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Yields of the Field Experiments 1977



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Rothamsted Research

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77/R/CS/176

STEM-EELWORM CONTROL

Object: To study the effects of dates of sowing and of rates and times of applying aldicarb on control of stem-eelworm (Ditylenchus dipsaci) and on the yield of winter onions - Great Field II.

Sponsor: A.G. Whitehead.

The third year, winter onions.

For previous years see 75/R/ON/1 and 76/R/CS/176.

Design: 3 randomised blocks of 10 plots with SOW DATE on blocks.

Whole plot dimensions: 1.22 x 5.18.

Treatments: All combinations of:-

Blocks

1.	SOW	DATE	Dates	of	sowing	(uniform	in	two	previous	years):

2 AUG 2 August, 1976 18 AUG 18 August 2 SEPT 2 September

Plots

2. ALDICARB Aldicarb (kg) (cumulative to 1975 and 1976 except as stated):

0	None (duplicated)
1 + 1	1 in seedbed, 1 in spring
2	2 in seedbed, none in spring
2 + 2	2 in seedbed, 2 in spring
4	4 in seedbed, none in spring
4 + 4	4 in seedbed, 4 in spring
8	8 in seedbed, none in spring
(4S) O	4 in seedbed in 1975 to spring-sown onions, none to winter
	onions 1976 and 1977 (duplicated)

NOTE: Spring aldicarb applied on 13 Apr, 1977.

Basal applications: Manures: (13:13:20) at 1040 kg. 'Nitro-Chalk' at 450 kg in winter. 'Nitro-Chalk' at 250 kg in spring. Irrigation: 36 mm to first sowing, 18 mm to second sowing.

Seed: Imai Early Yellow, sown at 6.7 kg.

Cultivations, etc.:- Deep-tine cultivated, rotary cultivated, NPK applied, rotary cultivated, rolled and hand raked for first sowing: 2 Aug, 1976. These plots irrigated with 9 mm on each of four occasions: 3 Aug, 10 Aug, 16 Aug, 24 Aug. Deep-tine cultivated, rotary cultivated, NPK applied, rotary cultivated, rolled and hand raked for second sowing: 18 Aug. These plots irrigated with 9 mm on each of two occasions: 19 Aug, 24 Aug. Deep-tine cultivated, rotary cultivated, NPK applied, rotary cultivated, rolled and hand raked for third sowing: 2 Sept. Winter N applied: 4 Jan, 1977. Spring N applied: 8 Mar. Lifted: 21 July.

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NOTES: (1) Plots were hand weeded.

(2) Soil samples were taken for counts of Ditylenchus dipsaci.

(3) Because of the wide discrepancies in yield, means for plots receiving and not receiving aldicarb in spring are presented separately.

SALEABLE ONIONS TONNES/HECTARE

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

ALDICARB APPLIED IN SPRING

SOW DATE ALDICARB	2 AUG	18 AUG	2 SEPT	MEAN
1+1 2+2 4+4	51.0 41.8 32.6	42.4 44.3 43.7	31.3 33.9 25.6	41.6 40.0 34.0
MEAN	41.8	43.5	30.3	38.5
ALDICARB NOT	APPLIED IN	SPRING		
SOW DATE ALDICARB	2 AUG	18 AUG	2 SEPT	MEAN
0	18.0	13.8	6.6	12.8
2	4.4	2.8	0.0	2.4
4	10.8	4.7	16.1	10.6
8	9.2	12.0	11.1	10.8
(48)0	8.1	0.2	0.8	3.0

6.8

6.0

7.9

PLOT AREA HARVESTED 0.00032

10.9

MEAN