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82/W/CS/35 Nematicides Dosage - S. Barley

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82/W/CS/35

NEMATICIDES DOSAGE

Object: To study the effects of rates and methods of applying nematicides on *Globodera rostochiensis* and yield of potatoes; residual effects are also studied - Woburn Stackyard AII.

Sponsor: A.G. Whitehead.

The eleventh year, s. barley.

For previous years see 72/W/CS/35(t) and 73-81/W/CS/35.

Design: 2 series each of 4 randomised blocks of 18 plots.

Whole plot dimensions: 4.27 x 6.10.

Treatments:-

The experiment has two series with the following cropping:-

	1968-71	72	73	74	75	76	77	78	79	80	81	82
Series II	P	P	P*	SB	B	P*	P	P	P*	W	B	B
Series III	P	P	P	P*	SB	B	P*	P	P	P*	W	B

Series I was damaged by soil erosion and has been excluded from the experiment since 1980.

P = Potatoes, SB = Sugar beet, B = S. barley, W = W. wheat

*Treatments applied to potatoes, following crops test residual effects.

Treatments:

Series II, s. barley 1982, tests the residual effects of new sets of treatments applied for potatoes in 1979, ignoring those applied in earlier years. All combinations of:-

1. A NEM(79) Residual effects of nematicide applied autumn 1978:

NONE	None
TELONE	'Telone' at 224 kg

2. S NEM(79) Residual effects of nematicide applied spring 1979:

ALDICARB
OXAMYL

3. SNEMRATE Rates of spring nematicides (kg):

2.5
5.0
7.5
10.0

plus two untreated plots per block

RATE

NONE

82/W/CS/35

Series III, s. barley 1982, tests the residual effects of new sets of treatments applied for potatoes in 1980, ignoring those applied in earlier years. All combinations (duplicated) of:-

1. S NEM(80) Spring nematicides:

ALDICARB
OXAMYL

2. SNEMRATE Rates of spring nematicides (kg):

2.5
5.0
7.5
10.0

plus two untreated plots per block

RATE

NONE

Basal applications:

S. barley (Series II & III): Manures: (20:10:10) at 500 kg.
Weedkillers: Dicamba with mecoprop and MCPA (as 'Poly-Farmon' at 4.9 l) in 280 l.

Seed: Triumph, dressed with ethirimol, sown at 160 kg.

Cultivations, etc.:-

Ploughed: 15 Sept, 1981, 4 Feb, 1982. NPK applied, heavy spring-tine cultivated: 25 Mar. Spring-tine cultivated with crumbler attached, seed sown: 29 Mar. Weedkillers applied: 17 May. Combine harvested: 10 Aug.

SERIES II SPRING BARLEY

GRAIN TONNES/HECTARE

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

S NEM(79)	ALDICARB	OXAMYL	MEAN		
A NEM(79)					
NONE	5.87	6.15	6.01		
TELONE	5.96	5.92	5.94		
MEAN	5.92	6.04	5.98		
SNEMRATE	2.5	5.0	7.5	10.0	MEAN
A NEM(79)					
NONE	6.07	6.07	5.90	6.02	6.01
TELONE	5.65	5.81	6.16	6.14	5.94
MEAN	5.86	5.94	6.03	6.08	5.98

82/W/CS/35

SERIES II SPRING BARLEY

GRAIN TONNES/HECTARE

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

	SNEMRATE	2.5	5.0	7.5	10.0	MEAN
	S NEM(79)					
	ALDICARB	5.81	6.00	5.85	6.00	5.92
	OXAMYL	5.91	5.88	6.21	6.16	6.04
	MEAN	5.86	5.94	6.03	6.08	5.98
	SNEMRATE	2.5	5.0	7.5	10.0	
	S NEM(79)					
A NEM(79)	ALDICARB	5.79	6.20	5.65	5.86	
NONE	OXAMYL	6.36	5.93	6.14	6.18	
	ALDICARB	5.84	5.80	6.05	6.14	
TELONE	OXAMYL	5.46	5.82	6.27	6.14	

RATE NONE 5.89

GRAND MEAN 5.97

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

TABLE	A NEM(79)	S NEM(79)	SNEMRATE	A NEM(79) S NEM(79)
-----	-----	-----	-----	-----
SED	0.097	0.097	0.137	0.137
TABLE	A NEM(79) SNEMRATE	S NEM(79) SNEMRATE	A NEM(79) S NEM(79) SNEMRATE	
-----	-----	-----	-----	
SED	0.194	0.194	0.275	

SED FOR RATE NONE V ANY MEAN IN
A NEM(79).S NEM(79).SNEMRATE TABLE IS 0.238

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

STRATUM	DF	SE	CV%
BLOCK.WP	52	0.388	6.5
GRAIN MEAN DM%	87.5		
PLOT AREA HARVESTED	0.00168		

82/W/CS/35

SERIES III SPRING BARLEY

GRAIN TONNES/HECTARE

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

SNEMRATE	2.5	5.0	7.5	10.0	MEAN
S NEM(80)					
ALDICARB	5.71	5.62	6.08	5.71	5.78
OXAMYL	5.68	5.41	5.57	5.33	5.50
MEAN	5.70	5.52	5.82	5.52	5.64

RATE NONE 5.60

GRAND MEAN 5.64

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

TABLE	S NEM(80)	SNEMRATE	S NEM(80) SNEMRATE & RATE NONE
SED	0.118	0.168	0.237

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

STRATUM	DF	SE	CV%
BLOCK.WP	60	0.474	8.4

GRAIN MEAN DM% 87.9

PLOT AREA HARVESTED 0.00126