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# Yields of the Field Experiments 1975

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## 75/ R/B/8 - Effects of Mildew Sources on Disease Control - Barley

### Rothamsted Research

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75/R/B/8

SPRING BARLEY

EFFECTS OF MILDEW SOURCES ON DISEASE CONTROL

Object: To study the effects of nearby sources of mildew on control by tridemorph sprays applied at a range of times - Little Hoos.

Sponsors: J.F. Jenkyn, A. Bainbridge.

Design: 3 randomised blocks of 2 plots split into 7.

Whole plot dimensions: 4.27 x 9.14.

Treatments: All combinations of:

Whole plots: 1. Mildew source:	MILDSRCE
None (seed treated ethirimol, crop sprayed tridemorph)	NONE
Much (no mildew control)	MUCH
Sub plots: 2. Times of applying tridemorph (single sprays applied at about 5-day intervals at 0.53 kg in 340 l):	TRIDEMOR
1 22 May	1
2 29 May	2
3 4 June	3
4 9 June	4
5 13 June	5
6 16 June	6
7 20 June	7

NOTE: The whole plot treatments were applied to a strip of crop 10 m wide at the ends of all sub plots. There were no discards between sub plots (0.6 m fallow paths only). The sides of sets of seven sub plots were separated by strips of crop 19 m wide, seed treated ethirimol, crop sprayed tridemorph at 0.53 kg in 450 l on 20 June.

Basal applications: Manures: (20:14:14) at 440 kg. Weedkillers: Paraquat at 0.42 kg ion in 220 l, dicamba with mecoprop and MCPA ('Tetralex Plus' at 7.0 l in 220 l).

Seed: Julia sown at 160 kg.

Cultivations, etc.: - Ploughed: 14 Nov, 1974. Paraquat applied: 27 Feb, 1975. Spring-tine cultivated: 1, 2, and 25 Mar. Seed sown: sub plots and ends of plots 11-17: 14 Apr, sowing completed and all plots spring-tine cultivated: 21 Apr. Weedkiller applied: 6 June. Combine harvested: 22 Aug. Previous crops: Potatoes 1973, winter wheat 1974.

NOTE: Mildew was assessed on one occasion.

75/R/B/3

GRAIN TONNES/HECTARE

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

TRIDEMOR MILDSRCE	1	2	3	4	5	6	7	MEAN
NONE	5.63	5.33	5.53	5.36	5.29	5.37	5.23	5.39
MUCH	5.47	5.48	5.35	5.18	4.70	5.11	4.81	5.16
MEAN	5.55	5.41	5.44	5.27	5.00	5.24	5.02	5.27

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

TABLE	TRIDEMOR	MILDSRCE TRIDEMOR
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SED	0.146	
ONLY WHEN COMPARING MEANS WITH SAME LEVEL(S) OF:		
MILDSRCE		0.206

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

STRATUM	DF	SE	CV%
BLOCK.WP.SP	24	0.253	4.8

GRAIN MEAN DM% 84.5

SUB PLOT AREA HARVESTED 0.00195