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Yields of the Field Experiments 1987

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87/R/SU/1 Early Varieties and Plant Health - Sunflowers

Rothamsted Research

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87/R/SU/1

SUNFLOWERS

EARLY VARIETIES AND PLANT HEALTH

Object: To compare six varieties of sunflower with and without sprays to control pathogens - Hoosfield.

Sponsor: C.J. Rawlinson.

Design: 3 randomised blocks of 12 plots.

Whole plot dimensions: 4.5 x 10.0.

Treatments: All combinations of:-

- | | |
|-------------|---|
| 1. VARIETY | Varieties: |
| SUNBRED | Sunbred 246 |
| EX 10 | Ex 10 |
| EX 34 | Ex 34 |
| S 2004 | S 2004 |
| CERFLOR | Cerflor |
| SUNWHEAT | Sunwheat |
| 2. PATHCONT | Pathogen control: |
| NONE | None |
| FULL | Full: Carbendazim at 0.25 kg with vinclozolin at 0.50 kg in 220 l on 25 July, 1987, 5 Aug, 19 Aug, 2 Sept and 16 Sept |

- NOTES: (1) Varieties SUNBRED and CERFLOR were desiccated with diquat at 0.60 kg ion in 220 l on 12 Oct, 1987 but were not harvested for yield because of subsequent storm and bird damage.
- (2) The remaining varieties were desiccated with diquat at 0.60 kg ion in 220 l on 18 Sept and combine harvested on 25 Sept.

Basal applications: Manures: 'Nitram' at 200 kg. Weedkillers: Glyphosate at 1.4 kg in 200 l. Trifluralin at 0.84 kg in 200 l. Linuron at 0.75 kg in 500 l.

Seed: Varieties, sown at 80,000 seeds per hectare.

Cultivations, etc.:- Glyphosate applied: 6 Nov, 1986. Ploughed: 1 Dec. Spring-tine cultivated: 14 Apr, 1987. N applied, trifluralin applied, rotary harrowed twice: 15 Apr. Seed sown: 17 Apr. Linuron applied: 21 Apr. Previous crops: Sugar beet 1985, s. barley 1986.

NOTE: Disease assessments were made on five occasions from June until September. Growth stages and plant height were assessed on ten occasions throughout the season. Oil contents of the grain were measured.

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GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

PATHCONT VARIETY	NONE	FULL	Mean
EX 10	1.79	1.71	1.75
EX 34	0.52	0.78	0.65
S 2004	2.71	2.38	2.55
SUNWHEAT	1.50	1.88	1.69
Mean	1.63	1.69	1.66

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

Table	VARIETY	PATHCONT	VARIETY PATHCONT
s.e.d.	0.168	0.119	0.238

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	14	0.291	17.6
GRAIN MEAN DM%	61.9		
PLOT AREA HARVESTED	0.00200		