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ROTHAMSTED RESEARCH

Yields of the Field Experiments 1988

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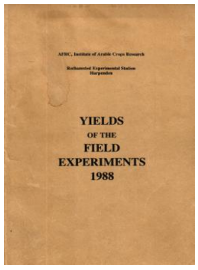

88/R/BE/1 Control of Chocolate Spot and Rust - W. Beans

Rothamsted Research

Rothamsted Research (1989) *88/R/BE/1 Control of Chocolate Spot and Rust - W. Beans ;* Yields Of The Field Experiments 1988, pp 198 - 199 **- DOI: https://doi.org/10.23637/ERADOC-1-43**

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88/R/BE/1

WINTER BEANS

CONTROL OF CHOCOLATE SPOT AND RUST

Object: To compare maneb plus mancozeb with benomyl plus chlorothalonil for the control of chocolate spot (Botrytis spp.) and rust (Uromyces viciae-fabae) on w. beans sown at two densities - New Zealand.

Sponsors: J. McEwen, D.P. Yeoman.

Design: 2 randomised blocks of 18 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments: All combinations of:-

1. **SEEDRATE** Seeds sown per square metre:

   12
   36

2. **CS FUNG** Fungicides applied to control chocolate spot until first rust pustules seen:

NONE	None
BEN+CHL	Benomyl at 0.50 kg plus chlorothalonil at 1.0 kg with a wetting agent ('Enhance' at 0.03 l) on 20 June, 1988
MAN+MANC	Maneb plus mancozeb each at 0.80 kg on 20 June

3. **RUSTFUNG** Fungicides applied to control rust, first applied as soon as rust pustules seen:

NONE	None
BEN+CHL	Benomyl at 0.50 kg plus chlorothalonil at 1.0 kg with a wetting agent ('Agral' at 0.06 l) on 29 June
MAN+MANC	Maneb plus mancozeb each at 0.80 kg on 29 June

NOTE: All spray treatments were applied in 200 l.

Basal applications: Weedkillers: Paraquat at 0.60 kg ion in 200 l. Propyzamide at 0.85 kg with simazine at 1.2 kg in 200 l. Insecticide: Deltamethrin at 0.0079 kg in 200 l on two occasions.

Seed: Bourdon, dressed with thiram.

Cultivations, etc.:- Paraquat applied: 22 Oct, 1987. Seed broadcast and ploughed in: 23 Oct. Disced: 26 Oct. Remaining weedkillers applied: 5 Nov. Insecticide applied: 26 Apr, 1988, 17 May. Combine harvested: 3 Oct. Previous crops: W. wheat 1986 and 1987.

NOTE: Establishment counts were made in autumn, disease assessments were made in July and August and components of yield were measured at maturity.

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88/R/BE/1

GRAIN TONNES/HECTARE

***** Tables of means *****

CS FUNG SEEDRATE	NONE	BEN+CHL	MAN+MANC	Mean
12	5.43	6.68	5.89	6.00
36	5.70	6.14	6.21	6.01
Mean	5.56	6.41	6.05	6.01

RUSTFUNG SEEDRATE	NONE	BEN+CHL	MAN+MANC	Mean
12	5.82	5.72	6.47	6.00
36	5.77	6.20	6.06	6.01
Mean	5.80	5.96	6.27	6.01

RUSTFUNG CS FUNG	NONE	BEN+CHL	MAN+MANC	Mean
NONE	5.12	5.27	6.30	5.56
BEN+CHL	6.43	6.55	6.24	6.41
MAN+MANC	5.84	6.06	6.25	6.05
Mean	5.80	5.96	6.27	6.01

SEEDRATE	RUSTFUNG CS FUNG	NONE	BEN+CHL	MAN+MANC
12	NONE	4.89	4.89	6.51
	BEN+CHL	7.11	6.64	6.28
	MAN+MANC	5.45	5.63	6.61
36	NONE	5.34	5.65	6.10
	BEN+CHL	5.75	6.47	6.20
	MAN+MANC	6.23	6.48	5.90

*** Standard errors of differences of means ***

SEEDRATE	CS FUNG	RUSTFUNG	SEEDRATE CS FUNG
0.160	0.196	0.196	0.277

SEEDRATE RUSTFUNG	CS FUNG RUSTFUNG	SEEDRATE CS FUNG RUSTFUNG
0.277	0.339	0.480

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP	17	0.480	8.0

GRAIN MEAN DM% 77.5

PLOT AREA HARVESTED 0.00330

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