

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 1977

[Full Table of Content](#)



77/R/PE/1 and 77/W/PE/1 Control of Pathogens - Peas

Rothamsted Research

Rothamsted Research (1978) *77/R/PE/1 and 77/W/PE/1 Control of Pathogens - Peas* ; Yields Of The Field Experiments 1977, pp 391 - 395 - DOI: <https://doi.org/10.23637/ERADOC-1-29>

77/R/PE/1 and 77/W/PE/1

PEAS

CONTROL OF PATHOGENS

Object: To study the effects of a range of pesticides on the incidence of pathogens and on the yield of leafless peas - Rothamsted (R), Long Hoos V 1 and Woburn (W) Far Field I.

Sponsors: A.J. Cockbain, K.E. Fletcher, J. McEwen, G.A. Salt, C. Wall, A.G. Whitehead.

Design: 3 blocks of 2 x 2 x 2. Randomisation restricted.

Whole plot dimensions: 4.19 x 5.49.

Treatments: All combinations of:-

- | | |
|----------------|--|
| 1. NEMACIDE | Nematicide: |
| NONE | None |
| ALDICARB | Aldicarb at 10 kg to the seedbed |
| 2. INSECTICIDE | Insecticide: |
| NONE | None |
| TRIAZOPH | Triazophos at 0.34 l in 680 l |
| 3. FUNGICIDE | Fungicide: |
| NONE | None |
| BEN+ZIN | Benomyl at 0.56 + zineb at 1.6 kg in 340 l |

Basal applications: Manures: Chalk at 2.9 t to Long Hoos V 1 (R) only. (0:14:28) at 880 kg to Long Hoos V 1 (R). (0:14:28) at 340 kg to Far Field I (W).

Weedkillers: Trietazine plus simazine ('Remtal' at 2.2 kg Long Hoos V 1 (R), at 1.7 kg Far Field I (W)), both in 330 l.

Seed: BS4, dressed thiram, sown at 220 kg Long Hoos V 1 (R), sown at 270 kg Far Field I (W).

Cultivations, etc.: - Long Hoos V 1 (R): Chalk applied: 8 Sept, 1976. Deep-tine cultivated: 13 Sept. PK applied: 8 Nov. Ploughed: 8 Nov-14 Dec. Power harrowed: 6 Apr, 1977. Treatment nematicide applied and all plots power harrowed: 7 Apr. Seed sown: 8 Apr. Weedkillers applied: 15 Apr. Treatment insecticide applied: 7 July. Treatment insecticide repeated and fungicides applied: 22 July. Harvested by hand: 6 Sept. Previous crops: Potatoes 1975, spring wheat 1976.

Far Field I (W): Heavy spring-tine cultivated: 19 Aug, 1976. Ploughed twice: 6 Sept, 15 Feb, 1977. Spring-tine cultivated: 30 Mar. Treatment nematicide applied, PK applied, all plots power harrowed and seed sown: 4 Apr. Weedkillers applied: 13 Apr. Treatment insecticide applied: 6 July. Treatment insecticide repeated and fungicides applied: 22 July. Harvested by hand: 5 Sept. Previous crops: Potatoes 1975, wheat 1976.

NOTE: Pea moth was monitored throughout the season at both sites and pea moth damage was assessed. Observations were made on diseases and pests throughout the season.

77/R/PE/1 LONG HOOS V I(R)

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

INSCTCDE	NONE	TRIAZOPH	MEAN	
NEMACIDE				
NONE	3.27	3.48	3.38	
ALDICARB	3.56	3.59	3.57	
MEAN	3.41	3.54	3.47	
FUNGCIDE	NONE	BEN+ZIN	MEAN	
NEMACIDE				
NONE	3.35	3.41	3.38	
ALDICARB	3.53	3.62	3.57	
MEAN	3.44	3.51	3.47	
FUNGCIDE	NONE	BEN+ZIN	MEAN	
INSCTCDE				
NONE	3.41	3.42	3.41	
TRIAZOPH	3.47	3.60	3.54	
MEAN	3.44	3.51	3.47	
INSCTCDE	NONE	TRIAZOPH		
FUNGCIDE	NONE	BEN+ZIN	NONE	BEN+ZIN
NEMACIDE				
NONE	3.31	3.23	3.39	3.58
ALDICARB	3.51	3.60	3.55	3.63

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	NEMACIDE	INSCTCDE	FUNGCIDE	NEMACIDE INSCTCDE
SED	0.113	0.113	0.113	0.160
TABLE	NEMACIDE FUNGCIDE	INSCTCDE FUNGCIDE	NEMACIDE INSCTCDE FUNGCIDE	
SED	0.160	0.160	0.226	

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	14	0.277	8.0
GRAIN MEAN DM%	76.0		

77/R/PE/1 LONG HOOS V I(R)

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

INSCTCDE	NONE	TRIAZOPH	MEAN
NEMACIDE			
NONE	4.69	5.06	4.87
ALDICARB	5.28	5.00	5.14
MEAN	4.99	5.03	5.01

FUNGCIDE	NONE	BEN+ZIN	MEAN
NEMACIDE			
NONE	4.70	5.05	4.87
ALDICARB	5.18	5.10	5.14
MEAN	4.94	5.07	5.01

FUNGCIDE	NONE	BEN+ZIN	MEAN
INSCTCDE			
NONE	4.82	5.15	4.99
TRIAZOPH	5.05	5.00	5.03
MEAN	4.94	5.07	5.01

INSCTCDE	NONE	TRIAZOPH		
FUNGCIDE	NONE	BEN+ZIN	NONE	BEN+ZIN
NEMACIDE				
NONE	4.24	5.15	5.16	4.96
ALDICARB	5.41	5.15	4.95	5.04

STRAW MEAN DM% 71.4

PLOT AREA HARVESTED 0.00091

77/W/PE/1 FARFIELD I(W)

GRAIN TONNES/HECTARE

***** TABLES OF MEANS *****

INSCTCDE	NONE	TRIAZOPH	MEAN	
NEMACIDE				
NONE	2.81	3.08	2.95	
ALDICARB	3.74	3.86	3.80	
MEAN	3.28	3.47	3.37	
FUNGCIDE	NONE	BEN+ZIN	MEAN	
NEMACIDE				
NONE	2.95	2.94	2.95	
ALDICARB	3.59	4.01	3.80	
MEAN	3.27	3.48	3.37	
FUNGCIDE	NONE	BEN+ZIN	MEAN	
INSCTCDE				
NONE	3.22	3.33	3.28	
TRIAZOPH	3.32	3.62	3.47	
MEAN	3.27	3.48	3.37	
INSCTCDE	NONE	TRIAZOPH		
FUNGCIDE	NONE	BEN+ZIN	NONE	BEN+ZIN
NEMACIDE				
NONE	2.85	2.76	3.04	3.12
ALDICARE	3.58	3.91	3.60	4.12

***** STANDARD ERRORS OF DIFFERENCES OF MEANS *****

TABLE	NEMACIDE	INSCTCDE	FUNGCIDE	NEMACIDE INSCTCDE
SED	0.127	0.127	0.127	0.180
TABLE	NEMACIDE FUNGCIDE	INSCTCDE FUNGCIDE	NEMACIDE INSCTCDE FUNGCIDE	
SED	0.180	0.160	0.254	

***** STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION *****

STRATUM	DF	SE	CV%
BLOCK.WP	14	0.312	9.2
GRAIN MEAN DM%	80.4		

77/W/PE/1 FARFIELD I(W)

STRAW TONNES/HECTARE

***** TABLES OF MEANS *****

INSCTCDE NEMACIDE	NONE	TRIAZOPH	MEAN
NONE	2.48	2.68	2.58
ALDICARB	3.01	2.90	2.96
MEAN	2.74	2.79	2.77

FUNGCIDE NEMACIDE	NONE	BEN+ZIN	MEAN
NONE	2.64	2.52	2.58
ALDICARB	2.86	3.05	2.96
MEAN	2.75	2.78	2.77

FUNGCIDE INSCTCDE	NONE	BEN+ZIN	MEAN
NONE	2.70	2.78	2.74
TRIAZOPH	2.80	2.78	2.79
MEAN	2.75	2.78	2.77

INSCTCDE FUNGCIDE NEMACIDE	NONE	TRIAZOPH	
	NONE	BEN+ZIN	MEAN
NONE	2.48	2.48	2.80
ALDICARB	2.93	3.09	2.80
			2.56
			3.00

STRAW MEAN DM% 85.5

PLOT AREA HARVESTED 0.00091