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Yields of the Field Experiments 1997

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97/R/RAW/1 Growth of Weeds and Rape - W. Oilseed Rape

Rothamsted Research

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97/R/RAW/1

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 - Bones Close

Sponsors: P.J.W. Lutman.

Design: 2 randomised blocks of 30 plots.

Whole plot dimensions: 3.0 x 15.0.

Treatments:

1. BARL DEN Barley (Gleam dressed Raxil S) density, mean plants per m²:

B0	0
B1	66
B2	160
B3	280
B4	448
B5	461
B6	567

2. CHCK DEN Chickweed (*Stellaria media*) density, mean plants per m²:

C0	0
C1	119
C2	327
C3	598
C4	734
C5	1536
C6	2118

NOTE: Target weed populations and combinations were as follows:

Target weed populations: Plants per m².

		Barley						
		0	50	100	200	300	400	500
	0 (x2)	x	x	x	x	x	x	x
	100	x	x	x	x	x		
	200	x	x	x	x	x		
<u>Chickweed</u>	400	x	x	x	x	x		
	600	x	x	x	x	x		
	500	x						
	1200	x						

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Experimental diary:

09-Sep-96 : B : Chalk at 2.5 t.
09-Sep-96 : B : Ploughed and furrow pressed.
10-Sep-96 : B : Harrowed.
11-Sep-96 : T : Chickweed and barley broadcast by hand. Rotary harrowed, Apex, dressed Vitavax RS, drilled at 120 seeds per m².
12-Sep-96 : B : Rolled.
17-Oct-96 : B : Irrigated 25 mm.
14-Nov-96 : B : Tigress at 1.75 l in 200 l.
21-Nov-96 : T : **BARL DEN 0**, **CHCK DEN 0**: Katamaran at 2.5 l in 220 l.
05-Dec-96 : T : **CHCK DEN 0**: Galtak 50 SC at 1.5 l in 200 l.
28-Feb-97 : B : 34.5% N at 175 kg.
11-Mar-97 : T : **CHCK DEN 0**: Galtak 50 SC at 1.5 l in 220 l.
26-Mar-97 : B : 34.5% N at 350 kg.
09-Apr-97 : B : Barclay Eyetak at 1.1 l with Fastac at 200 ml in 300 l.
21-Jul-97 : B : Reglone at 3.0 l with Vassgro Non-ionic at 392 ml in 400 l.
28-Jul-97 : B : Combine harvested.

Previous crops: W. wheat 1995, s. wheat 1996.

- NOTE:**
- (1) The crop failed on 12 plots and one plot (treatment **BARL DEN B6**, **CHCK DEN C0**) yield was lost because of a combine error. The blocks were removed as a covariate to avoid estimating missing values. For treatment combinations lost see note after SED table in the analysis.
 - (2) Assessments of weed emergence were made in autumn. Crop and weed biomass was measured in December, May and June. Visual assessments of ground cover were made in December and plant heights were measured in March.

97/R/RAW/1

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

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

CHCK DEN BARL DEN	C0	C1	C2	C3	C4	C5	C6
B0	3.97	3.80	3.76	3.40	3.10	2.84	2.86
B1	2.91	2.68	2.81	2.60	2.38		
B2	2.15	3.40	2.71	2.28	2.42		
B3	2.06	1.62	1.63	1.37	1.99		
B4	1.41	2.17	1.83	1.46	1.00		
B5	1.55						
B6	0.74						

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

BARL DEN

CHCK DEN

0.397 min.rep

0.362 max-min

BARL DEN

CHCK DEN

min.rep Any of the remainder

max-min B0.C0 v any of the remainder

NOTE: SED applies only to the following treatment combinations:-
B0.C0, B0.C2, B0.C5, B0.C6, B1.C1, B1.C2, B1.C3, B1.C4, B2.C2,
B2.C3, B2.C4, B3.C0, B3.C3, B3.C4, B4.C0, B4.C1 and B4.C3.

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	17	0.397	16.5
GRAIN MEAN DM%	88.0		