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Yields of the Field Experiments 1972

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

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72/W/CS/33

RATES OF NEMATICIDES DOSAGE

Object: To study the residual effects on yield of potatoes of several nematocides 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

NEMATOCIDE

| APPLICATION | O | M | D1 | D2 | D3 | D4 | T1 | T2 | T3 | T4 | Z1 | Z2 | Z3 | Z4 | Mean | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|
| 1969 | | | 33.6 | 31.4 | 19.1 | 21.7 | 30.0 | 27.0 | 17.4 | 32.3 | 27.8 | 22.4 | 35.7 | 31.7 | 32.8 | 27.9 |
| 1969-70 | | | 42.5 | 33.6 | 27.4 | 34.5 | 32.4 | 33.9 | 32.8 | 28.5 | 37.1 | 23.7 | 33.0 | 33.0 | 36.7 | 33.0 |
| Mean | 27.8 | 38.1 | 32.5 | 23.2 | 28.1 | 31.2 | 30.5 | 25.1 | 30.4 | 32.4 | 23.1 | 34.4 | 32.4 | 34.8 | 30.3* | |

* Grand mean

STANDARD ERRORS OF DIFFERENCES

| NEMATOCIDE | APPLICATION | NEMATOCIDE | APPLICATION |
|---------------------------------|-------------|------------|-------------|
| | | 3.75 | 0.91 |
| Unless same level of NEMATOCIDE | | | 4.41 |
| | | | 3.29 |

72/W/CS/33

PERCENTAGE WARE: 3.81 CM (1.5 INCH) RIDDLE

NEMATOCIDE

| APPLICATION | O | M | D1 | D2 | D3 | D4 | T1 | T2 | T3 | T4 | Z1 | Z2 | Z3 | Z4 | 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