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# Yields of the Field Experiments 1995



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# 95/R/LN/2 Weed Competition in Linseed - Linseed

# **Rothamsted Research**

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#### 95/R/LN/2

#### LINSEED

# WEED COMPETITION IN LINSEED

Object: To study the effects of two weed species on each other and on the growth and yield of linseed - New Zealand.

Sponsors: R.C. Van Acker, P.J.W. Lutman.

Design: 2 randomised blocks of (5 x 5) + 5 plots.

Plot dimensions:  $3.0 \times 10$ .

Treatments: All combinations of:-

1.	BARLEY	Average	number	of	barley	plants	established per	$m^2$ :
	B0 B1 B2 B3 B4	0 16 33 61 181						
2.	CHK WEED	Average	number	of	chickwe	ed plar	nts established p	per m²:
	C0 C1 C2 C3 C4	0 52 103 241 395						

plus 5 extra treatments

3. EXTRA Average number of barley or chickweed plants established per m<sup>2</sup>:

	Barley	Chickweed
-	0	0
EB1	97	0
EB2	200	0
EC1	0	358
EC2	0	528

NOTE: Weed sowing rates and target densities were as follows:

Seeds	per m <sup>2</sup>	Plants	per m
B1	25	C1	100
B2	50	C2	200
В3	100	C3	400
B4	300	C4	800
EB1	200	EC1	600
EB2	400	EC2	1200

#### 95/R/LN/2

#### Experimental diary:

- 09-Dec-94 : B : Farmyard manure at 25 t.
- 21-Dec-94 : B : Ploughed.
- 14-Mar-95 : B : Gramoxone 100 at 4.0 1 in 200 1.
- 20-Apr-95 : B : Spring-tine cultivated.
- 21-Apr-95 : T : BARLEY B1, B2, B3, B4, EXTRA EB1, EB2: Alexis, dressed Cerevax Extra, broadcast by machine.
  - : T : CHKWEED C1, C2, C3, C4, EXTRA EC1, EC2: Chickweed seeds broadcast by hand.
  - : B : Rotary harrowed, Antares, dressed Prelude 20LF, drilled at 700 seeds per  $\mathrm{m}^2$ .
- 03-May-95 : B : Irrigated 25 mm.
- 05-May-95 : B : Decis at 300 ml in 300 l.
- 16-May-95 : B : Irrigated 5 mm.
- 24-May-95 : B : 34.5% N at 232 kg.
- 15-Aug-95 : B : Standon Diquat at 3.0 l with Vassgro Spreader at 400 ml in 400 l.
- 16-Aug-95 : B : Hand harvested.

NOTE: Leaf area indices of barley, chickweed and linseed were measured on two occasions during the growing season. Percentage ground cover was assessed by visual and photographic methods on two occasions early in the growing season. Weed seed yield, and crop components of yield, were measured before harvest.

### 95/R/LN/2

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

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

CHK WEED	C0	C1	C2	C3	C4	Mean
BARLEY						
В0	1.31	1.22	1.19	0.93	0.45	1.02
B1	1.05	0.90	0.75	0.57	0.39	0.73
B2	0.73	0.68	0.81	0.54	0.47	0.65
В3	0.54	0.59	0.49	0.39	0.28	0.46
В4	0.23	0.23	0.13	0.14	0.17	0.18
Mean	0.77	0.72	0.67	0.51	0.35	0.61
EXTRA	-	EB1	EB2	EC1	EC2	Mean
	1.41	0.15	0.16	0.45	0.42	0.52

Grand mean 0.59

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

BARLEY	CHK WEED	BARLEY	
		CHK WEED	
		& EXTRA	
0.048	0.048	0.107	

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

Stratum d.f. s.e. cv%
BLOCK.WP 29 0.107 18.1

GRAIN MEAN DM% not measured

PLOT AREA HARVESTED 0.00010