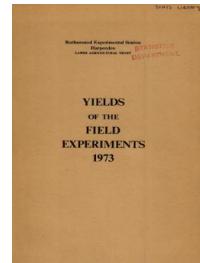


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Yields of the Field Experiments 1973

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73/S/BS/1 - Varieties, N & Fungicide - Spring Barley

Rothamsted Research

Rothamsted Research (1974) 73/S/BS/1 - *Varieties, N & Fungicide - Spring Barley* ; Yields Of The Field Experiments 1973, pp 338 - 342 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

73/S/BS/1

SPRING BARLEY

VARIETIES, N AND FUNGICIDE

Object: To study the effects of a range of nitrogen levels, applied to seedbed or as a top dressing, on the yield of three barley varieties. The effects of a fungicide against brown rust are also studied - Saxmundham, Grove Plot.

Sponsors: F.V. Widdowson, A. Penny.

Design: 3 randomised blocks of 9 plots split into 2.

Whole plot dimensions: 2.43 x 12.2. Area harvested: 0.00045.

Treatments: All combinations of:-

Whole plots: 1. Varieties:

VARIETY

Julia
Mazurka
Midas

Julia
Mazurka
Midas

2. Nitrogen fertiliser (kg N):

NRATE

50
100
150

50
100
150

3. Time of applying nitrogen:

NTIME

All to seedbed on 20 Mar
Half to seedbed, half top
dressed on 22 May
All top dressed on 22 May

Seedbed
SB/TD
Topdress

Sub plots: 4. Fungicide spray against brown rust: FUNGCIDE

None
BAS3170F applied at 1.4 kg a.i.
in 340 l on 19 June repeated
on 10 July

None
BAS3170F

Basal applications: Manures: (0:20:20) at 280 kg. Weedkiller:

Dichlorprop and MCPA ('Mephetol plus' at 5.6 l in 340 l).

Fungicide: Tridemorph ('Calixin' at 0.7 l) applied with the weedkiller.

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Seed: Dressed with ethirimol, sown at 190 kg.

Cultivations, etc.: - Ploughed: 27 Oct, 1972. PK applied, seed sown: 21 Mar, 1973. Weedkiller and fungicide applied: 22 May. Cut by hand: 15 Aug. Previous crops: Barley 1971, 1972.

NOTE: Brown rust (*Puccinia hordei*) and mildew (*Erysiphe graminis*) were assessed on 16 July.

Standard errors per plot. Grain, tonnes/hectare:

Whole plot: 0.248 or 4.9% (6 d.f.)
Sub plot: 0.274 or 5.5% (8 d.f.)

73/3/ES/1

TABLES OF MEANS

GRAIN: TUNNINGS/HECTARE

VARIETY	N RATE			N TIME			N FOLIAGE		
	50	100	150	Seeded	SE/TD	Top dress	Rate	NA63170F Rate	Rate
Julia	4.37	5.59	5.47	4.90	5.22	5.30	5.01	5.27	5.14
Mazurka	3.97	4.87	5.34	4.79	4.72	4.68	4.64	4.82	4.73
Midas	4.55	5.36	5.54	5.17	5.24	5.03	4.98	5.41	5.15
	N PEST			N PEST			N PEST		
		50	4.28	4.33	4.29	4.23	4.36	4.30	
		100	5.22	5.46	5.13	5.06	5.49	5.27	
		150	5.37	5.38	5.60	5.25	5.65	5.45	
	N PEST			N PEST			N PEST		
				Seeded	4.92	4.99	4.95		
				SE/TD	4.89	5.13	5.06		
				Top dress	4.63	5.39	5.01		
Mean							4.85	5.17	5.01

73/S/BS/1

TABLES OF MEANS

GRAIN: TONNES/HECTARE

STANDARD ERRORS OF DIFFERENCES

VARIETY	NRATE	NTIME	FUNGicide	VARIETY	VARIETY	NRATE	NTIME
				NRATE	NTIME	NRATE	NTIME
0.117	0.117	0.117	0.075	0.202	0.202	0.202	0.202
				VARIETY	NRATE	NRATE	NTIME
				FUNGicide	FUNGicide	FUNGicide	FUNGicide
					0.148	0.148	0.148
Except when comparing means with same level of	VARIETY	NRATE	NTIME		0.129	0.129	0.129

Mean D.M. % 87.8

73/S/BS/1

STRAW: TONNES/HECTARE

VARIETY	NRATE			NTIME			FUNGICIDE			Mean
	50	100	150	Seedbed	SB/TD	Top dress	None	BAS	317OF	
Julia	3.80	4.79	5.11	4.70	4.59	4.40	4.51	4.62	4.56	
Mazurka	3.84	4.82	5.30	4.81	4.86	4.30	4.67	4.64	4.65	
Midas	4.01	4.93	5.20	4.96	4.67	4.52	4.88	4.55	4.77	
	NRATE			NTIME			FUNGICIDE			
	50	4.01	3.88	3.75	3.84	3.92	3.88			
	100	4.91	5.03	4.61	4.91	4.79	4.85			
	150	5.55	5.20	4.86	5.31	5.10	5.20			
	NRATE			NTIME			FUNGICIDE			
				Seedbed	4.94	4.70	4.82			
				SB/TD	4.78	4.63	4.70			
				Topdress	4.34	4.47	4.41			
Mean							4.69	4.60	4.64	

Mean D.M. % 88.5