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84/R/RA/7 Methods of Applying Growth Regulator - W. Oilseed Rape

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84/R/RA/7

WINTER OILSEED RAPE

METHODS OF APPLYING GROWTH REGULATOR

Object: To compare electrostatic and conventional spray application of a growth regulator and to study effects on plant growth, diseases and yield of w. oilseed rape - Whittlocks.

Sponsors: C.J. Rawlinson, G.R. Cayley.

Design: 4 randomised blocks of 5 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

- | | |
|-----------|--|
| 1. METHOD | Methods of applying the growth regulator, triapenthenol: |
| CNVNTIAL | Conventional hydraulic sprayer in 200 l on 19 Mar, 1984. |
| ELECTROS | Electrostatic sprayer in 9.3 l on 19 Mar. |
| 2. RATE | Rates of triapenthenol (kg): |
| 0.35 | |
| 0.70 | |

plus one extra treatment:

EXTRA

NONE

Basal applications: Manures: 'Nitro-Chalk' at 220 kg on the first occasion, and at 460 kg on the second and third occasions. Weedkillers: TCA at 11 kg in 250 l. Propyzamide and 3, 6-dichloropicolinic acid (as 'Matrikerb' at 1.63 kg) in 500 l. Desiccant: Diquat at 0.60 kg ion with 'Agral', a wetting agent at 0.5 l, in 500 l.

Seed: Jet Neuf, seed dressed gamma HCH, thiram, fenpropimorph and iprodione, seed sown at 9 kg.

Cultivations, etc.: - Discd: 17 Aug, 1983. N applied: 22 Aug. TCA applied: 23 Aug. Spring-tine cultivated: 24 Aug. Seed direct drilled: 25 Aug. 'Matrikerb' applied: 25 Oct. N applied: 15 Feb, 1984. N applied: 5 Apr. Desiccant applied: 25 July. Combine harvested: 1 Aug. Previous crops: W. wheat 1982, w. barley 1983.

NOTE: Disease incidence and severity was assessed on seven occasions between March and July. Cuticular wax on leaves was measured on all plots in April. Plant height, internode length and branch number and length, were measured in July.

84/R/RA/7

GRAIN (90% DM) TONNES/HECTARE

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

	RATE	0.35	0.70	MEAN
	METHOD			
	CNVNTIAL	3.47	3.76	3.62
	ELECTROS	3.66	3.58	3.62
	MEAN	3.57	3.67	3.62
NONE		3.44		
GRAND MEAN		3.58		

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

TABLE	METHOD	RATE	METHOD RATE & NONE
SED	0.130	0.130	0.183

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

STRATUM	DF	SE	CV%
BLOCK.WP	12	0.259	7.2

GRAIN MEAN DM% 89.5

PLOT AREA HARVESTED 0.00229