

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 1993

[Full Table of Content](#)



93/R/CS/401 Nitrogen Indicators - W. Wheat

Rothamsted Research

Rothamsted Research (1994) *93/R/CS/401 Nitrogen Indicators - W. Wheat* ; Yields Of The Field Experiments 1993, pp 105 - 106 - DOI: <https://doi.org/10.23637/ERADOC-1-48>

93/R/CS/401

NITROGEN INDICATORS

Object: To relate chlorophyll concentrations in individual leaves of w. wheat to nitrogen supply and crop yield - Long Hoos I/II.

Sponsors: P. B. Barraclough.

The first year, w. wheat.

Design: 3 blocks of 8 plots.

Plot dimensions: 3.0 x 15.0.

Treatments:

| N | Spring nitrogen (kg N) at first node formation: |
|------|--|
| 0 | 0 |
| 50 | 50 |
| 100 | 100 |
| 150 | 150 |
| 200 | 200 |
| 250 | 250 |
| 300 | 300 |
| 40X5 | 40 plus 40 at four subsequent weekly intervals (total 200) |

Experimental diary:

11-Sep-92 : B : Discd.
16-Sep-92 : B : Discd.
17-Sep-92 : B : Rolled.
29-Sep-92 : B : Sting CT at 2.0 l in 200 l.
30-Sep-92 : B : Ploughed.
09-Oct-92 : B : Discd twice.
10-Oct-92 : B : Rotary harrowed, Hereward, dressed Cerevax, drilled at 400 seeds per square metre.
24-Nov-92 : B : Draza at 5.5 kg.
24-Feb-93 : B : Panther at 2.0 l in 200 l.
12-Mar-93 : B : PK as (0:18:36) at 1250 kg.
19-Apr-93 : T : N 50: 34.5% N at 145 kg.
 : T : N 100: 34.5% N at 290 kg.
 : T : N 150: 34.5% N at 435 kg.
 : T : N 200: 34.5% N at 580 kg.
 : T : N 250: 34.5% N at 725 kg.
 : T : N 300: 34.5% N at 870 kg.
 : T : N 40X5: 34.5% N at 116 kg.
06-May-93 : T : N 40X5: 34.5% N at 116 kg.
13-May-93 : T : N 40X5: 34.5% N at 116 kg.
20-May-93 : T : N 40X5: 34.5% N at 116 kg.
27-May-93 : T : N 40X5: 34.5% N at 116 kg.
03-Jun-93 : B : Cheetah R at 2.5 l and Calixin at 0.70 l in 200 l.
08-Jun-93 : B : Halo at 2.0 l in 200 l.
16-Aug-93 : B : Combine harvested.

93/R/CS/401

Previous crops: W. wheat 1991, s. oats 1992.

NOTE: Leaf chlorophyll concentrations were measured weekly from the beginning of stem extension. Total N and nitrate concentrations were measured in individual plant parts during stem extension.

GRAIN TONNES/HECTARE

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

| N RATE | |
|--------|------|
| 0 | 4.37 |
| 50 | 6.11 |
| 100 | 8.06 |
| 150 | 8.86 |
| 200 | 8.99 |
| 250 | 9.18 |
| 300 | 9.47 |
| 40X5 | 9.88 |
| Mean | 8.11 |

*** Standard errors of differences of means ***

N RATE
0.242

***** Stratum standard errors and coefficients of variation *****

| Stratum | d.f. | s.e. | cv% |
|----------|------|-------|-----|
| BLOCK.WP | 14 | 0.297 | 3.7 |

GRAIN MEAN DM% 85.2

PLOT AREA HARVESTED 0.00230