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71/W/CS/34 Nematicides in Crop Sequence - Potatoes

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71/W/CS/34

NEMATICIDES IN CROP SEQUENCE

Object: To study the effects of three nematicides on *Heterodera rostochiensis* and yield of potatoes grown continuously for three years - Woburn Great Hill II and III.

The third year of continuous potatoes - first year of treatments.

Design: 4 series of 3 blocks of 10 plots.

NOTE: Only Series I received treatments, the other three series continued in untreated susceptible potatoes.

Whole plot dimensions: 4.27 x 9.14. Area harvested: 0.00130.

Treatments: None (0), together with all combinations of:-
(1) Nematicides: Aldicarb (A), Du Pont 1410 (D), Nemacur P (N).
(2) Levels: 2.8, 6.0, 11.0 kg a.i.

Basal applications: 1883 kg (13:13:20). Weedkiller: Linuron at 1.12 kg in 371 l. Fungicide with insecticide: Mancozeb at 1.34 kg with demeton-s-methyl at 246 ml in 416 l.

Cultivations, etc.: Deep-tine cultivated: 24 Oct, 1970. NPK applied: 2 Apr, 1971. Treatments applied, rotary cultivated: 5 Apr. Potatoes planted: 6 Apr. Weedkiller applied: 5 - 6 May. Rotary ridged: 1 June. Fungicide with insecticide applied: 28 - 29 June. Haulm mechanically destroyed: 17 Sept. Sprayed with undiluted BOV at 225 l: 20 Sept. Lifted: 5 Oct. Variety: Pentland Crown.

NOTE: Soil samples were taken before treatment applications and after harvest for cyst, egg and larvae counts of *Heterodera rostochiensis*.

Standard error per plot.

Total tubers, tonnes/hectare: 3.63 or 9.9% (6 d.f.)

7L/W/CS/34

SUMMARY OF RESULTS

A.I: KG/HA

	2.8	6.0	11.0	Mean
TOTAL TUBERS: TONNES/HECTARE				
	(±2.10)*			(±1.21)
A	39.9	36.9	46.4	41.1
D	35.6	38.3	43.2	39.0
N	27.9	29.8	31.3	29.7
Mean (±1.21)	34.4	35.0	40.3	36.6

□ 15.1 (±2.10)

General mean: 34.4

¾ WARE: 3.81 CM (1.5 INCH) RIDDLE

A	92.3	91.6	93.6	92.5
D	90.4	91.1	91.4	90.9
N	87.1	87.6	88.6	87.8
Mean	89.9	90.1	91.2	90.4

□ 77.5

General mean: 89.1