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# Yields of the Field Experiments 1981

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## 81/R/B/9 Electrostatic Spray Study (Biological) - S. Barley

### Rothamsted Research

Rothamsted Research (1982) *81/R/B/9 Electrostatic Spray Study (Biological) - S. Barley*; Yields Of The Field Experiments 1981, pp 287 - 288 - DOI: <https://doi.org/10.23637/ERADOC-1-35>

81/R/B/9

SPRING BARLEY

ELECTROSTATIC SPRAY STUDY (BIOLOGICAL)

Object: To study the effects of applying fungicides by an electrostatic sprayer on the control of mildew and on the yield of s. barley - Gt. Knott III.

Sponsors: D.C. Griffiths, A.J. Arnold, G.R. Cayley, P. Etheridge, F.T. Phillips, B. Pye, G.C. Scott.

Design: 3 randomised blocks of 11 plots.

Whole plot dimensions: 4.27 x 24.4.

Treatments: All combinations of:-

1. SPR FORM           Sprayer and formulation of spray material:

EL OIL                Electrostatic sprayer, oil formulation  
EL WATER             Electrostatic sprayer, water formulation

2. FUNGCIDE          Fungicides:

DITAL IMF            Ditalimfos  
TRIDEMOR            Tridemorph

3. FUNGRATE          Fungicide rate (kg):

0.26  
0.52

plus three extra treatments:

EXTRA  
NONE                 No fungicides  
ST W D2             Standard sprayer, water formulation, ditalimfos at  
                          0.52 kg.  
ST W T2             Standard sprayer, water formulation, tridemorph at  
                          0.52 kg.

NOTE: Treatments were applied on 18 June, in 3.73 l of oil or water by electrostatic sprayer, in 340 l of water by standard sprayer.

Basal applications: Manures: (20:10:10) at 450 kg, combine drilled.  
Weedkillers: Dicamba with mecoprop and MCPA, (as 'Banlene Plus' at 5.0 l) in 250 l.

Seed: Wing, sown at 160 kg.

Cultivations, etc.:- Ploughed: 25 Nov, 1980. Spring-tine cultivated twice: 9 Apr, 1981. Seed sown: 10 Apr. Weedkillers applied: 30 May. Combine harvested: 2 Sept. Previous crops: W. oats 1979, w. wheat 1980.

NOTES: Mildew was assessed in July.

81/R/B/9

GRAIN TONNES/HECTARE

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

FUNGCIDE	DITALIMF	TRIDEMOR	MEAN	
SPR FORM				
EL OIL	3.97	4.46	4.21	
EL WATER	4.04	4.48	4.26	
MEAN	4.01	4.47	4.24	
FUNGRATE	0.26	0.52	MEAN	
SPR FORM				
EL OIL	4.18	4.24	4.21	
EL WATER	4.19	4.34	4.26	
MEAN	4.19	4.29	4.24	
FUNGRATE	0.26	0.52	MEAN	
FUNGCIDE				
DITALIMF	3.97	4.04	4.01	
TRIDEMOR	4.40	4.54	4.47	
MEAN	4.19	4.29	4.24	
SPR FORM	FUNGRATE	0.26	0.52	
EL OIL	FUNGCIDE			
	DITALIMF	4.02	3.91	
	TRIDEMOR	4.34	4.58	
EL WATER	DITALIMF	3.91	4.18	
	TRIDEMOR	4.47	4.50	
EXTRA	NONE	ST W D2	ST W T2	MEAN
	4.13	4.03	4.53	4.23

GRAND MEAN 4.24

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

TABLE	EXTRA	SPR FORM	FUNGCIDE	FUNGRATE
SED	0.132	0.066	0.066	0.066
TABLE	SPR FORM FUNGCIDE	SPR FORM FUNGRATE	FUNGCIDE FUNGRATE	SPR FORM FUNGCIDE FUNGRATE & EXTRA
SED	0.093	0.093	0.093	0.132

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

STRATUM	DF	SE	CV%
BLOCK.WP	20	0.161	3.8
GRAIN MEAN DM%	85.5	PLOT AREA HARVESTED	0.00520