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# Yields of the Field Experiments 1982

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## 82/R/CS/279 Nematicides and Stem Nematode

### Rothamsted Research

Rothamsted Research (1983) *82/R/CS/279 Nematicides and Stem Nematode* ; Yields Of The Field Experiments 1982, pp 174 - 180 - DOI: <https://doi.org/10.23637/ERADOC-1-33>

82/R/CS/279

NEMATICIDES AND STEM NEMATODE

Object: To study, on sites free from or infested by stem nematode (*Ditylenchus dipsaci*), the effects of nematicides on lucerne - Long Hoos V 5 (healthy) and Long Hoos IV 2 (infested).

Sponsor: A.G. Whitehead.

The first year, lucerne.

Design: On each site: 3 randomised blocks of 14 plots.

Whole plot dimensions: 1.22 x 3.66.

Treatments (applied to HEALTHY AND INFESTED sites):

TREATMNT	Varieties, rates and methods of applying nematicides:
V 0	Vertus, untreated
V A1	Vertus, aldicarb at 1.5 kg in seed furrow
E 0	Europe, untreated
E A1	Europe, aldicarb at 1.5 kg in seed furrow (duplicated)
E A2	Europe, aldicarb at 3.0 kg in seed furrow (duplicated)
E A1 A1	Europe, aldicarb at 1.5 kg in seed furrow, repeated after each cut
E C1	Europe, carbofuran at 1.5 kg in seed furrow (duplicated)
E C2	Europe, carbofuran at 3.0 kg in seed furrow (duplicated)
E T1	Europe, thiabendazole at 1.5 kg over the rows at drilling
E T2	Europe, thiabendazole at 3.0 kg over the rows at drilling

Basal applications: Manures: (0:25:25) at 530 kg. Weedkiller: 2.4 - DB at 2.8 l in 280 l.

Seed: Both sites: Varieties sown at 11 kg.

Cultivations, etc.:-

HEALTHY site: PK applied: 26 Mar, 1982. Rotary harrowed twice, Europe sown, aldicarb and carbofuran applied to this variety: 29 Mar. Vertus sown and aldicarb applied to this variety, thiabendazole applied to Europe: 30 Mar. Weedkiller applied: 26 May. Cut: 13 July. Aldicarb applied: 16 July. Cut, aldicarb applied: 26 Aug. Previous crops: Potatoes 1980, s.wheat 1981.

INFESTED site: Ploughed: 24 Sept, 1981. PK applied: 26 Mar, 1982. Rotary harrowed, seed sown, aldicarb, carbofuran and thiabendazole applied to Europe and aldicarb to Vertus: 31 Mar. Weedkiller applied: 26 May. Cut north block: 13 July. Aldicarb applied to this block: 16 July. Cut remaining two blocks: 19 July. Aldicarb applied to these two blocks: 22 July. Cut: 25 Aug. Aldicarb applied: 26 Aug. Previous crops: Fallow 1980, lucerne 1981.

82/R/CS/279 LONG HOOS V 5 (HEALTHY SITE)  
 1ST CUT (13/7/82) DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	2.04
V A1	1.38
E 0	2.91
E A1	2.72
E A2	2.41
E A1 A1	2.68
E C1	3.55
E C2	3.25
E T1	3.11
E T2	2.84
MEAN	2.77

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

TABLE	TREATMNT
-----	-----
SED	0.202 MIN REP
	0.175 MAX-MIN
	0.143 MAX REP

TREATMNT  
 MAX REP E A1 V E A2 V E C1 OR E C2  
 MAX-MIN E A1 V E A2 V E C1 OR E C2 V ANY OF REMAINDER  
 MIN REP ANY OF REMAINDER

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.247	8.9
1ST CUT MEAN DM%	17.8		

82/R/CS/279 LONG HOOS V 5 (HEALTHY SITE)

2ND CUT (26/8/82) DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	2.75
V A1	2.20
E 0	3.15
E A1	2.90
E A2	2.89
E A1 A1	3.16
E C1	3.61
E C2	3.38
E T1	3.51
E T2	2.96
MEAN	3.09

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

TABLE	TREATMNT	
SED	0.208	MIN REP
	0.181	MAX-MIN
	0.147	MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.255	8.3
2ND CUT MEAN DM%	21.9		

82/R/CS/279 LONG HOOS V 5 (HEALTHY SITE)

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	4.79
V A1	3.58
E 0	6.05
E A1	5.62
E A2	5.30
E A1 A1	5.84
E C1	7.16
E C2	6.63
E T1	6.62
E T2	5.79
MEAN	5.87

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

TABLE	TREATMNT
-----	-----
SED	0.360 MIN REP
	0.312 MAX-MIN
	0.255 MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.441	7.5
TOTAL OF 2 CUTS MEAN DM%	19.9		
PLOT AREA HARVESTED	0.00045		

82/R/CS/279 LONG HOOS IV 2 (INFESTED SITE)

1ST CUT (13-19/7/82) DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	2.42
V A1	1.89
E 0	3.49
E A1	3.66
E A2	3.27
E A1 A1	3.73
E C1	4.12
E C2	4.03
E T1	3.12
E T2	3.66
MEAN	3.46

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

TABLE	TREATMNT
-----	-----
SED	0.224 MIN REP
	0.194 MAX-MIN
	0.159 MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.275	7.9
1ST CUT MEAN DM%	21.6		

82/R/CS/279 LONG HOOS IV 2 (INFESTED SITE)  
2ND CUT (25/8/82) DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	2.16
V A1	1.99
E 0	2.62
E A1	2.62
E A2	2.57
E A1 A1	2.70
E C1	2.92
E C2	2.80
E T1	2.53
E T2	2.61
MEAN	2.60

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

TABLE	TREATMNT
-----	-----
SED	0.117 MIN REP
	0.101 MAX-MIN
	0.083 MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.143	5.5
2ND CUT MEAN DM%	24.2		

82/R/CS/279 LONG HOOS IV 2 (INFESTED SITE)

TOTAL OF 2 CUTS DRY MATTER TONNES/HECTARE

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

TREATMNT	
V 0	4.58
V A1	3.88
E 0	6.11
E A1	6.27
E A2	5.83
E A1 A1	6.43
E C1	7.03
E C2	6.83
E T1	5.64
E T2	6.26
MEAN	6.06

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

TABLE	TREATMNT
SED	0.273 MIN REP
	0.236 MAX-MIN
	0.193 MAX REP

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

STRATUM	DF	SE	CV%
BLOCK.WP	30	0.334	5.5
TOTAL OF 2 CUTS MEAN DM%	22.9		
PLOT AREA HARVESTED	0.00045		