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

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88/R/SU/1

SUNFLOWERS

EARLY VARIETIES AND PLANT HEALTH

Object: To compare six varieties of sunflower with and without pest and pathogen control - Fosters Corner.

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

Design: 3 randomised blocks of 12 plots.

Whole plot dimensions: 2.5 x 8.0.

Treatments: All combinations of:-

1. **VARIETY** Varieties:

S10	S - 10
HA 701	HA 701
S34	S - 34
S47	S - 47
S54	S - 54
S69	S - 69

2. **PATHCONT** Pathogen control:

NONE	None
FULL	Full: Pirimicarb at 0.14 kg in 220 l on 23 June, 1988. Carbendazim at 0.25 kg with vinclozolin at 0.50 kg in 220 l on 7, 15, 26 July, 3 and 15 Aug.

Basal applications: Manures: (10:10:15+4.5 Mg) at 600 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 0.80 kg ion in 440 l to S10, at 0.60 kg ion in 220 l to other varieties .

Seed: Varieties, sown at 100,000 seeds per hectare.

Cultivations, etc.:- Glyphosate applied: 17 Nov, 1987. Ploughed: 8 Dec. Manures applied: 11 Mar, 1988. Trifluralin applied, spring-tine cultivated, rotary harrowed twice: 6 Apr. Seed sown, rolled: 7 Apr. Linuron applied: 11 Apr. Desiccant applied to all plots except S10: 5 Sept, to S10 plots: 29 Sept. Harvested by hand, threshed by stationary combine harvester, all plots except S10: 6 Sept, S10 plots: 30 Sept. Previous crops: S. oats 1986, w. wheat 1987.

- NOTES:** (1) Plots were covered by a bird-proof net from mid-April to maturity.
- (2) Crop height was measured at anthesis. Head diameters and neck thickness were measured at maturity. Botrytis was assessed on four occasions.

88/R/SU/1

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

PATHCONT VARIETY	NONE	FULL	Mean
S10	1.87	2.01	1.94
HA 701	2.88	2.76	2.82
S34	0.70	0.86	0.78
S47	1.74	1.78	1.76
S54	1.40	1.42	1.41
S69	1.35	1.41	1.38
Mean	1.66	1.71	1.68

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

VARIETY	PATHCONT	VARIETY PATHCONT
0.078	0.045	0.110

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	22	0.135	8.0
GRAIN MEAN DM%	66.6		
PLOT AREA HARVESTED	0.00120		