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Yields of the Field Experiments 1973

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73/R/BE/9 - Insecticides & Beneficial Insects - Beans

Rothamsted Research

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73/R/BE/9

SPRING BEANS

INSECTICIDES AND BENEFICIAL INSECTS

Object: To study the effect of two insecticides on beneficial insects, particularly predators and parasites of aphids, and the yield of field beans - Pastures.

Sponsor: J.H. Stevenson.

Design: Small plots: 2 randomised blocks of 3 plots.
Large plots: 3 randomised blocks of 3 plots.

Whole plot dimensions: Small plots: 17.1 x 21.3. Area harvested: 0.00293
Large plots: 36.3 x 36.6. Area harvested: 0.00585

Treatments:	PLOTSIZE
One experiment with small plots	Small
One experiment with large plots	Large

Treatments identical on both experiments:-	INSECTICIDE
Insecticidal sprays just before flowering, 26 June:	
None	None
Dimethoate 0.34 l in 740 l	Dimeth
Menazon 0.28 kg in 740 l	Menazon

Basal applications: Manures: (0:20:20) at 1300 kg, Epsom salts at 900 kg, broadcast in autumn. (0:14:28) at 400 kg, placement drilled.
Weedkillers: Paraquat at 0.42 kg ion in 220 l, and simazine at 1.1 kg in 220 l.

Seed: Minor, sown at 220 kg.

Cultivations, etc.:- Autumn PK applied: 11 Sept, 1972. Epsom salts applied: 20 Sept. Ploughed: 23 Sept. Paraquat applied: 28 Nov.
Seed sown: 10 Mar, 1973. Simazine applied: 13 Mar. Combine harvested: 5 Sept. Previous crops: Barley 1971 and 1972.

NOTE: Aphid counts (*Aphis fabae*), sweep net samples of insects and samples for insects using portable insect suction sampler were made throughout the season. Carabid beetle samples from pit fall traps were taken just before and for 5 weeks after spraying. Water traps for insects were maintained in the crop during the latter part of the season.

Standard error per plot. PLOTSIZE Large.
Grain, tonnes/hectare: 0.219 or 6.3% (4 d.f.)

73/R/EE/9

TABLES OF MEANS

GRAIN: QUINPS/FOOTARE

PLOTSIZE	INSCTCDE			Mean
	None	Dimeth	Menazon	
Small	3.82	3.54	3.86	3.74
Large	2.96	3.71	3.79	3.49

STANDARD ERROR OF DIFFERENCES PLOTSIZE Large

INSCTCDE

0.179

Mean D.M. % 82.8