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# Yields of the Field Experiments 1985

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## 85/R/CS/298 Nematicide Sprays and Stem Nematode - Lucerne

### Rothamsted Research

Rothamsted Research (1986) *85/R/CS/298 Nematicide Sprays and Stem Nematode - Lucerne* ; Yields Of The Field Experiments 1985, pp 152 - 156 - DOI: <https://doi.org/10.23637/ERADOC-1-19>

85/R/CS/298

NEMATICIDE SPRAYS AND STEM NEMATODE

Object: To study the effects of applying a range of chemicals to stubbles after each cut on the incidence of stem nematode (*Ditylenchus dipsaci*) in lucerne given carbofuran to the seed furrow - Long Hoos IV I.

Sponsor: A.G. Whitehead.

The third year, lucerne.

For previous years see 83-84/R/CS/298.

Design: 2 randomised blocks of 16 plots.

Whole plot dimensions: 1.2 x 3.7.

Treatments:

TREATMNT Varieties and chemicals (all applied at 1.5 kg):

EV O	Euver, untreated
EV C	Euver, carbofuran to seed furrow
ER O	Europe, untreated (duplicated)
ER C	Europe, carbofuran to seed furrow
	To variety Europe, all given carbofuran to seed furrow
ER C AW	Aldicarb watered on
ER C CE	Carbendazim, applied by electrostatic sprayer
ER C CH	Carbendazim, applied by hydraulic sprayer
ER C DE	Dimethoate, applied by electrostatic sprayer
ER C DH	Dimethoate, applied by hydraulic sprayer
ER C PE	Pirimiphos methyl, applied by electrostatic sprayer
ER C PH	Pirimiphos methyl, applied by hydraulic sprayer
ER C TCE	Thiodicarb, applied by electrostatic sprayer
ER C TCH	Thiodicarb, applied by hydraulic sprayer
ER C TBE	Thiabendazole, applied by electrostatic sprayer
ER C TBH	Thiabendazole, applied by hydraulic sprayer

- NOTES: (1) Carbofuran was applied to seed furrow, in 1983 only. The other chemicals were applied after each cut in 1983; after each cut except the last in 1984; before the first cut and after each cut except the last in 1985. Aldicarb was applied in 7500 l by weeder bar. Hydraulic sprays were applied in 310 l and electrostatic sprays in 5.7 l.
- (2) The carbendazim application by electrostatic sprayer due after the first cut 1985 was omitted because of a formulation problem.
- (3) Pirimiphos methyl was applied before and after the first cut 1985 but the material was not available for subsequent treatments.

Basal applications: Manures: (0:24:24) at 730 kg. Weedkiller: Propyzamide at 0.70 kg in 220 l.

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Cultivations, etc.: - PK applied: 26 Nov, 1984. Weedkiller applied: 22 Jan, 1985. Treatments applied: 1 May. Cut: 17 June. Aldicarb treatment applied: 2 July. Remaining treatments applied: 12 July. Cut: 20 Aug. Aldicarb treatment applied: 2 Sept. Remaining treatments applied: 6 Sept. Cut: 4 Nov.

1ST CUT (17/6/85) DRY MATTER TONNES/HECTARE

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

TREATMNT	
EV O	4.63
EV C	5.34
ER O	3.67
ER C	3.58
ER C AW	4.93
ER C CE	4.89
ER C CH	5.67
ER C DE	3.95
ER C DH	6.08
ER C PE	3.49
ER C PH	4.32
ER C TCE	6.50
ER C TCH	5.59
ER C TBE	5.65
ER C TBH	5.73
MEAN	4.86

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

TABLE	TREATMNT
-----	-----
SED	1.207 MIN REP
	1.045 MAX-MIN

TREATMENT  
 MAX-MIN ER O V ANY OF REMAINDER  
 MIN REP ANY OF THE REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	1.207	24.9
1ST CUT MEAN DM%		19.6	

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2ND CUT (20/8/85) DRY MATTER TONNES/HECTARE

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

TREATMNT	
EV O	4.57
EV C	4.35
ER O	3.38
ER C	3.00
ER C AW	4.19
ER C CE	4.02
ER C CH	4.43
ER C DE	3.48
ER C DH	5.51
ER C PE	2.73
ER C PH	3.25
ER C TCE	5.20
ER C TCH	4.98
ER C TBE	5.41
ER C TBH	4.22
MEAN	4.13

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

TABLE	TREATMNT	
-----	-----	
SED	0.806	MIN REP
	0.698	MAX-MIN

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.806	19.5
2ND CUT MEAN DM%	22.9		

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3RD CUT (4/11/85) DRY MATTER TONNES/HECTARE

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

TREATMNT	
EV O	2.57
EV C	2.72
ER O	1.61
ER C	1.64
ER C AW	1.57
ER C CE	1.93
ER C CH	1.57
ER C DE	2.00
ER C DH	2.22
ER C PE	1.43
ER C PH	1.71
ER C TCE	2.14
ER C TCH	2.00
ER C TBE	2.57
ER C TBH	1.57
MEAN	1.93

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

TABLE	TREATMNT
-----	-----
SED	0.444 MIN REP
	0.384 MAX-MIN

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	0.444	23.0
3RD CUT MEAN DM%	28.1		

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TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

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

TREATMNT	
EV O	11.77
EV C	12.41
ER O	8.66
ER C	8.23
ER C AW	10.70
ER C CE	10.85
ER C CH	11.67
ER C DE	9.43
ER C DH	13.80
ER C PE	7.65
ER C PH	9.29
ER C TCE	13.85
ER C TCH	12.57
ER C TBE	13.63
ER C TBH	11.53
MEAN	10.92

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

TABLE	TREATMNT	
-----	-----	
SED	2.008	MIN REP
	1.739	MAX-MIN

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

STRATUM	DF	SE	CV%
BLOCK.WP	16	2.008	18.4
TOTAL OF 3 CUTS MEAN DM%	23.5		
PLOT AREA HARVESTED	0.00045		