

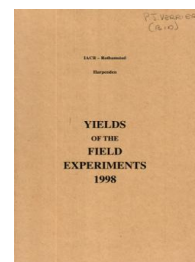
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98/R/EX/4 Exhaustion Land - W. Wheat

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98/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 143rd year, w. wheat.

For previous years see 'Details' 1977, 1973 and 74-97/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 | 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)

- | | |
|----------------|--|
| OLD RES | 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 potash |
| N*PK | N, P and K as above |

Experimental diary:

P test:

15-Oct-97 : **T** : Muriate of potash at 167 kg.

K test:

15-Oct-97 : **T** : Triple superphosphate at 319 kg.

98/R/EX/4

Experimental diary:

All plots:

- 23-Oct-97 : B : Ploughed.
- 24-Oct-97 : B : Rotary harrowed, Mercia, dressed Sibutol, drilled at 380 seeds per m².
- 05-Feb-98 : B : Amazon at 1.0 l with Chiltern Cropoil at 1.0 l in 200 l.
- 24-Mar-98 : B : 34.5% N at 557 kg.
- 09-May-98 : B : Opus at 0.7 l in 200 l.
- 28-May-98 : B : Opus at 0.7 l in 200 l.
- 15-Jun-98 : B : Bavistin DF at 0.5 kg with Folicur at 0.5 l in 100 l.
- 06-Aug-98 : B : Alpha Glyphogan at 3.0 l in 200 l.
- 18-Aug-98 : 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 | 3.38 | 7.22 | 7.62 | 8.01 | 6.56 |
| D | 6.98 | 7.62 | 7.70 | 7.88 | 7.55 |
| N | 3.43 | 7.48 | 7.73 | 7.61 | 6.56 |
| P | 6.19 | 7.32 | 7.72 | 7.41 | 7.16 |
| NPKNAMG | 6.40 | 7.41 | 7.77 | 8.05 | 7.41 |
| Mean | 5.28 | 7.41 | 7.71 | 7.79 | 7.05 |

GRAIN MEAN DM% 86.0

STRAW TONNES/HECTARE

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

| P RES | O | P1 | P2 | P3 | Mean |
|----------------|------|------|------|------|------|
| OLD RES | | | | | |
| O | 3.18 | 6.13 | 7.13 | 6.88 | 5.83 |
| D | 5.92 | 7.17 | 7.25 | 8.10 | 7.11 |
| N | 3.46 | 6.25 | 7.73 | 7.53 | 6.24 |
| P | 6.13 | 7.42 | 8.03 | 7.90 | 7.37 |
| NPKNAMG | 5.64 | 6.91 | 7.52 | 7.80 | 6.97 |
| Mean | 4.86 | 6.78 | 7.53 | 7.64 | 6.70 |

STRAW MEAN DM% 90.6

PLOT AREA HARVESTED 0.00589

98/R/EX/4

K TEST

GRAIN TONNES/HECTARE

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

OLD RES

| | |
|------|------|
| O | 6.50 |
| D | 6.79 |
| N* | 6.81 |
| PK | 7.21 |
| N*PK | 7.07 |
| Mean | 6.88 |

GRAIN MEAN DM% 85.8

STRAW TONNES/HECTARE

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

OLD RES

| | |
|------|------|
| O | 5.96 |
| D | 6.72 |
| N* | 6.38 |
| PK | 7.10 |
| N*PK | 7.72 |
| Mean | 6.78 |

STRAW MEAN DM% 91.9

PLOT AREA HARVESTED 0.00589