ROTHAMSTED RESEARCH

Yields of the Field Experiments 1982

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82/R/BE/12 Control of Rust - Spring Beans

Rothamsted Research

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82/R/BE/12

SPRING BEANS

CONTROL OF RUST

Object: To study the effects of fungicides on the control of rust (Uromyces fabae) and on the yield of spring beans - Long Hoos VI/VII 5.

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

Design: 3 randomised blocks of 10 plots.

Whole plot dimensions: 2.03 x 3.05.

Treatments: All combinations of:-

1. C S FUNG — Fungicide to control chocolate spot but not rust:

   NONE — None
   BENOMYL — Benomyl at 1.0 kg in 340 l on 2 July, 1982

2. RUSTFUNG — Fungicides to control rust:

   MAN+MANC — Maneb at 0.8 kg + mancozeb at 0.8 kg in 340 l
   PROPICON — Propiconazole at 0.12 kg in 340 l

3. RFNGTIME — Times of applying fungicides to control rust:

   TWICE — Twice on 9 July and 13 Aug
   THRICE — Thrice, on 9 July, 23 July and 13 Aug

plus one extra treatment:

   EXTRA

   NONE — None (duplicated)

Basal applications: Manures: Chalk at 2.9 t. Muriate of potash at 520 kg.
Weedkillers: Trietazine at 1.0 kg with simazine at 0.14 kg in 340 l.
Insecticide: Permethrin applied twice at 0.06 kg in 340 l.

Seed: Minden, sown at 270 kg.

Cultivations, etc.:- Muriate of potash applied: 12 Nov, 1981. Chalk applied: 27 Nov. Ploughed: 29 Jan, 1982. Spring-tine cultivated: 26 March. Spring-tine cultivated, power harrowed, seed sown: 29 Mar. Weedkillers applied: 14 Apr. Insecticide applied: 11 May, 26 May. Harvested by hand: 9 Sept. Previous crops: Potatoes 1980, fallow 1981.

NOTE: The incidence of chocolate spot and rust was assessed from early July until maturity. Components of yield were measured at maturity.

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82/R/BE/12
GRAIN TONNES/HECTARE

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

RUSTFUNG C S FUNG	MAN+MANC	PROPICON	MEAN
NONE	5.28	5.18	5.23
BENOMYL	5.65	5.60	5.62
MEAN	5.46	5.39	5.43

RFNGTIME C S FUNG	TWICE	THRICE	MEAN
NONE	5.06	5.40	5.23
BENOMYL	5.47	5.77	5.62
MEAN	5.27	5.59	5.43

RFNGTIME RUSTFUNG	TWICE	THRICE	MEAN
MAN+MANC	5.36	5.57	5.46
PROPICON	5.17	5.61	5.39
MEAN	5.27	5.59	5.43

C S FUNG	RFNGTIME RUSTFUNG	TWICE	THRICE
NONE	MAN+MANC	5.05	5.50
	PROPICON	5.06	5.30
BENOMYL	MAN+MANC	5.67	5.63
	PROPICON	5.28	5.92

EXTRA NONE 4.51

GRAND MEAN 5.24

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

TABLE	C S FUNG	RUSTFUNG	RFNGTIME	C S FUNG RUSTFUNG
SED	0.138	0.138	0.138	0.195

TABLE	C S FUNG RFNGTIME	RUSTFUNG RFNGTIME	C S FUNG RUSTFUNG RFNGTIME
SED	0.195	0.195	0.276

SED FOR COMPARING EXTRA NONE WITH ANY ITEM IN
C S FUNG.RUSTFUNG.RFNGTIME TABLE IS 0.239

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

STRATUM	DF	SE	CV%
BLOCK.WP	19	0.338	6.5

GRAIN MEAN DM% 87.0 PLOT AREA HARVESTED 0.00015

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