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ROTHAMSTED RESEARCH

Yields of the Field Experiments 1983

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83/R/BE/12 Row Spacing and Methods of Applying Phorate - S. Beans

Rothamsted Research

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83/R/BE/12

SPRING BEANS

ROW SPACING AND METHODS OF APPLYING PHORATE

Object: To study the effects of methods of applying phorate on the incidence of Sitona and on the yield of s. beans sown in wide or narrow rows - W. Barnfield II.

Sponsors: R. Bardner, D.C. Griffiths.

Design: 4 randomised blocks of 6 plots.

Whole plot dimensions: 5.33 x 13.7.

Treatments: All combinations of:-

1. PHORATE	Methods of applying phorate:
NONE	Not applied
B CAST	Broadcast at 1.7 kg and worked in to the seedbed
C DRILL	Combine drilled at 1.7 kg
2. ROW SPAC	Spacing between rows:
18 CM	7 inches (18 cm)
53 CM	21 inches (53 cm)

Basal applications: Manures: Chalk at 5.0 t. Weedkillers: Glyphosate at 1.4 kg in 250 l. Trietazine and simazine (as 'Aventox' at 2.4 l) in 250 l. Insecticide: Pirimicarb at 0.14 kg in 250 l.

Seed: Minden, sown at 280 kg.

Cultivations, etc.:- Chalk applied: 16 Sept, 1982. Glyphosate applied: 19 Oct. Ploughed: 25 Nov. Spring-tine cultivated twice: 8 Mar, 1983. Broadcast phorate treatments applied, rotary harrowed: 9 Mar. Combine drilled phorate treatments applied, seed sown: 10 Mar. 'Aventox' applied: 12 Mar. Insecticide applied: 16 June. Combine harvested: 12 Aug. Previous crops: S. barley 1981, w. wheat 1982.

NOTE: Leaf damage by Sitona was assessed in May; larval and pupal counts were made in July. Yellowing was assessed in July. Soil animals were assessed from soil in June and from pitfall traps at weekly intervals. Soil cores were taken for chemical analyses in May.

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83/R/BE/12

GRAIN TONNES/HECTARE

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

ROW SPAC PHORATE	18 CM	53 CM	MEAN
NONE	3.16	3.16	3.16
B CAST	3.40	3.39	3.40
C DRILL	3.65	3.81	3.73
MEAN	3.40	3.45	3.43

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

TABLE	PHORATE	ROW SPAC	PHORATE ROW SPAC
SED	0.131	0.107	0.185

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.262	7.6

GRAIN MEAN DM% 86.1

PLOT AREA HARVESTED 0.00293

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