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73/R/BE/1 - Virus Control (Winter Beans) - Beans

Rothamsted Research

Rothamsted Research (1974) *73/R/BE/1 - Virus Control (Winter Beans) - Beans* ; Yields Of The Field Experiments 1973, pp 346 - 347 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

73/R/BE/1

WINTER 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 - Pastures.

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	O
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

Roguing was done on 11 Dec, 1972, 23 Mar, 1973, 27 Apr, 31 May.
Insecticide treatment spray was 0.28 kg gamma BHC in 340 l on 23 Mar, repeated on 6 June.

Basal applications: Manures: (0:14:28) at 400 kg, placement drilled.

Seed: Throws MS sown at 350 kg.

Cultivations, etc.: Ploughed: 23 Sept, 1972. Rotary harrowed: 2 Oct.
Seed sown: 6 Oct. Tractor hoed: 19 Apr and 3 May, 1973. Combine harvested: 23 Aug. Previous crops: Barley 1971, barley 1972.

NOTES: (1) Plant populations were determined on 21 Mar. Incidence of viruses was assessed on 11 Dec and 7 July. Adult weevil damage was assessed on 14 Dec, 21 Mar and 16 Apr. Adult weevil populations were assessed on 7 June. Seed samples were taken at harvest for assessment of virus infection.

(2) Owing to a blockage during combining, yields from two plots (treatments HR and HRS) were not recorded. Estimated values were used in the analysis.

Standard error per plot.

Grain, tonnes/hectare: 0.300 or 9.6% (10 d.f.)

73/R/BE/1

TABLES OF MEANS

GRAIN: TONNES/HECTARE

VRUSCONT					
O	HR	R	HRS	RS	Mean
2.89	3.27	3.07	3.25	3.15	3.12

STANDARD ERROR OF DIFFERENCES

VRUSCONT

0.212

Mean D.M. % 85.7