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Yields of the Field Experiments 1973

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73/R/CS/102 - Nematicides & *Ditylenchus* - Onions

Rothamsted Research

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73/R/CS/102

NEMATOCIDES AND DITYLENCHUS

Object: To study direct and residual effects of nematocides on yields of onions and incidence of *Ditylenchus dipsaci* (see also 73/R/CS/127) - Great Field II.

Sponsor: A.G. Whitehead.

The second year, onions.

For previous year see 72/R/CS/102(t).

Design: 3 blocks of 10 plots split systematically into half and quarter plots.

Whole plot dimensions: 1.52 x 6.10. Area harvested: 0.00012.

Treatments:

Whole plots: 1. Nematicide and rate (kg a.i.) 1972		NEM1972
None		None
Aldicarb	1.57	Aldcarb1
Aldicarb	3.14	Aldcarb2
Aldicarb	6.28	Aldcarb4
CGA V10576	1.12	CGA1
CGA V10576	2.24	CGA2
CGA V10576	4.48	CGA4
DuPont V1410	1.46	Dupont1
DuPont V1410	2.92	Dupont2
DuPont V1410	5.84	Dupont4

Strips of Half plots: 2. Sowing method 1973:	SOWING
On the flat	Flat
On ridges	Ridge

Strips of Quarter plots: 3. Nematicide 1973:	NEM1973
None	None
Aldicarb at 5 kg	Aldicarb

Basal applications: Manures: (13:13:20) at 1900 kg. Weedkillers: Propachlor ('Ramrod' at 6.7 kg), pyrazon with chlorbufam ('Alice' at 4.5 kg in 450 l).

Seed: Robusta, fumigated with methyl bromide.

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Cultivations, etc.:- Ploughed: 30 Nov, 1972. NPK applied: 26 Mar, 1973. Power harrowed: 27 Mar. Seed sown, aldicarb and propachlor applied: 28 Mar. Pyrazon with chlorbufam applied: 24 May. Hand weeded: 30 May, 5, 11 June and 4 July. Lifted: 3 Sept.

- NOTES:
1. Onions were allowed to dry in the field and stored during the winter for observations of incidence of rots.
 2. The yields of the NEM1973 None plots were poor and very variable. Separate analyses were made for NEM1973 None and NEM1973 Aldicarb plots and standard errors are presented for the latter only.
 3. Five plots SOWING - Flat, NEM1973 - None, NEM1972 - CGA1, Aldicarb2, CGA2, Dupont1, CGA4 received the incorrect treatment. Estimated values were used in the analysis.

Standard errors per plot. Sound onions: tonnes/hectare:

NEM1973 Aldicarb only

Whole plot: 4.62 or 8.9% (18 d.f.)

Half plot: 4.89 or 9.4% (20 d.f.)

73/R/CS/102

TABLES OF MEANS

SOUND ONIONS: TONNES/HECTARE

NEM1973 SOWING	None			Aldicarb		
	Flat	Ridge	Mean	Flat	Ridge	Mean
NEM1972						
None	15.0	17.3	16.1	49.0	49.0	49.0
Aldicarb1	1.0	3.3	2.1	56.0	54.7	55.3
Aldicarb2	34.4	31.6	33.0	58.3	47.5	52.9
Aldicarb4	2.2	14.2	8.2	49.7	52.2	51.0
CGA1	2.2	0.7	1.4	58.3	53.8	56.1
CGA2	9.2	21.1	15.1	55.9	57.5	56.7
CGA4	27.9	9.8	18.8	53.8	46.9	50.3
Dupont1	26.9	26.7	26.8	57.9	47.1	52.5
Dupont2	10.2	20.3	15.2	54.3	46.0	50.1
Dupont4	13.4	20.2	16.8	52.7	41.5	47.1
Mean	14.2	16.5	15.4	54.6	49.6	52.1

Grand Mean 34.0

STANDARD ERRORS OF DIFFERENCES

NEM1973 Aldicarb only

NEM1972	SOWING	NEM1972
		SOWING

3.77 1.26 4.71

Except when comparing means with same level of

NEM1972 3.99