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## Yields of the Field Experiments 1996

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### Winter Oilseed Rape

#### Rothamsted Research

Rothamsted Research (1997) *Winter Oilseed Rape* ; Yields Of The Field Experiments 1996, pp 120 - 126 - DOI: <https://doi.org/10.23637/ERADOC-1-51>

96/R/RAW/5

WINTER OILSEED RAPE

DISEASE CONTROL

**Object:** To compare standard and forecast fungicidal spray programmes for control of light leaf spot and canker in w. oilseed rape - Great Knott II.

**Sponsors:** B.D.L. Fitt, S. Mitchell.

**Design:** 4 randomised blocks of 6 plots.

**Whole plot dimensions:** 3.0 x 20.0.

**Treatments:**

FUNGICIDE	Fungicide rate and timing:	Autumn	Winter	Spring
-	None (duplicated)	-	-	-
S3	Standard	0.5	0.5	0.5
S2	Standard	1.0	-	0.5
F3	Forecast	0.5	0.5	0.5
F2	Forecast	1.0	-	0.5

**NOTE:** 1.0 = Full rate, 0.5 = Half rate.

**Experimental diary:**

05-Aug-95 : B : PK as (0:20:32) at 1407 kg.  
07-Aug-95 : B : Ploughed and furrow pressed.  
04-Sep-95 : B : Irrigated 20 mm.  
05-Sep-95 : B : Rotary harrowed, Envol, dressed Lindex-Plus FS, drilled at 120 seeds per m<sup>2</sup>.  
02-Oct-95 : B : Butisan S at 1.5 l with Cyperkill 10 at 250 ml and Agral at 200 ml in 200 l.  
12-Oct-95 : B : Draza at 5.5 kg.  
07-Nov-95 : T : **FUNGICIDE** S3: Folicur at 0.5 l in 220 l.  
          : T : **FUNGICIDE** S2: Folicur at 1.0 l in 220 l.  
10-Jan-96 : T : **FUNGICIDE** F3: Folicur at 0.5 l in 220 l.  
          : T : **FUNGICIDE** F2: Folicur at 1.0 l in 220 l.  
27-Feb-96 : T : **FUNGICIDE** S3, F3: Folicur at 0.5 l in 220 l.  
29-Feb-96 : B : 34.5% N at 174 kg.  
02-Apr-96 : T : **FUNGICIDE** S3, S2, F3, F2: Folicur at 0.5 l in 220 l.  
09-Apr-96 : B : 34.5% N at 348 kg.  
25-Apr-96 : B : Fastac at 200 ml in 200 l.  
19-Jul-96 : B : Standon Diquat at 3.0 l with Vassgro Spreader at 390 ml in 390 l.  
30-Jul-96 : B : Combine harvested.

Previous crops: W. wheat 1994, set-aside 1995.

**NOTE:** Plant samples were taken regularly to assess the incidence and severity of diseases on leaves, stems and pods.

96/R/RAW/5

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

FUNGcide	
-	3.92
S3	4.12
S2	4.36
F3	4.16
F2	4.18
Mean	4.11

\*\*\* Standard errors of differences of means \*\*\*

FUNGcide	
0.142	min.rep
0.123	max-min

FUNGcide  
min.rep Any of the remainder  
max-min - v any of the remainder

\*\*\*\*\* Stratum standard errors and coefficients of variation \*\*\*\*\*

Stratum	d.f.	s.e.	cv%
BLOCK.WP	16	0.200	4.9
GRAIN MEAN DM%	89.5		
PLOT AREA HARVESTED	0.00391		

96/R/RAW/6

WINTER OILSEED RAPE

GROWTH OF WEEDS AND RAPE

**Object:** To investigate factors influencing the vigour of w. rape grown in competition with chickweed and volunteer barley - Fosters.

**Sponsor:** P.J.W. Lutman.

**Design:** 3 blocks of 2 plots split into 3 x 3 sub-plots.

**Sub-plot dimensions:** 3.0 x 14.0.

**Treatments:**

Whole plots

1. **SOW DATE**                      Sowing date:  
  
    SE                              Early, 06-Sep-95  
    SL                              Late, 21-Sep-95

Sub-plots

2. **CROP DEN**                      Crop density, seeds per m<sup>2</sup>:  
  
    DL                              100  
    DM                              180  
    DH                              260

3. **WEED**                              Weed type and seed rate:  
  
    -                                  None  
    WC                                Chickweed (*Stellaria media*), sown at 2000 seeds per m<sup>2</sup>  
    WB                                S. barley (cv. Magie, dressed Rappor), sown at 320  
   seeds per m<sup>2</sup>

**NOTE:** Weeds were broadcast just before drilling the w. rape.

**Experimental diary:**

05-Aug-95 : B : Ploughed and furrow pressed. Rolled.  
05-Sep-95 : B : Irrigated 20 mm.  
06-Sep-95 : T : **SOW DATE** SE: Rotary harrowed, Apex, dressed Lindex-Plus FS, drilled.  
21-Sep-95 : T : **SOW DATE** SL: Rotary harrowed, Apex, dressed Lindex-Plus FS, drilled.  
22-Sep-95 : B : Draza at 5.5 kg.  
23-Sep-95 : B : Cyperkill 10 at 250 ml with Agral at 300 ml in 300 l.  
29-Sep-95 : T : **SOW DATE** SE, **WEED** -, WB: Butisan S at 1.5 l in 220 l.  
30-Oct-95 : T : **SOW DATE** SL, **WEED** -: Butisan S at 1.5 l in 220 l.  
10-Jan-96 : T : **SOW DATE** SE, **WEED** WC: Carbetamex at 3.0 kg in 220 l.  
29-Feb-96 : B : 34.5% N at 174 kg.  
09-Apr-96 : B : 34.5% N at 348 kg.  
11-Apr-96 : B : Folicur at 0.5 l in 300 l.

96/R/RAW/6

**Experimental diary:**

- 25-Apr-96 : B : Decis at 0.5 l in 200 l.
- 22-Jul-96 : B : Reglone at 3.0 l with Vassgro Spreader at 390 ml in 390 l.
- 31-Jul-96 : B : Combine harvested.

Previous crops: W. wheat 1994, set-aside 1995.

- NOTES:** (1) Rape and weed plant densities were assessed in autumn. Crop and weed samples were taken on four occasions for dry matter assessments.
- (2) Crop failed on three plots with treatment combinations:
- |                 |    |    |    |
|-----------------|----|----|----|
| <b>SOW DATE</b> | SE | SL | SE |
| <b>CROP DEN</b> | DL | DL | DH |
| <b>WEED</b>     | WB | -  | WC |
- Estimated values were used in the analysis.
- (3) A sub-sample was taken to measure weed contamination in the grain. Estimated cleaned grain yields are presented

**CLEANED GRAIN (AT 90% DRY MATTER) TONNES/HECTARE**

\*\*\*\*\* Tables of means \*\*\*\*\*

<b>CROP DEN</b>	DL	DM	DH	mean
<b>SOW DATE</b>				
SE	3.62	3.88	4.04	3.84
SL	2.85	3.18	3.07	3.03
mean	3.23	3.53	3.55	3.44
<b>WEED</b>	-	WC	WB	mean
<b>SOW DATE</b>				
SE	4.85	4.66	2.02	3.84
SL	4.31	2.92	1.87	3.03
mean	4.58	3.79	1.95	3.44
<b>WEED</b>	-	WC	WB	mean
<b>CROP DEN</b>				
DL	4.64	3.76	1.30	3.23
DM	4.68	3.96	1.96	3.53
DH	4.43	3.66	2.58	3.55
mean	4.58	3.79	1.95	3.44
<b>SOW DATE</b>	<b>WEED</b>	-	WC	WB
	<b>CROP DEN</b>			
SE	DL	4.85	4.69	1.33
	DM	4.82	4.79	2.04
	DH	4.90	4.52	2.69
SL	DL	4.43	2.83	1.28
	DM	4.53	3.13	1.88
	DH	3.96	2.80	2.46

96/R/RAW/6

CLEANED GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

\*\*\* Standard errors of differences of means \*\*\*

CROP DEN	WEED	SOW DATE*
0.209	0.209	CROP DEN 0.295

SOW DATE*	CROP DEN	SOW DATE*
WEED	WEED	CROP DEN WEED
0.295	0.361	0.511

\* Within the same level of SOW DATE only

\*\*\*\*\* Stratum standard errors and coefficients of variation \*\*\*\*\*

Stratum	d.f.	s.e.	cv%
BLOCK.WP.SP	29	0.626	18.2

GRAIN MEAN DM% 88.2

SUB-PLOT AREA HARVESTED 0.00281 (36 Plots) or 0.00258 (18(Plots))

96/R/RAW/7

WINTER OILSEED RAPE

PHEROMONES IN W. RAPE

**Object:** To test the effects of aphid sex pheromones on aphid parasitoids in w. rape - Great Knott II.

**Sponsors:** R. Glinwood, W. Powell.

**Design:** 4 x 4 Latin square balanced for neighbours.

**Whole plot dimensions:** 6.0 x 6.0.

**Treatments:**

PHERMONE	Pheromones:
C	None
L	Nepetalactone
LO	Nepetalactol
R	Nepetalactone and nepetalactol

**Experimental diary:**

07-Aug-95 : B : Ploughed and furrow pressed.  
11-Sep-95 : B : Rotary harrowed, Envol, dressed Lindex-Plus FS, drilled at 120 seeds per m<sup>2</sup>.  
02-Oct-95 : B : Butisan S at 1.5 l with Cyperkill 10 at 250 ml in 200 l.  
29-Feb-96 : B : 34.5% N at 174 kg.  
09-Apr-96 : B : 34.5% N at 348 kg.  
11-Apr-96 : B : Folicur at 0.5 l in 300 l.  
13-May-96 : T : **PHERMONE** L, LO, R: Pheromones in vials placed in the crop.  
30-Jul-96 : B : Combine harvested.

Previous crops: S. beans 1994, set-aside 1995.

**NOTE:** Samples of aphids and parasitoids were taken weekly.

96/R/RAW/7

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

\*\*\*\*\* Tables of means \*\*\*\*\*

PHERMONE

C	4.03
L	3.71
LO	3.62
R	3.62
Mean	3.74

\*\*\* Standard errors of differences of means \*\*\*

PHERMONE

0.126

\*\*\*\*\* Stratum standard errors and coefficients of variation \*\*\*\*\*

Stratum	d.f.	s.e.	cv%
ROW.COL	6	0.178	4.7

GRAIN MEAN DM% 84.8

PLOT AREA HARVESTED 0.00138