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# Yields of the Field Experiments 1986

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## 86/R/WW/7 Sowing Dates, Fungicide Times and Eyespot - W. Wheat

### Rothamsted Research

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86/R/WW/7

WINTER WHEAT

SOWING DATES, FUNGICIDE TIMES AND EYESPOT

Object: To study the effects of sowing dates and timing of fungicide applications on the epidemiology of different strains of the eyespot fungus, *Pseudocercospora herpotrichoides* - Harwoods Piece.

Sponsors: A. Goulds, B.D.L. Fitt.

Design: 2 randomised blocks of 27 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. SOWDATE        Dates of sowing:  
    20 SEPT        20 September, 1985  
    18 OCT         18 October  
    4 NOV          4 November
2. EYE INOC        Inoculum of different strains of *P. herpotrichoides*:  
    NONE           None  
    WHEAT          "Wheat" type  
    RYE            "Rye" type
3. FUNGTIME        Timing of prochloraz + carbendazim fungicide:  
    NONE           None  
    TIME GS        Applied at G.S. 30 for each SOWDATE  
    TIMEDATE       Applied at a single date (G.S. 30 of SOWDATE 18 OCT)

- NOTES: (1) Prochloraz was applied at 0.37 kg and carbendazim at 0.14 kg in 220 l.
- (2) FUNGTIME dates were:  
    TIME GS: SOWDATE 20 SEPT applied 17 Apr, 1986.  
              SOWDATE 18 OCT applied 23 May.  
              SOWDATE 4 NOV applied 5 June.  
    TIMEDATE: Applied on 23 MAY.
- (3) Strains of wheat and rye type inoculum were colonised on oat seed and broadcast within two weeks of emergence of each sowing date.
- (4) For SOWDATE 4 NOV, FUNGTIME TIME GS was applied at G.S. 37.

Basal applications: Manures: 'Nitram' at 510 kg. Weedkillers: Isoproturon at 2.0 kg, clopyralid at 0.07 kg, bromoxynil octanoate at 0.34 kg and mecoprop at 2.5 kg in 500 l. Fungicide: Propiconazole at 0.12 kg in 200 l.

Seed: Avalon, sown at 190 kg.

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Cultivations, etc.:- Ploughed: 11 July, 1985. Discd twice: 20 Aug.  
 SOWDATE 20 SEPT plots rotary harrowed, seed sown: 20 Sept.  
 SOWDATE 18 OCT plots rotary harrowed, seed sown: 18 Oct.  
 SOWDATE 4 NOV plots rotary harrowed, seed sown: 4 Nov. N applied:  
 28 Apr, 1986. Weedkillers applied: 29 Apr. Basal fungicide applied:  
 27 June. Combine harvested: 22 Aug and 28 Aug. Previous crops:  
 S. oats 1984, ley 1985.

NOTE: Eyespot was assessed on plant samples taken at two-weekly intervals from February to G.S. 30 and weekly to the 'booting' stage.

GRAIN TONNES/HECTARE

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

EYE INOC	NONE	WHEAT	RYE	MEAN
SOWDATE				
20 SEPT	10.25	10.38	10.26	10.30
18 OCT	9.44	9.51	9.62	9.53
4 NOV	8.62	8.34	8.63	8.53
MEAN	9.44	9.41	9.51	9.45
FUNGTIME	NONE	TIME GS	TIMEDATE	MEAN
SOWDATE				
20 SEPT	10.15	10.24	10.51	10.30
18 OCT	9.44	9.33	9.81	9.53
4 NOV	8.32	8.50	8.78	8.53
MEAN	9.30	9.36	9.70	9.45
FUNGTIME	NONE	TIME GS	TIMEDATE	MEAN
EYE INOC				
NONE	9.41	9.33	9.56	9.44
WHEAT	9.21	9.46	9.56	9.41
RYE	9.28	9.27	9.97	9.51
MEAN	9.30	9.36	9.70	9.45
SOWDATE	FUNGTIME	NONE	TIME GS	TIMEDATE
20 SEPT	EYE INOC			
	NONE	10.40	10.17	10.17
	WHEAT	9.92	10.27	10.96
	RYE	10.11	10.28	10.40
18 OCT	NONE	9.26	9.39	9.69
	WHEAT	10.00	9.46	9.07
	RYE	9.06	9.15	10.66
4 NOV	NONE	8.58	8.44	8.83
	WHEAT	7.71	8.65	8.65
	RYE	8.66	8.39	8.85

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

TABLE	SOWDATE	EYE INOC	FUNGTIME	SOWDATE EYE INOC
SED	0.156	0.156	0.156	0.271

TABLE	SOWDATE FUNGTIME	EYE INOC FUNGTIME	SOWDATE EYE INOC FUNGTIME
SED	0.271	0.271	0.469

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

STRATUM	DF	SE	CV%
BLOCK.WP	26	0.469	5.0

GRAIN MEAN DM% 75.8

PLOT AREA HARVESTED 0.00207