

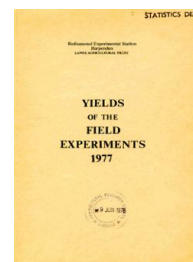
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77/R/BE/4 Aphids and Entomophthora - Beans

Rothamsted Research

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77/R/BE/4

SPRING BEANS

APHIDS AND ENTOMOPHTHORA

Object: To study the effects of the fungus *Entomophthora* on aphid populations and yield of field beans - Geescroft.

Sponsor: N. Wilding.

Design: 5 randomised blocks of 5 plots.

Whole plot dimensions: 9.22 x 9.14.

Treatments:

TREATMNT	Control of insects and fungi:
NONE	None
INSCTCDE	Insecticide: Pirimicarb at 0.14 kg in 340 l on 4 July
FUNG C	Fungicide: Captafol at 1.4 kg on the first and third occasions and at 1.7 kg on the second, fourth and fifth occasions
FUNG M	Fungicide: Mancozeb at 1.3 kg on 5 occasions
ENTAPHID	<i>Entomophthora</i> spp. applied in live infected aphids on 20 June, 1977

NOTES: (1) Fungicides were applied in 340 l on 4 July, 14 July, 21 July, 27 July and 4 August.

(2) Yields were adjusted for a fertility trend across the site.

Basal applications: Manures: Chalk at 7.5 t. Weedkiller: Simazine at 1.1 kg in 220 l.

Seed: Minden, sown at 220 kg.

Cultivations, etc.: - Chalk applied: 2 Sept, 1976. Ploughed: 9 Sept. Heavy spring-tine cultivated four times: 21 Sept, 22 Sept, 3 Nov, 8 Mar, 1977. Seed sown: 9 Mar. Weedkiller applied: 4 Apr. Combine harvested: 30 Sept. Previous crops: Wheat 1975, barley 1976.

NOTE: Weekly assessments were made of aphid population density and proportion of infected aphids infected with *entomophthora*. Total above-ground dry matter was measured in August.

77/R/BE/4

GRAIN TONNES/HECTARE

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

TREATMNT	NONE	INSCDCDE	FUNG C	FUNG M	ENTAPHID	MEAN
	0.81	4.03	0.49	0.63	2.10	1.61

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

TABLE	TREATMNT
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SED	0.173

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.270	16.8

GRAIN MEAN DM% 80.2

PLOT AREA HARVESTED 0.00239