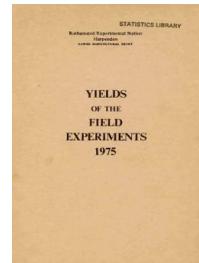


Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



# Yields of the Field Experiments 1975

[Full Table of Content](#)



## 75/ R/B/5 - Nitrogen & Foliar Diseases - Barley

### Rothamsted Research

Rothamsted Research (1976) 75/ R/B/5 - *Nitrogen & Foliar Diseases - Barley* ; Yields Of The Field Experiments 1975, pp 314 - 317 - DOI: <https://doi.org/10.23637/ERADOC-1-141>

75/R/B/5

SPRING BARLEY

NITROGEN AND FOLIAR DISEASES

Object: To study the effects of mildew and brown rust on the response to a range of nitrogen rates applied at different times - Gt. Knott II.

Sponsor: J.F. Jenkyn.

Design: Single replicate of 6 x 3 x 2 x 2.

Whole plot dimensions: 4.27 x 9.14.

Treatments: All combinations of:-

1. Amounts of nitrogen fertiliser (kg N): N RATE

25	25
50	50
70	70
90	90
110	110
135	135

2. Times of applying N: N TIME

Seedbed	SB
Top dressed	TD
Half to seedbed, half top dressed	SB/TD

3. Mildew fungicide: MILDEW F

None	NONE
Tridemorph on 6, 24 June and 21 July	TRIDEMOR

4. Rust fungicide: RUST F

None	NONE
Benodanil on 24 June	BENODANI

NOTE: Fungicides were applied in 340 l:-

- (a) Tridemorph at 0.53 kg
- (b) Benodanil at 1.12 kg with 175 ml 'Citowett'

Basal applications: Manures: (0:20:20) at 310 kg. Weedkiller: Dicamba, with mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l).

75/R/B/5

Seed: Zephyr, sown at 160 kg.

Cultivations, etc.: Ploughed: 6 Nov, 1974. Spring-tine cultivated: 14 and 21 Apr, 1975. Rotary harrowed: 22 Apr. Seed sown and harrowed in: 23 Apr. Seedbed N applied: 29 Apr. N top dressing applied: 22 May. Weedkiller applied: 6 June. Combine harvested: 22 Aug. Previous crops: Beans 1973, winter wheat 1974.

- NOTES: (1) Counts were made of seedling emergence. Mildew was assessed twice and brown rust once.  
(2) There was evidence of a pattern of yields across the site and the results presented have been adjusted for covariance on a dummy variate representing the comparison between plots 1 to 36 and plots 37 to 72.

75/R/B/5

GRAIN TONNES/HECTARE

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

RUST F MILDEW F	NONE	BENODANI	MEAN				
NONE	2.92	3.15	3.03				
TRIDEMOR	3.52	3.64	3.58				
MEAN	3.22	3.39	3.31				
N TIME MILDEW F	SB	TD	SB/TD	MEAN			
NONE	3.19	2.73	3.18	3.03			
TRIDEMOR	3.82	3.38	3.54	3.58			
MEAN	3.50	3.06	3.36	3.31			
N TIME RUST F	SB	TD	SB/TD	MEAN			
NONE	3.46	2.90	3.30	3.22			
BENODANI	3.54	3.22	3.42	3.39			
MEAN	3.50	3.06	3.36	3.31			
N RATE MILDEW F	25	50	70	90	110	135	MEAN
NONE	2.63	3.03	3.00	3.17	3.19	3.19	3.03
TRIDEMOR	3.10	3.18	3.52	3.96	3.78	3.92	3.58
MEAN	2.86	3.11	3.26	3.57	3.48	3.56	3.31
N RATE RUST F	25	50	70	90	110	135	MEAN
NONE	2.75	2.94	3.30	3.59	3.32	3.41	3.22
BENODANI	2.97	3.28	3.22	3.54	3.65	3.70	3.39
MEAN	2.86	3.11	3.26	3.57	3.48	3.56	3.31
N RATE N TIME	25	50	70	90	110	135	MEAN
SB	2.89	3.12	3.29	3.63	4.02	4.05	3.50
TD	2.86	3.13	2.99	3.25	3.05	3.06	3.06
SB/TD	2.84	3.06	3.50	3.82	3.38	3.56	3.36
MEAN	2.86	3.11	3.26	3.57	3.48	3.56	3.31
RUST F N TIME MILDEW F	NONE	SB	TD	SB/TD	BENODANI SB	TD	SB/TD
NONE	3.08	2.54	3.13	3.29	2.93	3.23	
TRIDEMOR	3.83	3.25	3.48	3.80	3.51	3.60	

75/R/B/5

GRAIN TONNES/HECTARE

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

	N RATE	25	50	70	90	110	135
MILDEW F	RUST F						
NONE	NONE	2.42	2.88	2.93	3.13	3.11	3.04
	BENODANI	2.83	3.18	3.06	3.21	3.26	3.34
TRIDEMOR	NONE	3.09	2.99	3.68	4.05	3.53	3.78
	BENODANI	3.11	3.37	3.37	3.88	4.03	4.07
MILDEW F	N RATE	25	50	70	90	110	135
	N TIME						
NONE	SB	2.84	3.00	2.99	3.10	3.62	3.57
	TD	2.49	3.00	2.61	2.84	2.62	2.84
TRIDEMOR	SB/TD	2.54	3.09	3.39	3.58	3.32	3.15
	SB	2.95	3.24	3.60	4.16	4.42	4.52
	TD	3.22	3.26	3.37	3.67	3.49	3.27
	SB/TD	3.13	3.04	3.60	4.06	3.44	3.97
RUST F	N RATE	25	50	70	90	110	135
	N TIME						
NONE	SB	2.57	2.74	3.67	3.97	3.83	3.97
	TD	2.81	3.10	2.74	3.12	2.66	2.94
BENODANI	SB/TD	2.88	2.97	3.50	3.69	3.47	3.32
	SB	3.22	3.50	2.92	3.29	4.21	4.13
	TD	2.90	3.17	3.24	3.39	3.44	3.18
	SB/TD	2.79	3.16	3.50	3.95	3.28	3.81

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

TABLE	MILDEW F	RUST F	N TIME	N RATE
SED	0.075	0.075	0.099	0.137
TABLE	MILDEW F	MILDEW F	RUST F	MILDEW F
	RUST F	N TIME	N TIME	N RATE
SED	0.107	0.135	0.135	0.192
TABLE	RUST F	N TIME	MILDEW F	MILDEW F
	N RATE	N RATE	RUST F	RUST F
	N RATE	N RATE	N TIME	N RATE
SED	0.191	0.239	0.189	0.268
TABLE	MILDEW F	RUST F		
	N TIME	N TIME		
	N RATE	N RATE		
SED	0.335	0.331		

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

STRATUM	DF	SE	CV%
WP	9	0.318	9.6

GRAIN MEAN DM% 83.5

PLOT AREA HARVESTED 0.00195