

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 1972

[Full Table of Content](#)



## 72/R/WS/3 Spring Wheat N Levels and Physiology

### Rothamsted Research

Rothamsted Research (1973) *72/R/WS/3 Spring Wheat N Levels and Physiology* ; Yields Of The Field Experiments 1972, pp 295 - 296 - DOI: <https://doi.org/10.23637/ERADOC-1-62>

72/R/WS/3

SPRING WHEAT

N LEVELS AND PHYSIOLOGY

Object: To study the physiological basis of the response of spring wheat to a wide range of nitrogen levels - Fosters Corner.

Sponsor: G.N. Thorne.

Design: 2 randomised blocks of 18 plots.

Whole plot dimensions: 2.41 x 13.7. Area harvested: 0.00094.

Treatments: All combinations of:-

1. Nitrogen: 0, 25, 50, 75, 100, 125, 150, 175, 200 kg N as 'Nitro-Chalk'.
2. Seed rates: 84, 179 kg.

Basal applications: 630 kg (0:14:28). Weedkiller: Bromoxynil, ioxynil, dichlorprop and MCPA ('Tetroxone' at 5.6 l in 340 l). Fungicides: Tridemorph at 0.53 kg in 340 l on 4 occasions and oxycarboxin ('Plantvax 75' at 2.0 kg in 340 l) on one occasion.

Seed: Kleiber.

Cultivations, etc.:- Deep-tine cultivated twice: 12 Nov, 1971. Basal PK applied: 21 Mar, 1972. Seed drilled: 23 Mar. Test N applied: 1 May. Weedkiller applied: 17 May. Fungicides applied: tridemorph: 23 May, 2 June, 14 June, 26 June, oxycarboxin: 6 July. Combine harvested: 6 Sept. Previous crops: Fallow 1970, potatoes 1971.

NOTE: Plant counts were made after germination and shoot counts throughout the season. Plant samples were taken on 8 occasions for growth analysis. Soil moisture was measured on 4 occasions and light penetration on 3. Rates of photosynthesis of leaves were measured on 8 occasions and translocation on 3. Scores were made for mildew (*Erysiphe graminis*), % anthesis and yellowness at ripening.

Standard error per plot.

Grain, tonnes/hectare: 0.665 or 12.6% (17 d.f.)

72/R/WS/3

TABLE OF MEANS

GRAIN: TONNES/HECTARE

N: KG/HA

	0	25	50	75	100	125	150	175	200	Mean
SEED RATE: KG/HA										
84	4.49	5.14	5.23	5.88	5.45	5.82	5.58	5.04	5.32	5.33
179	4.05	5.05	4.52	4.90	5.41	5.73	5.80	5.74	5.74	5.21
Mean	4.27	5.10	4.88	5.39	5.43	5.77	5.69	5.39	5.53	5.27

STANDARD ERROR OF DIFFERENCES

N	SEED RATE	N	SEED RATE
0.471	0.222		0.665

Mean D.M. %: 78.4