

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 1984

[Full Table of Content](#)



84/R/BE/8 Sowing Methods and Nematode Control - W. Beans

Rothamsted Research

Rothamsted Research (1985) *84/R/BE/8 Sowing Methods and Nematode Control - W. Beans ; Yields Of The Field Experiments 1984*, pp 289 - 290 - DOI: <https://doi.org/10.23637/ERADOC-1-32>

84/R/BE/8

WINTER BEANS

SOWING METHODS AND NEMATODE CONTROL

Object: To study the effects of aldicarb and carbofuran, applied to the seed furrows during sowing behind a plough or behind a rotary harrow, on the control of stem nematode (*Ditylenchus dipsaci*) and on the yield of w. beans - Highfield O & E III.

Sponsor: A.G. Whitehead.

Design: 3 randomised blocks of 16 plots.

Whole plot dimensions: SOW METH DRILL 2.13 x 4.57.
SOW METH PLOUGH 2.74 x 4.57.

Treatments: All combinations of:-

1. SOW METH Methods of sowing:

DRILL	By drill sowing rows 30 cm apart
PLOUGH	From a box attached to the plough, sowing into furrows 30 cm apart

2. NEMACIDE Nematicides, applied to the seed furrow:

ALDICARB	Aldicarb
CARBOFUR	Carbofuran

3. NEM RATE Rates of nematicides (kg):

1.25
2.50
5.00

plus two extra treatments:

EXTRA

- | | |
|----------|--|
| DRILL 0 | Sown by drill, no nematicide (duplicated) |
| PLOUGH 0 | Sown by plough, no nematicide (duplicated) |

Basal applications: Manures: (0:20:20) at 620 kg. Weedkillers: Glyphosate at 1.4 kg in 250 l. Simazine at 1.1 l in 560 l. Fungicide: Benomyl at 0.56 kg on four occasions, in 560 l, 220 l, 280 l and 280 l respectively. Insecticide: Pirimicarb at 0.14 kg on two occasions, in 340 l and 280 l respectively.

Seed: Throws MS, sown at 290 kg.

Cultivations, etc.: - Glyphosate applied: 20 Oct, 1983. Shallow rotary cultivated, PK applied: 25 Oct. Seed sown SOW METH PLOUGH plots, treatments applied: 27 Oct. Rotary harrowed, seed sown SOW METH DRILL plots, treatments applied: 28 Oct. Simazine applied: 20 Feb, 1984. Fungicide applied: 17 Apr, 16 May, 19 June, 2 July. Insecticide applied: 13 June, 18 July. Harvested by hand: 14 Aug. Previous crops: W. beans 1982 and 1983.

84/R/BE/8

NOTE: The percentage of stems infected with stem nematode was assessed in mid-July.

GRAIN TONNES/HECTARE

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

NEMACIDE	ALDICARB	CARBOFUR	MEAN			
SOW METH						
DRILL	3.72	4.80	4.26			
PLOUGH	3.03	3.25	3.14			
MEAN	3.37	4.02	3.70			
NEM RATE	1.25	2.50	5.0	MEAN		
SOW METH						
DRILL	3.85	4.37	4.55	4.26		
PLOUGH	3.16	3.15	3.10	3.14		
MEAN	3.51	3.76	3.82	3.70		
NEM RATE	1.25	2.50	5.0	MEAN		
NEMACIDE						
ALDICARB	3.25	3.35	3.51	3.37		
CARBOFUR	3.76	4.17	4.13	4.02		
MEAN	3.51	3.76	3.82	3.70		
NEMACIDE	ALDICARB		CARBOFUR			
NEM RATE	1.25	2.50	5.0	1.25	2.50	5.0
SOW METH						
DRILL	3.29	3.55	4.31	4.42	5.18	4.79
PLOUGH	3.21	3.15	2.72	3.11	3.15	3.48
EXTRA	DRILL 0	PLOUGH 0	MEAN			
	3.74	2.99	3.37			
GRAND MEAN	3.61					

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

TABLE	EXTRA	SOW METH	NEMACIDE	NEM RATE
SED	0.369	0.213	0.213	0.261
TABLE	SOW METH NEMACIDE	SOW METH NEM RATE	NEMACIDE NEM RATE	SOW METH NEMACIDE NEM RATE
SED	0.302	0.369	0.369	0.522

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

STRATUM	DF	SE	CV%
BLOCK.WP	32	0.640	17.7
GRAIN MEAN DM%	83.7	PLOT AREA HARVESTED	0.00042