

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 1995

[Full Table of Content](#)



95/R/WW/10 Plant N Indicators W. Wheat

Rothamsted Research

Rothamsted Research (1996) *95/R/WW/10 Plant N Indicators W. Wheat* ; Yields Of The Field Experiments 1995, pp 106 - 107 - DOI: <https://doi.org/10.23637/ERADOC-1-50>

95/R/WW/10

WINTER WHEAT

PLANT N INDICATORS

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

Sponsor: P.B. Barraclough.

Design: 4 randomised blocks of 11 plots.

Plot dimensions: 3.0 x 20.0.

Treatments:

N	Timing, rate and form of nitrogen fertilizer in spring (kg N):			
	G.S. 30	G.S. 31	G.S. 37	TOTAL
1	40	60	0	100
2	40	60	20	120
3	40	60	40	140
4	40	60	60	160
5	40	60	40*	140
6	40	60	80	180
7	40	60	-	160**
8	40	100	0	140
9	40	100	40	180
10	40	140	0	180
11	40	210	0	250

NOTES: * Treatment 5, nitrogen at G.S. (Growth Stage) 37 was applied as foliar urea (46% N).

** Treatment 7 received an extra 30 kg of N in early May, repeated in late May.

Experimental diary:

06-Sep-94 : B : PK as (0:20:32) at 1317 kg.
 08-Sep-94 : B : Deep tine cultivated with vibrating tines 60 cm apart and 45 cm deep.
 29-Sep-94 : B : Rolled. MSS Optica at 2.4 l in 200 l.
 07-Oct-94 : B : Ploughed and furrow pressed.
 21-Oct-94 : B : Spring-tine cultivated.
 : B : Rotary harrowed, Mercia, dressed Rappor, drilled at 380 seeds per m².
 24-Nov-94 : B : Alpha Isoproturon 500 at 3.0 l with Stomp 400 at 3.3 l in 200 l.
 10-Mar-95 : B : 34.5% N at 118 kg.
 07-Apr-95 : B : Tiger 90 at 35 kg.
 20-Apr-95 : T : N 1, 2, 3, 4, 5, 6, 7: 34.5% N at 174 kg.
 : T : N 8, 9: 34.5% N at 290 kg.
 : T : N 10: 34.5% N at 405 kg.
 : T : N 11: 34.5% N at 609 kg.
 10-May-95 : B : Halo at 2.0 l in 200 l.

95/R/WW/10

Experimental diary:

11-May-95 : T : N 7: 34.5% N at 87 kg.
 15-May-95 : T : N 2: 34.5% N at 58 kg.
 : T : N 3 and 9: 34.5% N at 116 kg.
 : T : N 4: 34.5% N at 174 kg.
 : T : N 5: 46% N (foliar) at 87 kg.
 : T : N 6: 34.5% N at 232 kg.
 24-May-95 : T : N 7: 34.5% N at 87 kg.
 20-Jun-95 : B : Silvapur at 1.0 l in 200 l.
 03-Aug-95 : B : Combine harvested.

Previous crops: Potatoes 1993, s. beans 1994.

NOTES: (1) Tiger 90 is a sulphur fertilizer (90% S).
 (2) The yield of one plot of treatment 8, was lost during harvesting. An estimated value was used in the analysis.
 (3) Leaf chlorophyll was measured with a SPAD metre on 8 occasions between GS 24 and GS 77.

GRAIN TONNES/HECTARE

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

N	
1	8.62
2	9.22
3	9.43
4	9.47
5	9.43
6	9.48
7	9.53
8	9.86
9	9.71
10	10.10
11	9.61
Mean	9.50

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

N
0.391

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	29	0.553	5.8
GRAIN MEAN DM%	91.2		
PLOT AREA HARVESTED	0.00345		