

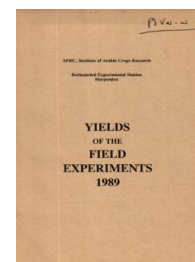
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89/R/SU/2 Varieties and Seed Rates - Sunflowers

Rothamsted Research

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89/R/SU/2

SUNFLOWERS

VARIETIES & SEED RATES

Object: To test the effects of four seed rates on plant growth, disease incidence and yield of two varieties - Long Hoos I/II.

Sponsors: C.J. Rawlinson, V.J. Church, R.A. Gutteridge.

Design: 3 randomised blocks of 8 plots.

Whole plot dimensions: 2.5 x 8.0.

Treatments: All combinations of:-

1. **VARIETY** Varieties:

S47
VINCENT

2. **SEEDRATE** Seed rate (number of seeds sown per square metre):

8
12
16
20

Basal applications: Manures: (0:18:36) at 925 kg. 'Nitram' at 150 kg.
Weedkillers: Glyphosate at 1.4 kg in 200 l. Trifluralin at 1.1 kg in 220 l. Linuron at 0.50 kg in 220 l. Desiccant: Diquat at 0.60 kg ion in 220 l.

Cultivations, etc.:- PK applied: 28 Sept, 1988. Glyphosate applied: 22 Oct. Ploughed: 16 Dec. N applied: 14 Apr, 1989. Trifluralin applied, rotary cultivated: 20 Apr. Seed sown: 21 Apr. Rolled, linuron applied: 24 Apr. Irrigated 12 mm: 5 June and 25 mm: 13 June. Desiccant applied to S47: 18 Aug. Desiccant applied to Vincent: 4 Sept. Hand harvested S47: 21 Aug. Hand harvested Vincent: 8 Sept. Previous crops: W. wheat 1987, s. beans 1988.

NOTE: The plots were covered by a bird-proof net from early May to maturity. Growth stages were monitored fortnightly. Head diameters and heights were measured. Botrytis was assessed in August. Plants were counted before harvest.

89/R/SU/2

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SEEDRATE	8	12	16	20	Mean
VARIETY					
S47	2.84	2.74	2.94	2.07	2.65
VINCENT	3.42	4.41	3.91	3.40	3.78
Mean	3.13	3.57	3.43	2.73	3.22

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

VARIETY	SEEDRATE	VARIETY SEEDRATE
0.200	0.282	0.399

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	14	0.489	15.2
GRAIN MEAN DM%	78.3		
PLOT AREA HARVESTED	0.00160		