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Yields of the Field Experiments 1987

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87/R/PE/1 Effects of Pea Seed-borne Mosaic Virus - Peas

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87/R/PE/1

PEAS

EFFECTS OF PEA SEED-BORNE MOSAIC VIRUS

Object: To study the transmission, symptoms and effects on yield of pea seed-borne mosaic virus in two varieties of peas with and without insecticide - Long Hoos III 2.

Sponsor: A.J. Cockbain.

Design: 4 randomised blocks of 2 whole plots split into 3.

Whole plot dimensions: 9.2 x 5.0.

Treatments: All combinations of:-

Whole plots

1. INSCDCDE	Insecticide:
NONE	None
PP 321	'PP 321' applied at 0.20 l and pirimicarb at 0.14 kg in 220 l on 1 July, 1986, 10 July and 24 July

Sub plots

2. VARIETY	Varieties:
PROGR H	Progreta, healthy stock, sown at 200 kg
WAVER H	Waverex, healthy stock, sown at 200 kg
WAVER I	Waverex, seed infected pea seed-borne mosaic virus, sown at 140 kg

NOTE: Plots were netted against bird damage from the end of May until harvest.

Basal applications: Manure: Muriate of potash at 520 kg. Weedkillers: Glyphosate at 1.4 kg. Simazine at 0.17 kg and trietazine at 1.2 kg in 220 l. Desiccant: Diquat at 0.84 kg ion in 220 l.

Cultivations, etc.:- K applied: 16 Sept, 1986. Glyphosate applied: 1 Oct. Ploughed: 28 Nov. Deep-tine cultivated twice: 28 Apr, 1987. Spring-tine cultivated, seed sown, rolled: 29 Apr. Simazine and trietazine applied: 5 May. Desiccant applied: 15 Sept. Combine harvested: 22 Sept. Previous crops: Potatoes 1985, s. barley 1986.

NOTES: (1) Aphid numbers were assessed during the growing season. Virus incidence was assessed in the plants during the season and in the seed from all plots after harvest.
(2) Because of weather conditions there was a long period between crop maturity and combine harvesting during which much grain was shed.

87/R/PE/1

GRAIN TONNES/HECTARE

***** Tables of means *****

VARIETY INSC TCDE	PROGR H	WAVER H	WAVER I	Mean
NONE	1.10	0.33	0.20	0.54
PP 321	1.23	0.60	0.28	0.70
Mean	1.16	0.46	0.24	0.62

*** Standard errors of differences of means ***

Table	VARIETY	INSC TCDE* VARIETY
s.e.d.	0.070	0.099

* Within the same level of INSC TCDE only

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
BLOCK.WP.SP	12	0.141	22.6

GRAIN MEAN DM% 73.6

SUB PLOT AREA HARVESTED 0.00072