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Yields of the Field Experiments 1974

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74/R/BE/1 Virus Control - Beans

74/R/BE/1 Virus Control - Beans, Rothamsted Research (1975) Yields Of The Field Experiments 1974, pp 323 - 324 - DOI: <https://doi.org/10.23637/ERADOC-1-119>

74/R/BE/1

SPRING BEANS

VIRUS CONTROL

Object: To study the effects of heat treatment of seed, roguing and control of weevil vectors on yield and incidence of broad bean stain (BBSV) and broad bean true mosaic (EBTMV) viruses in field beans - Whittlocks.

Sponsor: A.J. Cockbain.

Design: 4 randomised blocks of 5 plots.

Whole plot dimensions: 4.27 x 15.2. Area harvested: 0.00488.

Treatments: Virus control:

VRUSCONT

None	O
Seed heat treated (1 hour at 80°C), crop rogued	HR
Seed not heat treated, crop rogued	R
Seed heat treated, crop rogued and sprayed with methomyl	HRS
Seed not heat treated, crop rogued and sprayed with methomyl	RS

NOTES: (1) Plants with symptoms of BBSV or EBTMV were removed from R plots on 1, 8, 16, 21 and 31 May, 7, 14 and 20 June.
(2) Methomyl was applied on 15, 30 May, 20 June at 1.0 kg in 500 l.

Basal applications: Manures: (0:14:26) at 400 kg placement drilled.

Weedkiller: Simazine at 1.1 kg in 220 l. Insecticide: Demeton-s-methyl at 0.25 kg in 220 l.

Seed: Maris Bead, sown at 220 kg.

Cultivations, etc.: - Deep-tine cultivated: 19 and 20 Sept, 1973. Deep-tine cultivated: 26 Sept. Power harrowed: 27 Mar, 1974. Seed sown and spring-tine cultivated: 28 Mar. Simazine applied: 5 Apr. Insecticide applied: 13 June. Combine harvested: 26 Sept. Previous crops: Winter wheat 1972, barley 1973.

NOTE: Plant counts were made on 9 May. Damage by weevils (Sitona and Apion) was recorded on 9 May. Estimates of virus incidence were made on 7 and 20 June and 5 July. Seed samples were taken at harvest for assessment of virus infection.

Standard error per plot.

Grain, tonnes/hectare: 0.312 or 11.2% (12 d.f.)

74/R/BE/1

TABLES OF MEANS

GRAIN: TONNES/HECTARE

VRUSCONF

O	HR	R	HRS	RS	Mean
2.59	2.48	2.60	2.91	3.37	2.79

STANDARD ERROR OF DIFFERENCES

VRUSCONF

0.221

Mean D.M. % 67.1