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## Numerical Results of the Field Experiments 1970

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### 70/W/CS/33 Rates of Nematicides Dosage - Sugar Beet After Potatoes

#### Rothamsted Research

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RATES OF NEMATICIDES DOSAGE

(70/W/CS/33)

The effect of different rates of nematocides on a sequence of crops - Woburn Butt Close 1970. Second year, sugar beet after potatoes.

Design: 3 blocks of 14 plots, split for residual and cumulative nematocides.

Area of each sub plot: 0.0032. Area harvested: 0.0014.

Treatments:

Nematocides were repeated in 1970, applied cumulatively on half-plots of whole plots treated in 1969 (C). The half plots untreated in 1970 tested residues of nematocides applied in 1969 (R). Rates of nematocides:-

1969		1970		
None		None		(O)
780 lb methyl bromide to whole area in spring		780 lb methyl bromide to whole area in spring		(M)
80 lb DD	applied at	100 lb DD	applied to	(D1)
160 lb DD	base of ridges	200 lb DD	whole area	(D2)
320 lb DD	in spring	400 lb DD	in autumn	(D3)
400 lb DD injected and rotary cultivated in autumn		400 lb DD		(D4)
60 lb 'Telone'	applied at	75 lb 'Telone'	applied to	(T1)
120 lb 'Telone'	base of ridges	150 lb 'Telone'	whole area	(T2)
240 lb 'Telone'	in spring	300 lb 'Telone'	in autumn	(T3)
220 lb 'Telone'	applied in autumn	300 lb 'Telone'		(T4)
100 lb dazomet	applied in	100 lb dazomet	applied to	(Z1)
200 lb dazomet	rows in	200 lb dazomet	whole area	(Z2)
300 lb dazomet	spring	300 lb dazomet	in autumn	(Z3)
400 lb dazomet	broadcast in autumn	400 lb dazomet		(Z4)

Basal applications: 960 lb (13:13:20). Weedkiller: Phenmedipham ('Betanal' at 5 pts in 20 gals). Insecticide: Demeton-s-methyl at 3.5 oz in 25 gals.

Cultivations: Ploughed: 11 Oct, 1969. DD and 'Telone' applied, rotary cultivated in: 16 Oct. Dazomet applied, rotary cultivated in twice: 17 Oct. Methyl bromide applied under gas tight sheet: 19 Mar, 1970. Gas tight sheet removed: 3 Apr. Basal NPK applied: 14 Apr. Power

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harrowed, seed drilled at 5 lb: 20 Apr. Weedkiller applied: 15 May.  
Singled: 26 May. Insecticide applied: 22 June. Lifted: 17 - 18 Nov.  
Variety: Klein E.

- NOTES: (1) For previous year's results see 'Results' 69/W/CS/33.  
(2) Soil samples were taken before applying treatments, at planting and after harvest for cyst counts.

Standard errors per plot.

Roots (washed), tons: Whole plot: 1.282 or 5.8% (26 d.f.)  
Sub plot: 1.692 or 7.6% (28 d.f.)  
Total sugar, cwt: Whole plot: 5.46 or 7.0% (26 d.f.)  
Sub plot: 6.68 or 8.6% (28 d.f.)

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SUMMARY OF RESULTS

SUGAR BEET

	ROOTS (WASHED): TONS			SUGAR %			TOTAL SUGAR: CWT		
	R	C	Mean	R	C	Mean	R	C	Mean
	(1) and (2)		(±0.740)				(3) and (4)		(±3.15)
O			21.86			17.0			74.5
M	23.72	22.74	23.23	17.3	17.2	17.2	81.9	78.2	80.1
D1	22.48	21.76	22.12	17.5	17.6	17.5	78.7	76.6	77.6
D2	19.65	22.02	20.84	17.1	17.0	17.1	67.4	75.0	71.2
D3	21.56	21.30	21.43	17.6	17.1	17.3	75.8	73.1	74.4
D4	23.87	22.33	23.10	17.7	17.2	17.5	84.5	77.0	80.8
T1	21.50	21.56	21.53	17.3	17.3	17.3	74.5	74.5	74.5
T2	20.42	21.76	21.09	17.7	17.2	17.5	72.3	75.2	73.7
T3	21.45	21.45	21.45	17.6	17.4	17.5	75.7	74.7	75.2
T4	23.36	22.58	22.97	17.5	17.2	17.3	81.7	77.7	79.7
Z1	21.04	21.76	21.40	17.6	17.3	17.5	74.2	75.5	74.8
Z2	23.00	24.69	23.85	17.5	17.3	17.4	80.3	85.3	82.8
Z3	23.36	24.28	23.82	17.8	17.7	17.8	83.4	85.8	84.6
Z4	23.00	23.20	23.10	17.6	17.2	17.4	81.2	79.7	80.5
Mean	22.18	22.42	22.27*	17.5	17.3	17.4*	77.8	77.6	77.5*
	(±0.271)						(±1.07)		

(1) (±1.013) (3) (±4.17) For use in vertical and diagonal comparisons only  
 (2) (±0.977) (4) (±3.86) For use in horizontal and interaction comparisons only

\* General mean