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81/R/BE/13 Varieties and Blrv - S. Beans

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81/R/BE/13

SPRING BEANS

VARIETIES AND BLRV

Object: To study the effects of full pest and pathogen control on three varieties differing in susceptibility to bean leaf roll virus (BLRV) - Whittlocks.

Sponsor: A.J. Cockbain.

Design: 3 randomised blocks of 6 plots.

Whole plot dimensions: 5.33 x 9.14.

Treatments: All combinations of:-

1. VARIETY Varieties:
 BEAD Maris Bead (resistant to BLRV)
 MINDEN Minden (susceptible to BLRV)
 WEIRBOON Weirboon (tolerant to BLRV)
2. PATHCONT Pest & pathogen control in addition to basal:
 STANDARD None
 FULL Phorate at 2.2 kg combine drilled for BEAD and MINDEN, but applied at 4.5 kg after drilling for WEIRBOON

NOTES: (1) The large seed size of cv. Weirboon made it impossible to use the combine drill used for the other varieties. An alternative drill, not fitted for combine drilling, was used and the planned rate of phorate was doubled and applied to the soil surface the day after drilling.

(2) Additional pesticides planned for inclusion in PATHCONT FULL were omitted as the target organisms were absent.

Basal applications: Manures: Chalk at 7.5 t. Weedkillers: Trietazine at 1.0 kg and simazine at 0.14 kg in 250 l. Insecticide: Pirimicarb at 0.14 kg in 340 l.

Seed: Maris Bead, and Minden, sown at 260 kg.
Weirboon, sown at 500 kg.

Cultivations, etc.: - Chalk applied: 2 Sept, 1980. Ploughed: 29 Dec.
Spring-tine cultivated twice: 19 Feb, 1981, 7 Apr. Heavy spring-tine cultivated: 6 Apr. Seed sown: 7 Apr. Weedkillers applied: 9 Apr.
Basal insecticide applied: 14 July. Combine harvested: 9 Sept.
Previous crops: W. wheat 1979, s. barley 1980.

NOTE: Plant counts were made at emergence. Pest and disease incidence and growth parameters were assessed throughout the season.

81/R/BE/13

GRAIN TONNES/HECTARE

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

VARIETY PATHCONT	BEAD	MINDEN	WEIRBOON	MEAN
STANDARD	3.48	3.61	3.57	3.55
FULL	3.78	4.15	4.21	4.05
MEAN	3.63	3.88	3.89	3.80

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

TABLE	VARIETY	PATHCONT	VARIETY PATHCONT
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SED	0.096	0.078	0.136

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

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.166	4.4

GRAIN MEAN DM% 83.9

PLOT AREA HARVESTED 0.00293