ROTHAMSTED RESEARCH

Yields of the Field Experiments 1976

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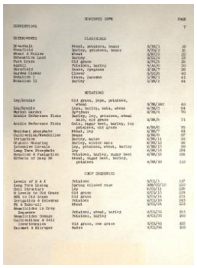

76/R/WS/1 Fungicides and Grain Microflora - S. Wheat

Rothamsted Research

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76/R/WS/1

SPRING WHEAT

FUNGICIDES AND GRAIN MICROFLORA

Object: To study the effects of a range of fungicides applied at a range of times on the yield, quality and grain microflora of spring wheat - Long Hoos V 1.

Sponsor: R.A. Hill.

Design: Single replicate of 2 x 3 x 2 x 2 x 2 fully randomised.

Whole plot dimensions: 2.41 x 8.23.

Treatments: All combinations of:-

1. SPECFUNG — Specific fungicides for foliar pathogen control:

NONE	None
T+B	Tridemorph at 0.53 kg plus benodanil at 1.4 kg, mixed and applied on 27 May

2. B S FUNG — Broad spectrum fungicides:

BENOMYL	Benomyl at 0.28 kg
CAPTAFOL	Captafol at 1.4 kg
BAYER	'Bayer 6447' (Triadimefon) at 0.25 kg a.i.

3. APP TIME — Application of broad spectrum fungicides:

	10 June	5 July	22 July
NONE	None	None	None
E	Sprayed	None	None
M	None	Sprayed	None
L	None	None	Sprayed
E+M	Sprayed	Sprayed	None
E+L	Sprayed	None	Sprayed
M+L	None	Sprayed	Sprayed
E+M+L	Sprayed	Sprayed	Sprayed

NOTE: All sprays were applied in 340 l.

Basal applications: Manures: (0:20:20) at 820 kg. 'Nitro-Chalk' at 450 kg.

Seed: Sappo, sown at 170 kg.

Cultivations, etc.:- PK applied: 8 Dec, 1975. Ploughed: 19 Dec. Spring-tine cultivated: 8 Mar, 1976. Seed sown, N applied: 9 Mar. Combine harvested: 30 July. Previous crops: Barley 1974, potatoes 1975.

NOTES: Grain microflora were assessed at fortnightly intervals from early June to harvest. Mildew and rust were assessed on several occasions.

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76/R/WS/1

GRAIN TONNES/HECTARE

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

ALL PLOTS

APP TIME / SPECFUNG	NONE	E	M	L	E+M	E+L	M+L	E+M+L	MEAN
NONE	2.76	2.77	2.83	3.34	2.90	3.03	3.10	3.25	3.00
T+B	3.06	3.19	2.86	2.97	3.10	2.86	3.01	3.03	3.01
MEAN	2.91	2.98	2.85	3.15	3.00	2.95	3.05	3.14	3.00

EXCLUDING APP TIME NONE

B S FUNG / SPECFUNG	BENOMYL	CAPTAFOL	BAYER	MEAN
NONE	3.03	3.07	2.99	3.03
T+B	2.96	3.01	3.04	3.00
MEAN	3.00	3.04	3.01	3.02

APP TIME / B S FUNG	E	M	L	E+M	E+L	M+L	E+M+L	MEAN
BENOMYL	2.99	2.74	3.48	3.20	2.76	2.86	2.94	3.00
CAPTAFOL	3.00	2.89	3.03	2.87	2.91	3.29	3.30	3.04
BAYER	2.95	2.90	2.96	2.91	3.17	3.01	3.18	3.01
MEAN	2.98	2.85	3.15	3.00	2.95	3.05	3.14	3.02

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

TABLE	SPECFUNG	B S FUNG	APP TIME	SPECFUNG B S FUNG
SED	0.090 0.096*	0.118	0.180	0.166

TABLE	SPECFUNG APP TIME	B S FUNG APP TIME
SED	0.254	0.311

* USE ONLY WITH TABLES EXCLUDING APP TIME NONE

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

STRATUM	DF	SE	CV%
WP	16	0.311	10.4

GRAIN MEAN DM% 88.5

PLOT AREA HARVESTED 0.00111

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