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83/R/BE/18 Permethrin and Alarm Pheromone - S. Beans

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83/R/BE/18

SPRING BEANS

PERMETHRIN AND ALARM PHEROMONE

Object: To study the effects of aphid alarm pheromone on the activity of permethrin against bean aphids and on the yield of spring beans - Long Hoos VI/VII 2.

Sponsors: D.C. Griffiths, J.A. Pickett, G.R. Cayley.

Design: 2 randomised blocks of 14 plots.

Whole plot dimensions: 2.4 x 4.5.

Treatments: All combinations of:-

- | | |
|-------------|--------------------------------|
| 1. PERMETH | Permethrin (g): |
| 0 | None (duplicated) |
| 3 | |
| 10 | |
| 30 | |
| 90 | |
| 270 | |
| 2. PHEROMON | Pheromone: |
| NONE | None |
| BETA FAR | (E), beta farnesene at 0.004 l |

NOTE: Treatments were applied by electrostatic sprayer in 4.2 l hexane on 4 July.

Basal applications: Manures: Chalk at 2.9 t. Weedkillers: Trietazine at 1.1 kg with simazine at 0.16 kg in 220 l. Insecticide: Permethrin at 0.15 kg in 220 l.

Seed: Minden, sown at 280 kg.

Cultivations, etc.: Chalk applied: 28 Sept, 1982. Ploughed: 4 Nov. Spring-tine cultivated, seed sown: 10 Mar, 1983. Weedkillers applied: 17 Mar. Insecticide applied: 24 May. Combine harvested: 11 Aug. Previous crops: Potatoes 1981, fallow 1982.

NOTE: Aphid infestations were measured in early July.

83/R/BE/18

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

PERMETH PHEROMON	0	3	10	30	90	270	MEAN
NONE	1.73	1.51	1.76	1.92	1.87	1.99	1.79
BETA FAR	1.59	1.98	1.99	1.87	1.89	1.91	1.83
MEAN	1.66	1.74	1.88	1.90	1.88	1.95	1.81

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	PERMETH	PHEROMON	PERMETH PHEROMON	
SED	0.183		0.259	MIN REP
	0.159	0.098	0.224	MAX-MIN
			0.183	MAX REP

PERMETH
MAX REP 0
MAX-MIN 0 V ANY OF REMAINDER
MIN REP ANY OF REMAINDER

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.259	14.3
GRAIN MEAN DM%	86.1		
PLOT AREA HARVESTED	0.00065		