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83/R/B/6 Mildew Sensitivity - S. Barley

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83/R/B/6

SPRING BARLEY

MILDEW SENSITIVITY

Object: To study the effects of varieties with differing resistance genes on the sensitivity of powdery mildew (*Erysiphe graminis*) to fungicides - Fosters Corner.

Sponsor: D.W. Hollomon.

Design: 2 randomised blocks of 12 plots.

Whole plot dimensions: 9.0 x 9.0.

Treatments: All combinations of:-

1. VARIETY Varieties:

CARNIVAL
TRIUMPH

2. FUNG SD Fungicidal seed dressings:

NONE None
ETHIRIMO Ethirimol at 4 g per kg seed
TR DMNOL Triadimenol at 0.4 g per kg seed

3. FUNG SP Fungicidal foliar spray:

NONE None
TR DMFON Triadimefon at 0.12 kg in 250 l on 17 June, 1983

NOTE: The seed was sown at 160 kg.

Basal applications: Manures: (0:18:36) at 690 kg. 'Nitro-Chalk' at 450 kg followed by 250 kg. Weedkillers: Dicamba, mecoprop and MCPA (as 'Herrisol' at 5.0 l) in 250 l.

Cultivations, etc.: - PK applied: 19 Oct, 1982. Ploughed: 25 Oct. Spring-tine cultivated: 8 Mar, 1983. First N applied: 10 Mar. Spring-tine cultivated: 11 Mar. Seed sown: 12 Mar. Weedkillers applied: 24 May. Second N applied: 26 May. Combine harvested: 8 Aug. Previous crops: S. beans 1981, w. wheat 1982.

NOTE: Mildew was assessed on six occasions during May, June and July; scald (*Rhynchosporium secalis*) was also recorded in May and June. Sensitivity of mildew to triadimenol was assessed by bioassay on two occasions.

83/R/B/6

GRAIN TONNES/HECTARE

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

FUNG SD VARIETY	NONE	ETHIRIMO	TR DMNOL	MEAN
CARNIVAL	6.49	6.51	6.98	6.66
TRIUMPH	6.00	6.01	5.95	5.99
MEAN	6.25	6.26	6.47	6.33

FUNG SP VARIETY	NONE	TR DMFON	MEAN
CARNIVAL	6.20	7.13	6.66
TRIUMPH	5.28	6.70	5.99
MEAN	5.74	6.91	6.33

FUNG SP FUNG SD	NONE	TR DMFON	MEAN
NONE	5.68	6.81	6.25
ETHIRIMO	5.72	6.80	6.26
TR DMNOL	5.81	7.13	6.47
MEAN	5.74	6.91	6.33

FUNG SD FUNG SP VARIETY	ETHIRIMO		TR DMNOL	
	NONE	TR DMFON	NONE	TR DMFON
CARNIVAL	6.11	6.87	6.08	6.95
TRIUMPH	5.26	6.74	5.37	6.66
			6.41	7.56
			5.22	6.69

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

TABLE	VARIETY	FUNG SD	FUNG SP	VARIETY FUNG SD
SED	0.196	0.240	0.196	0.339

TABLE	VARIETY FUNG SP	FUNG SD FUNG SP	VARIETY FUNG SD FUNG SP
SED	0.277	0.339	0.480

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

STRATUM	DF	SE	CV%
BLOCK.WP	11	0.480	7.6

GRAIN MEAN DM% 87.2

PLOT AREA HARVESTED 0.00248