

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 1986

[Full Table of Content](#)



86/R/WW/17 Foliar-applied Urea - W. Wheat

Rothamsted Research

Rothamsted Research (1987) *86/R/WW/17 Foliar-applied Urea - W. Wheat* ; Yields Of The Field Experiments 1986, pp 204 - 205 - DOI: <https://doi.org/10.23637/ERADOC-1-36>

86/R/WW/17

WINTER WHEAT

FOLIAR-APPLIED UREA

Object: To study the effects and recovery of foliar-applied urea given at different times on the yield and quality of grain - New Zealand.

Sponsors: D.S. Powlson, P.R. Poulton, D.S. Jenkinson, A. Penny, M.V. Hewitt.

Design: 3 randomised blocks of 12 plots.

Whole plot dimensions: 2.5 x 9.0.

Treatments:

N	Nitrogen rates, forms and times:
0+0	None
170+0	170 kg N as 'Nitro-Chalk' in spring
210+0	210 kg N as 'Nitro-Chalk' in spring
250+0	250 kg N as 'Nitro-Chalk' in spring
210+40/1	210 kg N as above + 40 kg N as urea, half on 4 June, 1986, half on 6 June
210+40/2	210 kg N as above + 40 kg N as urea, half on 11 June, half on 13 June
210+40/3	210 kg N as above + 40 kg N as urea, half on 16 June, half on 19 June
210+40/4	210 kg N as above + 40 kg N as urea, half on 24 June, half on 26 June
210+40/5	210 kg N as above + 40 kg N as urea, half on 1 July, half on 4 July
210+40/6	210 kg N as above + 40 kg N as urea, half on 7 July, half on 9 July
210+20/4	210 kg N as above + 20 kg N as urea, half on 24 June, half on 26 June
210+60/4	210 kg N as above + 60 kg N as urea, half on 24 June, half on 26 June

NOTES: (1) The spring 'Nitro-Chalk' application was divided, 50 kg N on 18 Mar, 1986 the remainder on 29 Apr.

(2) All urea applications were labelled with 15N.

Basal applications: Weedkillers: Paraquat at 0.60 kg ion in 200 l. Clopyralid at 0.07 kg, bromoxynil octanoate at 0.34 kg, mecoprop at 2.5 kg and isoproturon at 2.1 kg in 200 l applied with the prochloraz and carbendazim. Fungicides: Prochloraz at 0.40 kg and carbendazim at 0.15 kg. Propiconazole at 0.12 kg in 200 l.

Seed: Avalon, sown at 190 kg.

Cultivations, etc.: Heavy spring-tine cultivated: 30 Aug, 1985. Paraquat applied: 24 Sept. Heavy spring-tine cultivated twice: 2 Oct. Rotary harrowed, seed sown: 4 Oct. Weedkillers with prochloraz and carbendazim applied: 30 Apr, 1986. Propiconazole applied: 26 June. Combine harvested: 22 Aug and 25 Aug. Previous crops: W. wheat 1984, w. oats 1985.

86/R/WW/17

NOTE: Crop samples were taken throughout the season for N analysis.

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

N	
0+0	5.63
170+0	9.64
210+0	9.60
250+0	9.45
210+40/1	9.26
210+40/2	9.45
210+40/3	9.43
210+40/4	9.74
210+40/5	9.37
210+40/6	9.76
210+20/4	9.51
210+60/4	9.14
MEAN	9.16

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	N
-----	-----
SED	0.248

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	22	0.303	3.3

GRAIN MEAN DM% 78.4

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

N	
0+0	3.82
170+0	6.09
210+0	6.07
250+0	6.32
210+40/1	5.89
210+40/2	5.83
210+40/3	5.75
210+40/4	6.36
210+40/5	6.07
210+40/6	6.32
210+20/4	5.94
210+60/4	5.89
MEAN	5.86

STRAW MEAN DM% 81.5

PLOT AREA HARVESTED 0.00074