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Yields of the Field Experiments 1992

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Linseed

Rothamsted Research

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92/R/LN/1

LINSEED

VARIETIES AND DISEASE

Object: To investigate the effects of pathogens on varieties of linseed - White Horse II.

Sponsors: B.D.L. Fitt, J. Harold.

Design: 4 randomised blocks of 10 plots.

Whole plot dimensions: 3.0 x 15.0.

Treatments: All combinations of:-

1. **VARIETY** Varieties:

ANTARES
BARBARA
MCGREGOR
NORLIN
CD 1747

2. **FUNGICIDE** Fungicides:

NONE None
APPLIED Prochloraz seed dressing, iprodione during flowering,
prochloraz and carbendazim plus maneb post-
flowering

Experimental diary:

16-Oct-91 : B : Straw burnt.
28-Nov-91 : B : Farmyard manure at 10 t.
04-Dec-91 : B : Ploughed.
18-Mar-92 : B : PK as (0:18:36) at 940 kg.
10-Apr-92 : B : 34.5% N at 220 kg.
11-Apr-92 : B : Spring-tine cultivated.
21-Apr-92 : T : **VARIETY:** All varieties drilled at 550 seeds per square
metre.
: T : **FUNGICIDE APPLIED:** Seed, dressed Prelude 20LF, drilled.
22-Apr-92 : B : Rolled.
02-Jun-92 : B : Basagran at 2.0 l and Vindex at 1.0 l in 200 l.
24-Jun-92 : T : **FUNGICIDE APPLIED:** Rovral Flo at 2.0 l in 200 l.
08-Jul-92 : T : **FUNGICIDE APPLIED:** Sportak 45 at 0.90 l in 200 l.
23-Jul-92 : T : **FUNGICIDE APPLIED:** Delsene M Flowable at 5.0 l in 200 l.
05-Sep-92 : B : Challenge at 3.0 l in 400 l.
29-Sep-92 : B : Combine harvested.

Previous crops: W. wheat 1990, linseed 1991.

NOTE: Emergence counts were made in spring. Samples were taken fortnightly from June to September for disease assessment. Oil content of the grain was measured.

92/R/LN/1

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

FUNGCIDE VARIETY	NONE	APPLIED	Mean
ANTARES	2.41	2.55	2.48
BARBARA	1.74	2.12	1.93
MCGREGOR	2.31	2.42	2.36
NORLIN	2.01	2.30	2.16
CD 1747	2.15	2.32	2.23
Mean	2.12	2.34	2.23

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

VARIETY	FUNGCIDE	VARIETY FUNGCIDE
0.087	0.055	0.123

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	27	0.174	7.8

GRAIN MEAN DM% 88.7

PLOT AREA HARVESTED 0.00276

92/R/LN/2

LINSEED

WEED COMPETITION AND LINSEED

Object: To investigate the effects of weed competition on the growth and yield of linseed - Fosters Corner.

Sponsor: P.J.W. Lutman.

Design: 3 randomised blocks of 10 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. **SPECIES** Weed species:
- | | |
|----------|---|
| CUL OATS | Cultivated oats (<i>Avena sativa</i>) to simulate wild oats (<i>A. fatua</i>) |
| CHICKWD | Chickweed (<i>Stellaria media</i>) |
2. **DENSITY** Density of established plants (number of plants per square metre):
- | | Cultivated oats | Chickweed |
|----|-----------------|-----------|
| D0 | 0 | 0 |
| D1 | 6 | 57 |
| D2 | 24 | 159 |
| D3 | 49 | 182 |
| D4 | 119 | 465 |

NOTES: (1) Target plant populations (number of plants per square metre):

	D0	D1	D2	D3	D4
Cultivated oats	0	10	50	100	200
Chickweed	0	100	200	400	800

(2) Weed species were sown in the central 2 m of each plot.

Experimental diary:

- 06-Sep-91 : B : Straw chopped.
06-Dec-91 : B : Ploughed (start).
02-Jan-92 : B : Ploughed (finish).
22-Apr-92 : B : 34.5% N at 220 kg.
 : B : Spring-tine cultivated.
23-Apr-92 : B : Harrowed.
23-Apr-92 : T : **SPECIES** CUL OATS: Dula drilled.
 : T : **SPECIES** CHICKWD: Broadcast by hand.
23-Apr-92 : B : Rotary harrowed, Antares, dressed Prelude 20LF, drilled at 48 kg, harrowed.
24-Apr-92 : B : Rolled.
09-Jun-92 : T : **SPECIES** CUL OATS: Basagran at 2.0 l and Vindex at 1.0 l in 220 l.
08-Sep-92 : T : Hand harvested (start).
09-Sep-92 : T : Hand harvested (finish).

92/R/LN/2

Previous crops: W. wheat 1990, s. beans 1991.

NOTE: Weed counts were made and dry weight samples were taken at intervals during the growing season.

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

DENSITY SPECIES	D0	D1	D2	D3	D4	Mean
CUL OATS	1.62	1.34	0.98	0.65	0.47	1.01
CHICKWD	1.63	1.27	1.39	1.43	1.43	1.43
Mean	1.63	1.31	1.18	1.04	0.95	1.22

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

SPECIES	DENSITY	SPECIES DENSITY
	0.065	0.102
		0.144

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	18	0.177	14.5

GRAIN MEAN DM% *

PLOT AREA HARVESTED 0.00020