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# Yields of the Field Experiments 1983

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## Winter Oilseed Rape

### Rothamsted Research

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83/R/RA/1

WINTER OILSEED RAPE

MUSTARD OILS AND LIGHT LEAF SPOT

Object: To study the effects of mustard oils, sulphur and benomyl on the incidence of light leaf spot (*Pyrenopeziza brassicae*) and on the yield of two w. oilseed rape varieties with contrasting glucosinolate levels - Long Hoos V 4.

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

Design: 3 randomised blocks of 10 plots.

Whole plot dimensions: 1.83 x 6.10.

Treatments: All combinations of:

- |             |  |
|-------------|--|
| 1. VARIETY  | Varieties:   |
| DP 1305     |  |
| NORLI       |  |
| 2. FUNGCIDE | Fungicides:  |
| NONE        | None   |
| BENOMYL     | Benomyl at 0.5 kg in 4.2 l                         |
| M OIL 1     | Mustard oil 1 at 0.15 kg in 4.2 l                  |
| M OIL 2     | Mustard oil 2 at 0.24 kg in 4.2 l                  |
| SULPHUR     | Elemental sulphur at 10 kg in 340 l (as 'Thiovit') |

NOTES: (1) All fungicide treatments were applied on 30 Nov, 1982 and 12 Apr, 1983; sulphur was applied by hydraulic sprayer, the remainder by electrostatic sprayer.

(2) Diseases were so severe on VARIETY DP1305 that all plants, irrespective of treatments were killed by the end of April.

Basal applications: Manures: 'Nitro-Chalk' at 900 kg. Weedkillers: Benazolin ethyl ester at 0.67 kg with 3, 6-dichloropicolinic acid at 0.11 kg in 450 l. Desiccant: Diquat at 0.84 kg in 250 l.

Seed: Sown at 19 kg.

Cultivations, etc.: - Spring-tine cultivated twice: 25 Aug, 1982. Seed sown by hand: 26 Aug. Weedkillers applied: 15 Oct. N applied: 14 Mar, 1983. Desiccant applied: 25 July. Combine harvested: 27 July. Previous crops: Potatoes 1981, fallow 1982.

NOTE: Phoma and light leaf spot were assessed on five occasions during the season.

83/R/RA/1

NORLI ONLY

GRAIN TONNES/HECTARE

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

FUNGCIDE	NONE	BENOMYL	M OIL 1	M OIL 2	SULPHUR	MEAN
	2.05	2.60	2.29	2.47	2.46	2.37

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

TABLE	FUNGCIDE
-----	-----
SED	0.246

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

STRATUM	DF	SE	CV%
BLOCK.WP	8	0.301	12.7

GRAIN MEAN DM% 75.4

PLOT AREA HARVESTED 0.00111

83/R/RA/4

WINTER OILSEED RAPE

CONTROL OF PESTS AND DISEASES

Object: To study the effects of carbofuran, cypermethrin, benomyl and triazophos on the incidence of pests and diseases and on the yield of w. oilseed rape - Bones Close.

Sponsors: R.J. Tuppen (MAFF), G.J.W. Dean, I.H. Williams, C.J. Rawlinson.

Design: 4 randomised blocks of 6 plots.

Whole plot dimensions: 4.0 x 20.0.

Treatments: All combinations of:-

1. INSCTCDE            Insecticides:

NONE	None
CARBOFUR	Carbofuran at 2.5 kg as granules on 3 Sept, 1982
CYPERMET	Cypermethrin at 0.035 l in 500 l on 3 June, 1983

2. FUNG INS            Fungicide and additional insecticide:

NONE	None
BEN+TRI	Benomyl at 0.50 kg on 15 Nov, 1982, and triazophos on 8 June, 1983

NOTE: 'Actipron', a wetting agent, was applied at 2.5 l with the benomyl.

Basal applications: Manures: (5:14:30) at 450 kg. 'Nitro-Chalk' at 500 kg followed by 450 kg. Weedkillers: Paraquat at 0.70 kg ion in 250 l. Diquat at 0.60 kg ion applied with 'Agral', a wetting agent, at 0.5 l in 500 l. Propyzamide and 3,6 - dichloropicolinic acid (as 'Matri-Kerb' at 1.63 kg) in 250 l.

Seed: Jet Neuf, dressed thiram and thiabendazole, sown at 7.8 kg.

Cultivations, etc.:- Paraquat applied: 23 Aug, 1982. Discd: 29 Aug. NPK applied, seed sown: 31 Aug. 'Matri-Kerb' applied: 9 Nov. First N applied: 23 Feb, 1983. Second N applied: 28 Mar. Diquat applied: 22 July. Combine harvested: 28 July. Previous crops: W. wheat 1981, w. wheat and w. barley 1982.

NOTE: Light leaf spot was assessed in early spring, May and June.

83/R/RA/4

GRAIN TONNES/HECTARE

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

FUNG INS INSCTCDE	NONE	BEN+TRI	MEAN
NONE	3.17	3.39	3.28
CARBOFUR	3.11	3.53	3.32
CYPERMET	2.91	3.51	3.21
MEAN	3.06	3.47	3.27

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

TABLE	INSCTCDE	FUNG INS	INSCTCDE FUNG INS
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SED	0.219	0.179	0.310

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

STRATUM	DF	SE	CV%
BLOCK.WP	15	0.439	13.4
GRAIN MEAN DM%	85.6		
PLOT AREA HARVESTED	0.00640		