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87/R/SU/3

SUNFLOWERS

PESTS AND PATHOGENS

Object: To study the separate and combined effects of pest and pathogen control on sunflowers - Garden Plot 2.

Sponsors: A.W. Ferguson, C.J. Rawlinson.

Design: 4 randomised blocks of 4 plots.

Whole plot dimensions: 2.13 x 10.1.

Treatments: All combinations of:-

1. PESTCONT Sprays to control pests:

NONE	None
FULL	Full: Pirimicarb at 0.14 kg on 25 July, 1987, 5, 19 Aug, 3, 17 Sept. Malathion at 1.3 l on 4, 11, 19 Aug

2. PATHCONT Sprays to control pathogens:

NONE	None
FULL	Full: Carbendazim at 0.25 kg with vinclozolin at 0.50 kg on 25 July, 5, 19 Aug, 3, 17 Sept, 1 Oct

- NOTES: (1) Pesticides were applied in the same 220 l when applied on the same day otherwise in 220 l each. Fungicides were always applied together in 220 l.
(2) The crop was netted against bird damage from late Aug to harvest.
(3) A planned test of varieties was thwarted by bird damage.

Basal applications : Manures: 'Nitro-Chalk' at 225 kg. Weedkillers: Glyphosate at 1.4 kg in 220 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.

Seed: Asmer 9, sown at 90,000 seeds per hectare.

Cultivations, etc.: - Glyphosate applied: 1 Oct, 1986. Ploughed: 15 Oct. N applied: 21 Apr, 1987. Trifluralin applied, rotary cultivated: 23 Apr. Seed sown, rolled: 24 Apr. Linuron applied: 29 Apr. Diquat applied: 19 Oct. Harvested by hand: 23 Oct (threshed by stationary combine harvester). Previous crops: Mixed legumes 1985, s. barley 1986.

- NOTES: (1) Aphids and pollen beetles were counted weekly in late summer.
(2) Growth stages and diseases were observed on six occasions during the season.

87/R/SU/3

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

PATHCONT	NONE	FULL	Mean
PESTCONT			
NONE	1.98	2.06	2.02
FULL	1.84	2.05	1.95
Mean	1.91	2.05	1.98

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

Table	PESTCONT	PATHCONT	PESTCONT PATHCONT
s.e.d.	0.110	0.110	0.156

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	9	0.221	11.1

GRAIN MEAN DM% 60.0

PLOT AREA HARVESTED 0.00215