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Yields of the Field Experiments 1974

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74/R/BE/3 Varieties and Viruses - Beans

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74/R/BE/3

SPRING BEANS

VARIETIES AND VIRUSES

Object: To study the spread and effects on yield of broad bean stain and broad bean true mosaic viruses in different varieties of field bean - Long Hoos I/II.

Sponsor: A.J. Cockbain.

Design: 4 randomised blocks of 6 plots.

Whole plot dimensions: 6.40 x 15.2. Area harvested: 0.00488.

Treatments: Varieties (all healthy seed except where stated):	VARIETY
Herz Freya	Freya H
Maris Bead, seed infected with both viruses, two plots per block	Bead I
Maris Bead	Bead H
Minden	Minden H
Minor	Minor H

NOTE: Examination of seedlings showed that Herz Freya had 0.01% of plants with virus infection from the seed and Maris Bead, Healthy 0.04%. Maris Bead, Infected had 3.2%. Minden and Minor had none.

Basal applications: Manures: (0:14:28) at 400 kg placement drilled.
Weedkiller: Simazine at 1.1 kg in 220 l. Insecticide: Demeton-s-methyl at 0.25 kg in 450 l.

Seed: Sown at 220 kg.

Cultivations, etc.: Ploughed: 19 Nov, 1973. Spring-tine cultivated: 8 and 9 Mar, 1974. Spring-tine cultivated: 26 Mar. Seed sown and spring-tine cultivated: 28 Mar. Weedkiller applied: 10 Apr. Insecticide applied: 19 June. Combine harvested: 26 Sept.

NOTE: Plant counts were made on 15 May. Seed-borne virus infection was recorded on 9 May and damage by Sitona and Apion weevils on 15 May. Incidence of viruses was assessed on 15 May, 13 June, 2 and 7 July. Estimates of the numbers of adult weevils were made on 13 June. Seed samples were taken at harvest to assess virus infection.

Standard error per plot.

Grain, tonnes/hectare: 0.447 or 12.7% (16 d.f.)

74/R/BE/3

TABLE OF MEANS

GRAIN: TONNES/HECTARE

VARIETY

Freya H	Bead I	Bead E	Minden H	Minor H	Mean
3.03	3.32	3.14	4.64	3.68	3.52

STANDARD ERRORS OF DIFFERENCES

VARIETY

Bead I v any of remainder
Between any of remainder

0.274
0.316

Mean D.M. % 72.7