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Yields of the Field Experiments 1972

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72/W/CS/33 Rates of Nematicides Dosage - Potatoes

Rothamsted Research

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72/W/CS/33

RATES OF NEMATICIDES DOSAGE

Object: To study the residual effects on yield of potatoes of several nematicides applied at a range of rates (to potatoes 1969, sugar beet 1970, none to barley 1971) - Woburn Butt Close.

Sponsor: A.G. Whitehead.

The fourth year, potatoes.

For previous years see 69/W/CS/33(t), 70/W/CS/33(t) and 71/W/CS/33.

Whole plot dimensions: 2.84 x 9.14. Area harvested: 0.00065.

Basal applications: 1500 kg (13:13:20). Weedkillers: Paraquat at 0.56 kg ion in 280 l. Linuron at 1.1 kg with paraquat at 0.42 kg ion 370 l. Fungicide: Mancozeb at 1.3 kg in 430 l. Fungicide with insecticide: Mancozeb at 1.3 kg with demeton-s-methyl at 0.24 kg in 430 l.

Variety: Pentland Crown.

Cultivations, etc.: Paraquat applied: 9 Sept, 1971. Ploughed twice: 21 Sept, 17 Feb, 1972. NPK applied: 31 Mar. Rotary cultivated, potatoes planted: 5 Apr. Weedkiller applied: 5 May. Fungicide applied: 5 July. Fungicide with insecticide applied: 26 July. Haulm mechanically destroyed: 6 Sept. Lifted: 20 - 21 Sept.

NOTE: Soil samples were taken after harvest for cyst and egg counts of *Heterodera rostochiensis*.

Standard errors per plot. Total tubers, tonnes/hectare.
Whole plot: 4.59 or 15.2% (26 d.f.)
Sub plot: 4.03 or 13.3% (29 d.f.)

72/w/cs/33

TABLES OF MEANS

TOTAL TUBERS: TONNES/HECTARE

APPLICATION	NEMATICIDE								Mean
	0	M	D ₁	D ₂	D ₃	D ₄	T ₁	T ₂	
1969	33.6	31.4	19.1	21.7	30.0	27.0	17.4	32.3	27.8
1969-70	42.5	33.6	27.4	34.5	32.4	33.9	32.8	28.5	37.1
Mean	27.8	38.1	32.5	23.2	28.1	31.2	30.5	25.1	30.4

* Grand mean

STANDARD ERRORS OF DIFFERENCES

NEMATICIDE	APPLICATION	NEMATICIDE	APPLICATION
		3.75	0.91
Unless same level of NEMATICIDE		4.41	3.29

72/w/cs/33

PERCENTAGE WARE: 3.81 CM (1.5 INCH) RIDDLE

NEMATICIDE

APPLICATION	O	M	D ₁	D ₂	D ₃	D ₄	T ₁	T ₂	T ₃	T ₄	Z ₁	Z ₂	Z ₃	Z ₄	Mean
1969	94.5	94.0	87.9	91.1	92.8	91.2	87.7	93.7	93.3	90.7	93.2	92.1	92.0	91.9	
1969-70	94.0	93.4	88.2	93.5	91.0	91.6	92.8	93.5	94.0	92.1	91.8	93.5	93.0	92.5	
Mean	91.7	94.3	93.7	88.0	92.3	91.9	91.4	90.3	93.6	93.6	91.4	92.5	92.8	92.5	92.1*

* Grand mean