

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 1981

[Full Table of Content](#)



81/R/CS/211 Factors Affecting Eyespot - W. Wheat

Rothamsted Research

Rothamsted Research (1982) *81/R/CS/211 Factors Affecting Eyespot - W. Wheat* ; Yields Of The Field Experiments 1981, pp 165 - 168 - DOI: <https://doi.org/10.23637/ERADOC-1-35>

81/R/CS/211

FACTORS AFFECTING EYESPOT

Object: To study the effects of a range of treatments on the incidence of eyespot (*Pseudocercosporella herpotrichoides*) and on the yield of w. wheat - Meadow.

Sponsors: R.D. Prew, A. Bainbridge.

The fourth year, w. wheat.

For previous years see 78-80/R/CS/211.

Design: 2 randomised blocks of 2 whole plots split into 6 sub plots split into 3 sub sub plots.

Whole plot dimensions: 94.0 x 9.14.

Treatments: All combinations of:-

Whole plots

- | | |
|----------|--|
| 1. STRAW | Treatment of straw in autumn (cumulative): |
| BURNT | Burnt on site after spreading |
| CARTED | Baled and carted off |

Sub plots

- | | |
|-------------|--|
| 2. DRILLING | Cultivations and drilling in autumn (cumulative): |
| CNVNTIAL | Cultivated and conventionally drilled |
| DIRECT | Uncultivated, direct drilled |
| 3. BEN DATE | Dates of applying benomyl (first applied for 1981 crop): |
| NEVER | Never |
| 14 OCT | 14 October, 1980 |
| 27 MAR | 27 March, 1981 |

Sub sub plots

- | | |
|------------------|---|
| 4. SEEDRATE (80) | Seed rates (kg) in 1979 & 1980, all sown at 200 kg in 1981: |
| 100 | |
| 150 | |
| 200 | |

NOTE: Benomyl was applied at 1.12 kg in 340 l on both occasions.

Basal applications: Manures: (10:23:23) at 250 kg, combine drilled. 'Nitro-Chalk' at 500 kg. Weedkillers: Paraquat at 0.84 kg ion in 250 l, applied twice. Metoxuron at 4.4 kg in 250 l, applied twice. Mecoprop with bromoxynil and ioxynil (as 'Brittox' at 3.7 l) in 250 l.

Seed: Armada, sown at 200 kg.

81/R/CS/211

Cultivations, etc.: - Paraquat applied: 1 Sept, 1980. Straw treatments applied: 8 Sept. 'DIRECT' plots disc harrowed: 12 Sept. 'CNVNTIAL' plots ploughed: 17 Sept. 'CNVNTIAL' plots heavy spring-tine cultivated: 19 Sept. Paraquat applied: 3 Oct. Disc harrowed twice: 9 Oct. Seed sown: 10 Oct. Metoxuron applied: 20 Nov and 27 Mar, 1981. N applied: 13 Apr. 'Brittox' applied: 22 Apr. Combine harvested: 26 Aug.

NOTE: Plants were assessed for infection with eyespot and the incidence of eyespot spores was measured throughout the year. Take-all (*Gaeumannomyces graminis*) was assessed at harvest.

GRAIN TONNES/HECTARE

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

DRILLING	CNVNTIAL	DIRECT	MEAN	
STRAW				
BURNT	6.38	6.24	6.31	
CARTED	6.55	5.52	6.03	
MEAN	6.46	5.88	6.17	
BEN DATE	NEVER	14 OCT	27 MAR	MEAN
STRAW				
BURNT	6.28	5.91	6.74	6.31
CARTED	5.80	5.82	6.48	6.03
MEAN	6.04	5.86	6.61	6.17
BEN DATE	NEVER	14 OCT	27 MAR	MEAN
DRILLING				
CNVNTIAL	6.48	6.28	6.64	6.46
DIRECT	5.61	5.45	6.58	5.88
MEAN	6.04	5.86	6.61	6.17
SEEDRATE(80)	100	150	200	MEAN
STRAW				
BURNT	6.40	6.10	6.44	6.31
CARTED	5.94	5.94	6.22	6.03
MEAN	6.17	6.02	6.33	6.17
SEEDRATE(80)	100	150	200	MEAN
DRILLING				
CNVNTIAL	6.51	6.36	6.52	6.46
DIRECT	5.83	5.68	6.14	5.88
MEAN	6.17	6.02	6.33	6.17

81/R/CS/211

GRAIN TONNES/HECTARE

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

SEEDRATE(80)	100	150	200	MEAN	
BEN DATE					
NEVER	5.98	5.85	6.30	6.04	
14 OCT	5.80	5.69	6.10	5.86	
27 MAR	6.71	6.52	6.59	6.61	
MEAN	6.17	6.02	6.33	6.17	
	BEN DATE	NEVER	14 OCT	27 MAR	
STRAW	DRILLING				
BURNT	CNVNTIAL	6.46	6.11	6.57	
	DIRECT	6.11	5.72	6.90	
CARTED	CNVNTIAL	6.50	6.44	6.70	
	DIRECT	5.11	5.19	6.26	
	SEEDRATE(80)	100	150	200	
STRAW	DRILLING				
BURNT	CNVNTIAL	6.54	6.15	6.45	
	DIRECT	6.25	6.04	6.43	
CARTED	CNVNTIAL	6.47	6.57	6.60	
	DIRECT	5.40	5.32	5.84	
	SEEDRATE(80)	100	150	200	
STRAW	BEN DATE				
BURNT	NEVER	6.34	5.92	6.59	
	14 OCT	6.00	5.70	6.04	
	27 MAR	6.86	6.67	6.68	
CARTED	NEVER	5.63	5.78	6.01	
	14 OCT	5.61	5.68	6.16	
	27 MAR	6.57	6.38	6.50	
	SEEDRATE(80)	100	150	200	
DRILLING	BEN DATE				
CNVNTIAL	NEVER	6.40	6.45	6.58	
	14 OCT	6.23	6.15	6.45	
	27 MAR	6.89	6.48	6.54	
DIRECT	NEVER	5.56	5.25	6.02	
	14 OCT	5.38	5.23	5.76	
	27 MAR	6.54	6.57	6.63	
	SEEDRATE(80)	100	150	200	
STRAW	DRILLING				
BURNT	CNVNTIAL	NEVER	6.61	6.08	6.69
		14 OCT	6.34	5.74	6.25
		27 MAR	6.68	6.63	6.41
	DIRECT	NEVER	6.07	5.75	6.50
		14 OCT	5.65	5.65	5.84
		27 MAR	7.03	6.72	6.95
CARTED	CNVNTIAL	NEVER	6.20	6.82	6.47
		14 OCT	6.13	6.55	6.65
		27 MAR	7.09	6.33	6.68
	DIRECT	NEVER	5.06	4.74	5.54
		14 OCT	5.10	4.80	5.67
		27 MAR	6.04	6.43	6.31

81/R/CS/211

GRAIN TONNES/HECTARE

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

TABLE	DRILLING	BEN DATE	SEEDRATE(80)
-------	----------	----------	--------------

SED	0.149	0.182	0.134
-----	-------	-------	-------

TABLE	STRAW* DRILLING	STRAW* BEN DATE	DRILLING BEN DATE	STRAW* SEEDRATE(80)
-------	--------------------	--------------------	----------------------	------------------------

SED	0.211	0.258	0.258	0.190
-----	-------	-------	-------	-------

TABLE	DRILLING SEEDRATE(80)	BEN DATE SEEDRATE(80)	STRAW* DRILLING BEN DATE	STRAW* DRILLING SEEDRATE(80)
-------	--------------------------	--------------------------	--------------------------------	------------------------------------

SED	0.215	0.263	0.365	0.304
-----	-------	-------	-------	-------

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

DRILLING

0.190

BEN DATE

0.233

STRAW.DRILLING

0.269

TABLE	STRAW* BEN DATE SEEDRATE(80)	DRILLING BEN DATE SEEDRATE(80)	STRAW* DRILLING BEN DATE SEEDRATE(80)
-------	------------------------------------	--------------------------------------	--

SED	0.372	0.372	0.526
-----	-------	-------	-------

EXCEPT WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:

STRAW.BEN DATE

0.329

DRILLING.BEN DATE

0.329

STRAW.DRILLING.BEN DATE

0.465

* WITHIN THE SAME LEVEL OF STRAW ONLY

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	10	0.365	5.9
BLOCK.WP.SP.SSP	24	0.465	7.5

GRAIN MEAN DM% 87.0

SUB PLOT AREA HARVESTED DRILLING DIRECT 0.00254

SUB PLOT AREA HARVESTED DRILLING CNVNTIAL 0.00258