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# Yields of the Field Experiments 1985

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## 85/R/SU/1 Varieties - Sunflowers

### Rothamsted Research

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85/R/SU/1

SUNFLOWERS

VARIETIES

Object: To compare six varieties of sunflower with and without control of pests and diseases - Garden Plot 9.

Sponsor: C.J. Rawlinson.

Design: 4 randomised blocks of 12 plots.

Whole plot dimensions: 2.13 x 3.05.

Treatments: All combinations of:-

1. VARIETY Varieties:

ASM 077	ASM 077
EXP 8504	EXP 8504
FRNKASOL	Frankaso1
KOFLOR 2	Koflor 2
S8283580	SV 8283580
WW 2135	WW 2135

2. PATHCONT Pest and pathogen control:

NONE	None
FULL	Full: Carbendazim at 0.25 kg with vinclozolin at 0.38 kg applied on 18 June, 8 Aug and 4 Sept, 1985. Pirimicarb at 0.14 kg on 4 June and 2 July.

- NOTE: (1) Pest and pathogen control treatments were applied by hand sprayer in 220 l.  
(2) Seed was sown by hand in rows 53 cm apart, seed spaced 7.6 cm apart in the row. Plants were thinned to 22.8 cm on 31 May.  
(3) The crop was protected against bird damage throughout the season.  
(4) At harvest, heads were removed by hand, dried, seeds removed by hand, and cleaned on a Rober seed cleaner.

Basal applications: Manures: Chalk at 2.9 t. Muriate of potash at 520 kg. 'Nitro-Chalk' (27.5% N) at 440 kg. Weedkillers: Trifluralin at 1.1 kg in 220 l. Paraquat at 0.56 kg ion in 220 l. Molluscicide: Methiocarb at 0.22 kg.

Cultivations, etc.:- Chalk applied: 11 Sept, 1984. Muriate of potash applied: 27 Sept. Ploughed: 17 Oct. Spring-tine cultivated, trifluralin applied, spring-tine cultivated in, seed sown: 10 Apr, 1985. N applied: 16 Apr. Paraquat applied: 18 Apr. Methiocarb applied: 29 May. Harvested: 30 Sept. Previous crops: Potatoes 1983, fallow 1984.

85/R/SU/1

NOTE: Time to 50% emergence, date of first anther ring, and number of days for anthesis were noted. Neck circumference measurements were taken on three occasions from late July until late August. Plant height measurements and disease assessments were made throughout the season. The percentage of oil in the seed was measured by N.M.R. analysis.

GRAIN TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

PATHCONT VARIETY	NONE	FULL	MEAN
ASM 077	3.50	3.58	3.54
EXP 8504	4.34	4.65	4.50
FRNKASOL	3.78	4.16	3.97
KOFLOR 2	4.70	4.91	4.80
S8283580	1.19	1.40	1.29
WW 2135	1.49	1.57	1.53
MEAN	3.17	3.38	3.27

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	VARIETY	PATHCONT	VARIETY PATHCONT
SED	0.139	0.080	0.197

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP	33	0.278	8.5

GRAIN MEAN DM% 92.9

PLOT AREA HARVESTED 0.00033