

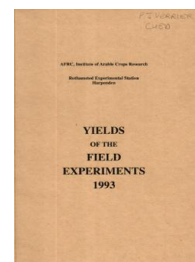
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### 93/R/RAW/8 Weed Competition - Rape and Cleavers - W. Oilseed Rape

#### Rothamsted Research

Rothamsted Research (1994) *93/R/RAW/8 Weed Competition - Rape and Cleavers - W. Oilseed Rape ; Yields Of The Field Experiments 1993*, pp 136 - 137 - DOI:

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93/R/RAW/8

# WINTER OILSEED RAPE

## WEED COMPETITION - RAPE AND CLEAVERS

**Object:** To study the competitive effect of cleavers (*Galium aparine*) on the growth and yield of w. rape sown on three different dates - Summerdells II.

**Sponsors:** P.J.W. Lutman.

**Design:** 3 blocks of 3 plots split into 6 sub plots.

**Whole plot dimensions:** 14.0 x 21.0.

**Treatments:** All combinations of:-

Whole plots

1. **SOW DATE** Time of sowing w. rape:

|       |                 |
|-------|-----------------|
| EARLY | Early September |
| MID   | Mid September   |
| LATE  | Late September  |

Sub plots

2. **WEED DEN** Density of cleavers (plants per square metre):

|         | SOW DATE |     |      |
|---------|----------|-----|------|
|         | EARLY    | MID | LATE |
| D0 (US) | 0        | 0   | 0    |
| D1      | 4        | 2   | 5    |
| D2      | 18       | 7   | 14   |
| D3      | 38       | 11  | 54   |
| D4      | 77       | 26  | 112  |
| D0 (S)  | 0        | 0   | 0    |

**NOTES:** (1) Target **SOW DATE** EARLY: Late August, MID: Early September, LATE: Mid September.

(2) Target **WEED DEN** (plants per square metre) at each sowing date:

| D0 | D1 | D2 | D3 | D4 |
|----|----|----|----|----|
| 0  | 4  | 16 | 32 | 64 |

(3) Cleaver seeds were broadcast by hand in the central 2.5 m of the plot.

(4) Broad-leaved herbicides applied to **WEED DEN** D0(S) plots only.

### Experimental diary:

28-Jul-92 : B : Shallow cultivated with Bomford Dynadrive.

18-Aug-92 : B : Sting CT at 1.5 l in 200 l.

26-Aug-92 : B : Ploughed and furrow pressed.

03-Sep-92 : T : **SOW DATE** EARLY: Rotary harrowed. Weed seeds broadcast. Rotary harrowed, Falcon, dressed Lindex-Plus FS, drilled at 120 seeds per square metre.

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**Experimental diary:**

15-Sep-92 : T : **SOW DATE** MID: Rotary harrowed. Weed seeds broadcast.  
Rotary harrowed, Falcon, dressed Lindex-Plus FS,  
drilled at 120 seeds per square metre.

28-Sep-92 : T : **SOW DATE** LATE: Rotary harrowed.

29-Sep-92 : T : **SOW DATE** LATE: Rotary harrowed. Weed seeds broadcast.  
Rotary harrowed, Falcon, dressed Lindex-Plus FS,  
drilled at 120 seeds per square metre.

23-Oct-92 : B : Club at 5.5 kg.

04-Nov-92 : T : **SOW DATE** EARLY, MID: Pilot at 75 ml with Cropspray 11E  
at 2.0 l in 200 l.

10-Dec-92 : T : **SOW DATE** EARLY, MID, LATE: D0(S) plots only: Benazalox  
at 0.75 kg and Kerb 50 W at 1.0 kg in 220 l.

18-Feb-93 : B : 34.5% N at 170 kg.

23-Mar-93 : B : 34.5% N at 370 kg.

17-Jul-93 : B : Reglone at 3.0 l with Vassgro Spreader at 0.40 l in  
400 l.

28-Jul-93 : B : Combine harvested.

Previous crops: W. wheat 1991, w. barley 1992.

**NOTE:** Emergence counts were made and samples of Weed and crop taken on four occasions throughout the season for observations, counts and growth estimations.

**GRAIN TONNES/HECTARE**

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

| WEED DEN        | D0(US) | D1   | D2   | D3   | D4   | D0(S) | Mean |
|-----------------|--------|------|------|------|------|-------|------|
| <b>SOW DATE</b> |        |      |      |      |      |       |      |
| EARLY           | 3.51   | 3.07 | 2.13 | 1.87 | 1.23 | 3.81  | 2.60 |
| MID             | 4.23   | 3.84 | 2.97 | 2.48 | 2.20 | 4.27  | 3.33 |
| LATE            | 3.63   | 3.15 | 2.53 | 1.99 | 1.52 | 3.00  | 2.64 |
| Mean            | 3.79   | 3.35 | 2.54 | 2.11 | 1.65 | 3.69  | 2.86 |

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

| <b>SOW DATE</b>                                       | <b>WEED DEN</b> | <b>SOW DATE</b> |
|-------------------------------------------------------|-----------------|-----------------|
|                                                       |                 | <b>WEED DEN</b> |
|                                                       | 0.155           | 0.138           |
|                                                       |                 | 0.268           |
| Except when comparing means with the same level(s) of |                 |                 |
| <b>SOW DATE</b>                                       |                 | 0.240           |

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

| Stratum                 | d.f. | s.e.    | cv%  |
|-------------------------|------|---------|------|
| BLOCK.WP                | 4    | 0.190   | 6.7  |
| BLOCK.WP.SP             | 30   | 0.293   | 10.3 |
| GRAIN MEAN DM%          | 73.6 |         |      |
| SUB PLOT AREA HARVESTED |      | 0.00260 |      |