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Yields of the Field Experiments 1987

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Printed: Rothamsted, Bedfordshire
Rothamsted 2008

87/R/SU/3 Pests and Pathogens - Sunflowers

Rothamsted Research

Rothamsted Research (1988) *87/R/SU/3 Pests and Pathogens - Sunflowers* ; Yields Of The Field Experiments 1987, pp 242 - 243 - DOI: <https://doi.org/10.23637/ERADOC-1-37>

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