

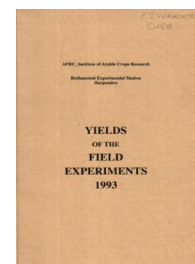
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93/R/RAW/7 Weed Competition - Rape and Chickweed - W. Oilseed Rape

Rothamsted Research

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93/R/RAW/7

WINTER OILSEED RAPE

WEED COMPETITION - RAPE AND CHICKWEED

Object: To study the competitive effect of chickweed (*Stellaria media*) 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 chickweed (plants per square metre):

	SOW DATE		
	EARLY	MID	LATE
D0 (US)	0	0	0
D1	44	54	84
D2	134	279	340
D3	475	1296	1169
D4	1299	2189	1983
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 | 50 | 200 | 600 | 1200 |
- (3) Chickweed 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 : Floughed 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.

93/R/RAW/7

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
SOW DATE							
EARLY	3.54	2.45	1.65	1.38	1.61	3.79	2.41
MID	3.66	3.12	2.33	2.33	2.31	3.78	2.92
LATE	3.73	2.56	2.10	1.95	1.43	3.19	2.49
Mean	3.64	2.71	2.03	1.89	1.78	3.59	2.61

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

	SOW DATE	WEED DEN	SOW DATE WEED DEN
	0.286	0.130	0.352
Except when comparing means with the same level(s) of			
SOW DATE			0.225

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	4	0.350	13.4
BLOCK.WP.SP	30	0.276	10.6
GRAIN MEAN DM%	80.1		
		SUB PLOT AREA HARVESTED	0.00260