

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1987

[Full Table of Content](#)

ARC, Institute of Arable Crops Research
Rothamsted Experimental Station
Harpenden
Herts
SG8 5LR
UK

The copyright in this document is owned by the Rothamsted Research and is licensed to the user under the terms of the Creative Commons Attribution 4.0 International License. For more information on this license please visit <https://creativecommons.org/licenses/by/4.0/>

Printed: 2018-08-08
Rothamsted 2018

87/R/SU/4 Fungicide and Botrytis - Sunflowers

Rothamsted Research

Rothamsted Research (1988) *87/R/SU/4 Fungicide and Botrytis - Sunflowers* ; Yields Of The Field Experiments 1987, pp 244 - 246 - DOI: <https://doi.org/10.23637/ERADOC-1-37>

87/R/SU/4

SUNFLOWERS

FUNGICIDE AND BOTRYTIS

Object: To study the effects of five times and two methods of applying a mixture of fungicides on the control of Botrytis head infection and on the yield of sunflowers - Annables and Long Hoos III 3.

Sponsor: C.J. Rawlinson.

Design: 3 randomised blocks of 12 plots on each site.

Whole plot dimensions: Annables: 4.2 x 7.0. Long Hoos: 2.7 x 8.0.

Treatments: All combinations of:-

1. SPRAYDTE Dates of applying vinclozolin at 0.50 kg and carbendazim at 0.25 kg:

	Annables	Long Hoos
1	25 July, 1987	21 Aug
2	25 July and 5 Aug	21 Aug and 4 Sept
3	25 July, 5 and 19 Aug	21 Aug, 4 and 17 Sept
4	25 July, 5, 19 Aug and 3 Sept	21 Aug, 4, 17 Sept and 1 Oct (duplicated)
5	25 July, 5, 19 Aug, 3 and 16 Sept	

 2. SPRAYMET Method of spraying:

ELECTRO	Electrostatic sprayer in 5.3 l (Annables only)
CNVNTIAL	Conventional hydraulic sprayer in 220 l (duplicated on Long Hoos)
- plus one extra treatment
- EXTRA
- NONE None (duplicated)

NOTE: On Long Hoos the crop was netted from early June to harvest.

Basal applications:

Annables: Manures: 'Nitram' at 170 kg. Weedkiller: Trifluralin at 1.1 kg in 220 l. Desiccant: Diquat at 0.60 kg ion in 220 l.
Long Hoos: Manures: 'Nitro-Chalk' at 255 kg. Weedkillers: 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: Annables: Asmer 3 sown at 90,000 seeds per hectare.

Long Hoos: Asmer 3 failed and site was resown with EX10, both at 90,000 seeds per hectare.

87/R/SU/4

Cultivations, etc.:-

Annables: Ploughed: Autumn 1986, date not recorded. Rotary cultivated, 'Nitram' applied, trifluralin applied, rotary cultivated, seed sown: 15 Apr, 1987. Desiccant applied: 23 Sept. Combine harvested: 29 Sept. Previous crops: W. wheat 1985 and 1986.

Long Hoos: Ploughed: 29 Dec, 1986. 'Nitro-Chalk' applied: 21 Apr, 1987. Spring-tine cultivated, trifluralin applied, rotary cultivated, Asmer 3 sown and rolled: 24 Apr. Linuron applied: 29 Apr. EX10 sown: 28 May. Desiccant applied: 15 Oct. Harvested by hand: 23 Oct (threshed by stationary combine harvester). Previous crops: Fallow 1985, lupins 1986.

NOTE: Botrytis in heads and stems and growth stages were assessed on both sites. More detailed observations on crop growth were made on Annables.

ANNABLES

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

	SPRAYMET	ELECTRO	CNVNTIAL	Mean
	SPRAYDTE			
	1	0.73	0.74	0.73
	2	0.85	0.79	0.82
	3	0.77	0.76	0.77
	4	0.77	0.79	0.78
	5	0.72	0.72	0.72
	Mean	0.77	0.76	0.76
EXTRA NONE		0.84		
Grand mean		0.78		

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

Table	SPRAYDTE	SPRAYMET	SPRAYDTE SPRAYMET
s.e.d.	0.128	0.081	0.181

SED for comparing NONE with any item in SPRAYMET.SPRAYDTE table is 0.156

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	23	0.221	28.5
GRAIN MEAN DM%	69.2		
PLOT AREA HARVESTED	0.00223		

87/R/SU/4

LONG HOOS III

GRAIN (AT 90% DRY MATTER) TONNES/HECTARE

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

SPRAYDTE	NONE	1	2	3	4	5	Mean
	1.02	0.99	1.11	1.10	1.04	0.91	1.03

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

Table	SPRAYDTE
s.e.d.	0.093

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	27	0.161	15.6

GRAIN MEAN DM% 48.2

PLOT AREA HARVESTED 0.00216