

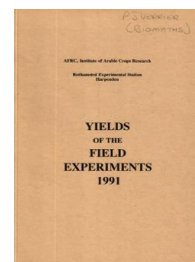
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91/R/RAW/9 Weed Competition - W. Oilseed Rape

Rothamsted Research

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91/R/RAW/9

WINTER OILSEED RAPE

WEED COMPETITION

Object: To study the effects of a range of densities of two weed species on the growth and yield of w. oilseed rape - Pastures.

Sponsor: P.J.W. Lutman.

Design: 4 randomised blocks of 12 plots.

Whole plot dimensions: 3.0 x 6.0.

Treatments: All combinations of:-

1. **WEED SPC** Weed species:
S MEDIA Stellaria media
V PERSIC Veronica persica
2. **SOW DENS** Sowing density of weed seeds (seeds per square metre):
1 300
2 600
3 1200
4 2400
5 4800

plus one extra treatment without sown weed seeds:

EXTRA

NONE None (duplicated)

Basal applications: Manures: Magnesian limestone at 5.0 t. 'Nitram' at 320 kg on two occasions. Weedkiller: Quizalofop-ethyl at 0.12 kg with a wetting agent, 'Actipron' at 2.0 l, in 200 l. Fungicide: Prochloraz at 0.40 kg in 200 l. Insecticide: Deltamethrin at 6.2 g in 200 l and later at 12.5 g in 200 l. Irrigation: 25 mm applied on two occasions

Seed: Libravo, dressed fenpropimorph, gamma-HCH and thiram, sown at 6.0 kg.

Cultivations, etc.:- Magnesian limestone applied: 31 July, 1990. Ploughed and rolled: 3 Aug. Rotary harrowed twice, cultivated by rotary grubber, seed sown: 5 Sept. Irrigated: 13 and 27 Sept. First deltamethrin applied: 15 Oct. Weedkiller with wetting agent applied: 23 Oct. First N applied: 27 Feb, 1991. Second N applied: 21 Mar. Second deltamethrin applied: 12 Apr. Fungicide applied: 23 Apr. Harvested by hand: 30 July. Previous crops: W. wheat 1989, w. barley 1990.

NOTE: Samples of crop and weed were taken in December, March, May and July for assessment of the effects of weeds on the growth of the rape. Components of yield were measured.

91/R/RAW/9

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SOW DENS	1	2	3	4	5	Mean
WEED SPC						
S MEDIA	3.94	3.75	3.24	3.73	3.35	3.60
V PERSIC	3.72	3.82	4.21	3.30	3.16	3.64
Mean	3.83	3.78	3.73	3.52	3.26	3.62
NONE	3.77					
GRAND MEAN	3.65					

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

WEED SPC	SOW DENS	WEED SPC SOW DENS
0.207	0.327	0.462

SED of NONE v any item in the WEED SPC.SOW DENS table is 0.400

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	34	0.654	17.9
MEAN DM% *			

PLOT AREA HARVESTED 0.00020