- 13-Jun-94 : B : Halo at 2.0 l with Mallard 750 EC at 0.5 l in 200 l.
- 17-Jun-94 : B : Hostathion at 840 ml in 200 l.
- 16-Aug-94 : 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	2.42	7.29	7.62	7.88	6.30
D	6.45	8.07	8.07	7.53	7.53
N	2.32	7.41	7.75	7.54	6.26
P	6.34	8.09	8.69	8.07	7.80
NPKNAMG	5.75	7.60	7.87	7.87	7.27
Mean	4.66	7.69	8.00	7.78	7.03

GRAIN MEAN DM% 86.0

**STRAW TONNES/HECTARE**

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

P RES	O	P1	P2	P3	Mean
OLD RES					
O	1.35	4.44	4.58	4.74	3.78
D	3.59	4.80	4.68	4.50	4.39
N	1.08	4.42	4.45	4.18	3.53
P	3.79	4.97	5.35	4.86	4.74
NPKNAMG	3.22	4.74	4.54	4.36	4.22
Mean	2.61	4.68	4.72	4.53	4.13

STRAW MEAN DM% 91.1

PLOT AREA HARVESTED 0.00589

94/R/EX/4

K TEST

GRAIN TONNES/HECTARE

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

OLD RES

O	7.08
D	6.84
N*	6.90
PK	6.86
N*PK	6.54
Mean	6.84

GRAIN MEAN DM% 86.0

STRAW TONNES/HECTARE

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

OLD RES

O	3.65
D	3.36
N*	3.09
PK	3.32
N*PK	3.03
Mean	3.29

STRAW MEAN DM% 90.4

PLOT AREA HARVESTED 0.00589