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82/R/SW/1 Electrostatic Spray Study - Swedes

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82/R/SW/1

SWEDES

ELECTROSTATIC SPRAY STUDY

Object: To compare the effects of electrostatic and conventional sprayers on disease control and on yield of swedes - Little Knott I.

Sponsors: A.J. Arnold, G.R. Cayley, P. Etheridge, D.C. Griffiths, B. Pye, F.T. Phillips, G.C. Scott.

Design: 4 randomised blocks of 9 plots.

Whole plot dimensions: 3.05 x 13.7.

Treatments: All combinations of:-

- | | |
|-------------|----------------------------------|
| 1. SPRAYER | Spraying machine: |
| CNVNTIAL | Conventional |
| ELECTROS | Electrostatic |
| 2. FUNGCIDE | Fungicides: |
| TRIADIME | Triadimefon |
| NUARIMOL | Nuarimol |
| 3. FUNGRATE | Rates of applying fungicides: |
| 1 | 62 g triadimefon, 40 g nuarimol |
| 2 | 125 g triadimefon, 80 g nuarimol |

plus one extra treatment not sprayed

EXTRA

NONE None (duplicated)

NOTE: The fungicides were applied in 6.0 l water by electrostatic sprayer and 320 l by conventional sprayer, on 4 Aug, 1982 and again on 8 Sept.

Basal applications: Manures: 'Nitro-Chalk' at 380 kg. (0:20:20) at 630 kg. Weedkiller: Trifluralin at 1.1 kg in 250 l.

Seed: Doon Major, sown at 2.0 kg.

Cultivations, etc.: Ploughed: 22 Jan, 1982. Spring-tine cultivated: 5 Apr. N applied, PK applied: 26 Apr. Weedkiller applied, rotary harrowed: 5 May. Seed sown: 10 May. Plants singled: 14 June. Harvested: 22 Nov. Previous crops: Peas 1980, s. barley 1981.

NOTES: (1) Leaves were assessed for mildew infection at 6 and 15 days after the first spray application and the 4th leaf was assessed 15 days after the second application.
(2) The yields presented have been adjusted for an edge effect.

82/R/SW/1

TOTAL TUBERS TONNES/HECTARE

***** TABLES OF MEANS *****

FUNGICIDE	TRIADIME	NUARIMOL	MEAN
SPRAYER			
CNVNTIAL	51.4	50.5	50.9
ELECTROS	45.7	48.7	47.2

MEAN	48.5	49.6	49.1
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FUNGRATE	1	2	MEAN
SPRAYER			
CNVNTIAL	53.8	48.1	50.9
ELECTROS	47.1	47.3	47.2

MEAN	50.5	47.7	49.1
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FUNGRATE	1	2	MEAN
FUNGICIDE			
TRIADIME	49.0	48.0	48.5
NUARIMOL	51.9	47.4	49.6

MEAN	50.5	47.7	49.1
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FUNGICIDE	TRIADIME	NUARIMOL	
FUNGRATE	1	2	
SPRAYER			
CNVNTIAL	53.1	49.7	54.6
ELECTROS	44.9	46.4	49.2

EXTRA NONE 39.8

GRAND MEAN 47.2

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	SPRAYER	FUNGICIDE	FUNGRATE	SPRAYER FUNGICIDE
SED	1.61	1.61	1.61	2.28

TABLE	SPRAYER FUNGRATE	FUNGICIDE FUNGRATE	SPRAYER FUNGICIDE FUNGRATE
SED	2.30	2.28	3.23

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	27	4.49	9.5
PLOT AREA HARVESTED	0.00084		