

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1982

[Full Table of Content](#)



82/R/BE/5 Control of Stem Nematode - Winter and Spring Beans

Rothamsted Research

Rothamsted Research (1983) *82/R/BE/5 Control of Stem Nematode - Winter and Spring Beans ; Yields Of The Field Experiments 1982*, pp 284 - 287 - DOI:

<https://doi.org/10.23637/ERADOC-1-33>

82/R/BE/5

WINTER AND SPRING BEANS

CONTROL OF STEM NEMATODE

Object: To study the effects of a range of chemicals, rates and times of application on the control of stem nematode (*Ditylenchus dipsaci*) and on the yield of w. and s. beans - Highfield 0 and E III, Fosters 0 and E II.

Sponsor: A.G. Whitehead.

Design: For each crop: 2 randomised blocks of 15 plots.

Whole plot dimensions: 2.29 x 4.57.

Treatments:

NEMACIDE	Nematicides, rates and times of application:	
	Applied in the furrow at sowing	Top-dressed after emergence
NONE	None	None (duplicated)
AL1+AL1	Aldicarb at 1.25 kg	+ aldicarb at 1.25 kg
AL2+AL2	Aldicarb at 2.5 kg	+ aldicarb at 2.5 kg
AL1+TH1	Aldicarb at 1.25 kg	+ thiabendazole at 1.25 kg
AL1+TH2	Aldicarb at 1.25 kg	+ thiabendazole at 2.5 kg
AL1+TH4	Aldicarb at 1.25 kg	+ thiabendazole at 5.0 kg
AL2+TH1	Aldicarb at 2.5 kg	+ thiabendazole at 1.25 kg
AL2+TH2	Aldicarb at 2.5 kg	+ thiabendazole at 2.5 kg
AL2+TH4	Aldicarb at 2.5 kg	+ thiabendazole at 5.0 kg
TH1+TH1	Thiabendazole at 1.25 kg	+ thiabendazole at 1.25 kg
TH2+TH2	Thiabendazole at 2.5 kg	+ thiabendazole at 2.5 kg
TH4+TH4	Thiabendazole at 5.0 kg	+ thiabendazole at 5.0 kg
CA1+CA1	Carbofuran at 1.25 kg	+ carbofuran at 1.25 kg
CA2+CA2	Carbofuran at 2.5 kg	+ carbofuran at 2.5 kg

- NOTES: (1) To ensure the presence of stem nematode, infested straw was spread on both sites.
 (2) Thiabendazole was applied in 7,650 l water.
 (3) Post emergence treatments were applied to w. beans on 27 Apr, 1982, to s. beans on 27 May.

Basal applications:

W. beans: Highfield 0 and E III: Manures: Chalk at 3.8 t. (0:14:28) at 500 kg. Weedkiller: Simazine at 1.1 l in 280 l. Fungicide: Benomyl at 0.56 kg in 280 l applied on two occasions. Insecticide: Pirimicarb at 0.14 kg in 280 l applied on two occasions.
 S. beans: Fosters 0 and E II: Manures: (0:14:28) at 500 kg. Weedkiller: Simazine at 1.1 l in 220 l. Fungicide: Benomyl at 0.56 kg in 280 l applied on two occasions. Insecticide: Pirimicarb at 0.14 kg in 270 l applied on two occasions.

Seed: Highfield 0 and E III: Throws MS, sown at 240 kg.
 Fosters 0 and E II: Minden, sown at 250 kg.

82/R/BE/5

Cultivations, etc.:-

Highfield 0 and E III: Chalk applied: 25 Sept, 1981. Infested straw applied: 9 Oct. Ploughed: 15 Oct. PK applied: 3 Nov. Rotary harrowed, seed sown, treatments applied: 5 Nov. Weedkiller and fungicide applied: 4 Jan, 1982. Fungicide applied: 26 May. Insecticide applied twice: 17 June and 7 July. Harvested by hand: 5 Aug. Previous crops: S. oats 1980, fallow 1981.

Fosters 0 and E II: Infested straw applied: 28 Oct, 1981. PK applied: 3 Jan, 1982. Rotary harrowed, seed sown, treatments applied: 24 Mar. Weedkiller applied: 26 Mar. Fungicide applied: 26 May. Insecticide applied: 17 June. Fungicide applied: 2 July. Insecticide applied: 7 July. Harvested by hand: 5 Aug. Previous crops: S. barley 1980, s. beans 1981.

NOTES: On Highfield 0 and E III counts were made of number of stems infested with stem nematode.
On Fosters 0 and E II counts were made only on untreated plots.

82/R/BE/5 HIGHFIELD

GRAIN TONNES/HECTARE

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

NEMACIDE	
NONE	2.77
AL1+AL1	3.24
AL2+AL2	3.82
AL1+TH1	3.29
AL1+TH2	2.01
AL1+TH4	3.84
AL2+TH1	3.34
AL2+TH2	3.42
AL2+TH4	2.49
TH1+TH1	2.99
TH2+TH2	3.58
TH4+TH4	3.39
CA1+CA1	5.54
CA2+CA2	5.83
MEAN	3.49

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

TABLE	NEMACIDE	
-----	-----	
SED	0.576	MIN REP
	0.499	MAX-MIN

NEMACIDE
MIN REP NONE
MAX-MIN NONE V ANY OF THE REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.576	16.5
GRAIN MEAN DM%	82.5		
PLOT AREA HARVESTED	0.00035		

82/R/BE/5 FOSTERS

GRAIN TONNES/HECTARE

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

NEMACIDE	
NONE	2.16
AL1+AL1	2.60
AL2+AL2	2.66
AL1+TH1	2.47
AL1+TH2	2.41
AL1+TH4	2.62
AL2+TH1	2.48
AL2+TH2	2.41
AL2+TH4	2.41
TH1+TH1	2.11
TH2+TH2	1.95
TH4+TH4	2.26
CA1+CA1	2.56
CA2+CA2	2.63
MEAN	2.39

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

TABLE	NEMACIDE	
-----	-----	-----
SED	0.270	MIN REP
	0.234	MAX-MIN

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.270	11.3

GRAIN MEAN DM% 85.3

PLOT AREA HARVESTED 0.00035