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84/R/BE/12 Control of Stem Nematode - S. Beans

Rothamsted Research

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84/R/BE/12

SPRING BEANS

CONTROL OF STEM NEMATODE

Object: To study the effects of two chemicals, applied at three rates and at two times, on the control of seed-borne infestations of stem nematode (*Ditylenchus dipsaci*) in a spring and a winter variety of field bean sown in spring - ex-Allotments.

Sponsors: A.G. Whitehead.

Design: 2 randomised blocks of 18 plots.

Whole plot dimensions: 2.3 x 4.6.

Treatments: All combinations of:-

1. VARIETY Varieties:
 BEAD Maris Bead, spring variety
 THROWS Throws M.S., winter variety
2. NEMACIDE Nematicides:
 ALDICARB Aldicarb
 CARBOFUR Carbofuran
3. NEM RATE Rates and times of applying nematicides:
 1 1 kg to seed furrow at sowing
 2 2 kg to seed furrow at sowing
 4 4 kg to seed furrow at sowing
 2+2 2 kg to seed furrow at sowing plus 2 kg on 30 May, 1984
 to foliage

plus two extra treatments:

EXTRA

- | | |
|----------|---------------------------------|
| BEAD 0 | Maris Bead given no nematicide |
| THROWS 0 | Throws M.S. given no nematicide |

Basal applications: Manures: (0:14:28) at 450 kg. Weedkiller: Simazine at 1.1 kg in 560 l. Fungicide: Benomyl at 0.56 kg in 280 l on two occasions. Insecticide: Pirimicarb on two occasions, at 0.14 kg in 340 l on the first and in 280 l on the second.

Seed: Throws MS, sown at 240 kg.
 Maris Bead, sown at 260 kg.

Cultivations, etc.: - PK applied: 5 Mar, 1984. Seed sown: 8 Mar.
Weedkiller applied: 16 Mar. Pirimicarb applied: 13 June. Fungicide applied: 19 June, 2 July. Pirimicarb applied: 18 July. Combine harvested VARIETY BEAD: 13 Aug. Combine harvested VARIETY THROWS: 28 Aug. Previous crops: S. barley 1982, fallow 1983.

84/R/BE/12

GRAIN TONNES/HECTARE

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

NEMACIDE VARIETY	ALDICARB	CARBOFUR	MEAN		
BEAD	3.88	3.75	3.82		
THROWS	3.79	3.90	3.84		
MEAN	3.83	3.83	3.83		
NEM RATE VARIETY	1	2	4	2+2	MEAN
BEAD	3.71	3.46	3.78	4.32	3.82
THROWS	3.73	3.84	3.68	4.13	3.84
MEAN	3.72	3.65	3.73	4.22	3.83
NEM RATE NEMACIDE	1	2	4	2+2	MEAN
ALDICARB	3.66	3.59	3.79	4.28	3.83
CARBOFUR	3.77	3.71	3.67	4.16	3.83
MEAN	3.72	3.65	3.73	4.22	3.83
VARIETY	NEM RATE NEMACIDE	1	2	4	2+2
BEAD	ALDICARB	3.90	3.36	3.86	4.40
	CARBOFUR	3.51	3.56	3.70	4.24
THROWS	ALDICARB	3.42	3.82	3.73	4.17
	CARBOFUR	4.03	3.86	3.63	4.08
EXTRA	BEAD 0	THROWS 0	MEAN		
	3.45	3.63	3.54		
GRAND MEAN	3.80				

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

TABLE	EXTRA	VARIETY	NEMACIDE	NEM RATE
SED	0.322	0.117	0.117	0.166
TABLE	VARIETY NEMACIDE	VARIETY NEM RATE	NEMACIDE NEM RATE	VARIETY NEMACIDE NEM RATE & EXTRA
SED	0.166	0.235	0.235	0.332

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

STRATUM	DF	SE	CV%
BLOCK.WP	17	0.332	8.7

GRAIN MEAN DM% 80.3 PLOT AREA HARVESTED 0.00070