Yields of the Field Experiments 1973

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73/R/EE/3 - Virus Control (Spring Beans) - Beans

Rothamsted Research

73/R/BE/3

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 and Broad Bean True Mosaic Viruses in field beans - Great Knott II.

Sponsor: A.J. Cockbain.

Design: 4 randomised blocks of 5 plots.

Whole plot dimensions: 4.27 x 15.2. Area harvested: 0.00650.

Treatments: Virus control: VRUSCONT

None	0
Seed heat treated (4 days at 55-60°C), crop rogued	HR
Seed not heat treated, crop rogued	R
Seed heat treated, crop rogued and sprayed with gamma BHC	HRS
Seed not heat treated, crop rogued and sprayed with gamma BHC	RS

The heat treated seed failed to germinate. Roguing was done on 4, 25 May, 7 June. (Roguing was abandoned on 29 June as too many plants infected.) Insecticide treatment spray was 0.28 kg gamma BHC applied in 340 l on 6 June, repeated on 3 July.

Basal applications: Manures: Ground chalk at 7.5 tonnes, (0:20:20) at 1300 kg, Epsom salts at 900 kg in autumn. (0:14:28) at 400 kg, placement drilled.

Seed: Maris Bead, sown at 220 kg.

Cultivations, etc.:- Autumn PK applied: 21 Sept, 1972. Epsom salts applied: 22 Sept. Chalk applied: 25 Sept. Ploughed: 22 Nov. Seed sown: 14 Mar, 1973. Combine harvested: 3 Sept. Previous crops: Winter wheat 1971, barley 1972.

NOTE: Incidence of viruses was assessed on 29 June and 25 July. Adult weevil populations were assessed on 7 June. Seed samples were taken at harvest for assessment of virus infection.

Standard error per plot.
   Grain, tonnes/hectare: 0.406 or 8.7% (6 d.f.)

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73/P/BE/3

TABLES OF MEANS

GRAIN: TONNES/HECTARE

VRUSCONT

C	R	R3	Mean
4.53	4.49	4.93	4.65

STANDARD ERROR OF DIFFERENCES

VRUSCONT

0.287

Mean D.M. % 82.9

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