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Numerical Results of the Field Experiments 1968

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68/C/33 Nematicides (Formerly Ploughsole D-d) - Sugar Beet

Rothamsted Research

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68/C/33.1

NEMATICIDES (FORMERLY PLOUGHSOLE D-D)

(WCM)

The effect of nematicides on Trichodorus and Longidorus in sugar beet - Woburn Butt Furlong, 2nd year.

Design: 2 blocks of 3 plots split into 16.

Area of each sub plot: 0.0045. Area harvested: 0.0034.

Treatments: All combinations of:-

Whole plots:	(1) Nitrogen: None (N0), 1.0 (N1), 2.0 cwt N (N2) as 'Nitro-Chalk'.
Quarter plots:	(2) Residues of D-D 1967: None (D0), 65 (D1), 140 (D2), 250 lb D-D (Dichloropropane-dichloropropene) (D3).
Strips of three quarter plots (at right angles to quarter plots of factor 2):	(3) Fumigants: None (0), 82 lb Telone (dichloropropene) (D) injected in row position before sowing at 6 inch depth. 22.2 lb of 5% granules Lannate (L), 10.6 lb of 10% granules Temik (T). Granules placed in row positions after sowing.

Basal applications: 45 cwt magnesian limestone, 340 lb (0:14:28), 5 cwt salt. Insecticide: Demeton-s-methyl at 3.5 oz in 37 gals.

Cultivations, etc.: Magnesian limestone applied: 7 Nov, 1967. Salt applied, ploughed: 9 Nov. PK applied: 22 Mar, 1968. 'Nitro-Chalk' applied: 25 Mar. Telone applied, seed drilled at 8 lb: 26 Mar. Lannate and Temik applied: 29 Mar. Singled: 20-31 May. Insecticide applied: 17 June. Lifted: 12 Dec. Variety: Klein E.

NOTES: (1) Samples were taken monthly from May to October for nematode counts.
(2) For previous year's results see 'Results' 67/C/40.

Standard errors per plot (pooled):

Roots (washed):	2.087 or 13.2%	(47 d.f.)
Total sugar:	6.55 or 13.4%	(47 d.f.)
Tops:	2.499 or 18.8%	(47 d.f.)

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SUMMARY OF RESULTS

	O	D	L	T	Mean
	ROOTS (WASHED)				
	(±0.738)				(±0.369)
NO	7.57	6.38	7.14	11.10	8.05
N1	18.34	15.43	16.35	21.68	17.95
N2	21.74	20.19	20.17	23.37	21.37
Mean (±0.426)	15.88	14.00	14.56	18.72	15.79

	D0	D1	D2	D3
	(±0.738)			
NO	5.34	8.43	8.72	9.70
N1	16.40	18.93	18.57	17.89
N2	20.44	20.38	22.49	22.17
	(±0.852)			
O	13.31	16.38	16.70	17.14
D	12.69	13.91	14.77	14.63
L	12.68	14.41	15.75	15.39
T	17.57	18.96	19.15	19.19
Mean (±0.426)	14.06	15.92	16.59	16.59

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	O	D	L	T	Mean
			SUGAR %		
NO	15.7	15.5	15.5	15.8	15.6
N1	15.7	15.8	15.5	15.7	15.7
N2	15.2	15.3	15.2	15.3	15.3
Mean	15.5	15.5	15.4	15.6	15.5

	DO	D1	D2	D3
NO	15.5	15.7	15.6	15.7
N1	15.8	15.6	15.7	15.6
N2	15.3	15.3	15.2	15.2
O	15.4	15.5	15.6	15.6
D	15.5	15.5	15.5	15.5
L	15.4	15.5	15.3	15.3
T	15.7	15.6	15.6	15.6
	15.5	15.5	15.5	15.5

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	O	D	L	T	Mean
		TOTAL SUGAR			
		(±2.31)			(±1.16)
NO	23.8	19.8	22.2	35.1	25.2
N1	57.8	48.6	50.6	68.2	56.3
N2	66.0	61.7	61.2	71.5	65.1
Mean (±1.34)	49.2	43.4	44.7	58.3	48.9

	D0	D1	D2	D3
		(±2.31)		
NO	16.7	26.5	27.3	30.5
N1	51.8	59.1	58.5	55.9
N2	62.3	62.2	68.3	67.6
		(±2.67)		
O	41.0	50.7	52.0	53.1
D	39.5	42.9	45.9	45.3
L	39.1	44.4	48.1	47.1
T	54.9	59.0	59.4	59.7
Mean (±1.34)	43.6	49.3	51.4	51.3

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	O	D	L	T	Mean
		TOPS			
		(±0.884)			(±0.442)
NO	4.83	4.89	5.46	7.67	5.71
N1	13.33	10.88	13.03	17.69	13.73
N2	20.60	19.31	18.75	22.65	20.33
Mean (±0.510)	12.92	11.70	12.41	16.01	13.26

	DO	D1	D2	D3
		(±0.884)		
NO	3.84	5.72	6.12	7.18
N1	11.77	15.41	13.56	14.19
N2	18.85	19.48	22.29	20.70
		(±1.020)		
O	10.41	13.98	13.27	14.02
D	10.54	11.73	12.66	11.86
L	10.89	12.13	13.58	13.05
T	14.11	16.32	16.45	17.15
Mean (±0.510)	11.49	13.54	13.99	14.02

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