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# Yields of the Field Experiments 1983

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## 83/R/BE/1 Effects of Pests and Pathogens - W. Beans

### Rothamsted Research

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83/R/BE/1

WINTER BEANS

EFFECTS OF PESTS AND PATHOGENS

Object: To assess the effects of three amounts of pest and disease control on w. beans - Stackyard.

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Design: 6 randomised blocks of 3 plots.

Whole plot dimensions: 5.33 x 15.0.

Treatments:

PATHCONT	Pest and pathogen control (in addition to basals):
STANDARD	None
ENHANCED	Seed dressed with benomyl and thiram (1.1 g of each per kg of seed)
FULL	Phorate at 2.2 kg as granules to foliage on 14 Apr, 1983 Seed dressed with benomyl and thiram (1.1 g of each per kg of seed) Aldicarb at 10 kg on 23 Sept, 1982 Benomyl at 0.50 kg and fosetyl-Al at 1.76 kg on 7 Mar, 1983 Carbofuran at 2.24 kg on 14 Apr Benomyl at 0.50 kg on 26 Apr Propiconazole at 0.12 kg on 28 June and 11 July

NOTES: (1) Treatment sprays were applied in 340 l.  
(2) Sides of plots were separated by strips of w. beans 5.33 m wide plus 0.66 m fallow paths, ends of plots were separated by strips of w. beans 9.2 m wide plus 0.9 m fallow paths. The separating crops received basal applications as for the plots and in addition received benomyl at 0.50 kg on 7 Mar.

Basal applications: Weedkillers: Simazine at 1.2 kg in 250 l. Fungicide: Benomyl at 0.56 kg in 250 l on two occasions, the second time with the insecticide. Insecticide: Pirimicarb at 0.14 kg.

Seed: Throws MS, sown at 230 kg.

Cultivations, etc.: - Ploughed: 26 Aug, 1982. Spring-tine cultivated, rotary harrowed: 23 Sept. Seed sown: 24 Sept. Weedkiller applied: 16 Oct. Basal fungicide applied: 26 May, 1983. Basal fungicide with insecticide applied: 23 June. Combine harvested: 12 Aug. Previous crops: W. wheat 1981 and 1982.

NOTE: Plant counts were made after establishment and components of yield were measured at maturity. Migratory nematodes, root and foliar fungi, aphids and weevils were counted at intervals during the season. Total above ground dry matter, and N content, were measured in July. N content of grain was measured.

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GRAIN TONNES/HECTARE

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

PATHCONT	STANDARD	ENHANCED	FULL	MEAN
	3.62	3.93	4.03	3.86

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

TABLE	PATHCONT
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SED	0.111

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

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.192	5.0

GRAIN MEAN DM% 86.5

SUB PLOT AREA HARVESTED 0.00320