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76/R/BE/1 Crop Density and Chocolate Spot - W. Beans

Rothamsted Research

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76/R/BE/1

WINTER BEANS

CROP DENSITY AND CHOCOLATE SPOT

Object: To study the effects of plant density and fungicide on Chocolate Spot (*Botrytis* spp.) and yield of winter beans - Stackyard.

Sponsor: A. Bainbridge.

Design: 2 randomised blocks of 12 plots.

Whole plot dimensions: 5.33 x 9.14.

Treatments: All combinations of:-

1. FUNGCIDE Fungicide:

NONE	None
BENOMYL	Benomyl (0.56 kg in 340 l) applied 2 June 1976 (duplicated)

2. SEEDRATE Seed rates (kg):

126	126
378	378

3. SPACING Spacing between rows:

18 CM	18 cm (7 inches)
53 CM	53 cm (21 inches)

NOTE: It was intended to compare applications of benomyl on one and two occasions. Because of exceptionally dry weather and failure of Chocolate Spot to develop, only one application was made.

Basal applications: Manures: Chalk at 7.5 t. Weedkillers: Simazine at 1.1 kg in 220 l.

Seed: Throws MS.

Cultivations, etc.: Deep-tine cultivated twice: 16 Sept, 1975. Chalk applied: 19 Sept. Ploughed: 22 Sept. Heavy spring-tine cultivated: 29 Sept. Seed sown: 2 Oct. Weedkiller applied: 7 Oct. Combine harvested: 20 July, 1976. Previous crops: Winter wheat 1974, barley 1975.

NOTES: (1) Emergence counts were made.

(2) Chocolate Spot assessments were made throughout the season.

Grain mean DM%: 86.5

Plot area harvested close rows 0.00279

Plot area harvested wide rows 0.00244

76/R/BE/1

GRAIN TONNES/HECTARE

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

SEEDRATE	126	378	MEAN
FUNGCIDE			
NONE	3.54	4.07	3.81
BENOMYL	3.54	4.19	3.87
MEAN	3.54	4.11	3.83

SPACING	18 CM	53 CM	MEAN
FUNGCIDE			
NONE	3.61	4.00	3.81
BENOMYL	3.72	4.01	3.87
MEAN	3.65	4.01	3.83

SPACING	18 CM	53 CM	MEAN
SEEDRATE			
126	3.44	3.64	3.54
378	3.85	4.37	4.11
MEAN	3.65	4.01	3.83

	SEEDRATE	126	378	
	SPACING	18 CM	53 CM	53 CM
FUNGCIDE				
NONE		3.43	3.65	3.79
BENOMYL		3.46	3.62	3.99
				4.35
				4.40

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

TABLE	FUNGCIDE	SEEDRATE	SPACING	FUNGCIDE SEEDRATE	
SED				0.230	MIN REP
	0.141	0.133	0.133	0.199	MAX-MIN
				0.162	MAX REP

TABLE	FUNGCIDE SPACING	SEEDRATE SPACING	FUNGCIDE SEEDRATE SPACING	
SED	0.230		0.325	MIN REP
	0.199	0.187	0.281	MAX-MIN
	0.162		0.230	MAX REP

MIN REP FUNGCIDE
 MAX-MIN BENOMYL
 MAX REP NONE V BENOMYL
 MAX REP NONE

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.325	8.5