

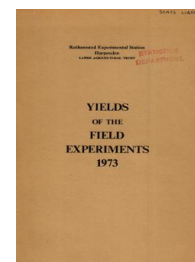
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1973

[Full Table of Content](#)



73/W/CS/52 - Copper Sprays & 'scorch' - Spring Wheat

Rothamsted Research

Rothamsted Research (1974) 73/W/CS/52 - *Copper Sprays & 'scorch' - Spring Wheat* ; Yields Of The Field Experiments 1973, pp 213 - 216 - DOI: <https://doi.org/10.23637/ERADOC-1-98>

T3/W/CS/52

COPPER SPRAYS AND 'SCORCH'

Object: To study the residual effects of dazomet, formalin and aldicarb applied in 1971, repeated on half plots in 1972, at a range of nitrogen levels, on nematodes and yield of spring wheat. The effects of a copper oxychloride spray are also studied - Woburn Butt Close.

Sponsors: T.D. Williams, J. Bolton.

The third year, spring wheat.

For previous years see T1/W/CS/52(t) and T2/W/CS/52(t).

Design: 4 blocks of 12 plots, split into 2.

Whole plot dimensions: 2.13 x 9.14. Area harvested: 0.00059.

Treatments: All combinations of:-

Whole plots: 1. Fumigants:	FUMIGANT
None	None
Aldicarb 9 kg	Aldicarb
Dazomet 380 kg	Dazomet
Formalin (38% formaldehyde) 3000 l	Formalin
2. Nitrogen fertiliser (kg N per annum) applied 1971 and 1972, with basal dressing of 165 kg N in 1973 only	NRESID
63	63
126	126
189	189
3. Copper oxychloride foliar spray in 1973 (kg Cu)	COPPER
0.0	0.0
1.1	1.1
2.2	2.2
Sub plots: 4. Years of application of fumigants:	FUMYEAR
1971 only	1971
1971 and 1972 cumulatively	1971/72

On one block the test of copper oxychloride was omitted.

T3/W/CS/52

Basal applications: Manures: Magnesian limestone at 7.5 tonnes. N at 180 kg as 'Nitro-Chalk', (0:20:20) at 400 kg combine drilled. Weedkiller: Ioxynil at 0.53 kg plus mecoprop at 1.6 kg in 280 l.

Seed: Kleiber, sown at 190 kg.

Cultivations, etc.: Deep-tine cultivated: 27 Sept, 1972. Magnesian limestone applied: 3 Oct. Deep-tine cultivated: 28 Oct. Ploughed: 4 Jan, 1973. N applied: 8 Mar. Seed sown: 15 Mar. Copper oxychloride treatments applied: 31 May. Weedkiller applied: 11 May. Combine harvested: 20 Aug.

- NOTE: 1. Soil samples were taken before sowing and after harvest for counts of nematode eggs and larvae.
2. Plant samples were taken in May for counts of root invasion by nematodes.

Standard errors per plot.

Grain, tonnes/hectare: Blocks 2, 3 and 4: Whole plot: 0.345 or 18.3% (10 d.f.)
Sub plot: 0.216 or 11.5% (28 d.f.)

73/W/CS/52

TABLES OF MEANS

GRAIN: TONNES/HECTARE

BLOCKS 2, 3 AND 4

FUMIGANT	NRESID			COPPER			FUMYEAR		
	63	126	189	0.0	1.1	2.2	1971	1971/72	Mean
None	1.69	1.78	1.53	1.64	1.83	1.53	1.67	1.67	1.67
Aldicarb	2.02	2.10	1.92	2.23	1.89	1.92	1.95	2.08	2.01
Dazomet	2.12	1.90	2.03	2.13	1.78	2.12	1.94	2.08	2.01
Formalin	1.71	1.81	2.00	1.74	1.79	2.00	1.86	1.83	1.84
NRESID									
	63			1.88	1.82	1.95	1.87	1.90	1.88
	126			1.87	1.89	1.93	1.88	1.92	1.90
	189			2.05	1.76	1.79	1.81	1.92	1.87
COPPER									
				0.0			1.89	1.99	1.94
				1.1			1.75	1.89	1.82
				2.2			1.92	1.86	1.89
Mean							1.85	1.91	1.88

STANDARD ERRORS OF DIFFERENCES

FUMIGANT	NRESID	COPPER	FUMYEAR	FUMIGANT NRESID	FUMIGANT COPPER	NRESID COPPER	FUMIGANT FUMYEAR
0.163	0.141	0.141	0.051	0.282	0.282	0.247	0.178
Except when comparing means with same level of FUMIGANT							0.102

NRESID	COPPER
FUMYEAR	FUMYEAR
0.154	0.154
Except when comparing means with same level of	
NRESID	0.088
COPPER	0.088

Mean D.M. % 85.8

73/W/CS/52

GRAIN: TONNES/HECTARE

BLOCK 1

	NRESID			FUMYEAR		
	63	126	189	1971	1971/72	Mean
FUMIGANT						
None	1.85	2.01	2.05	1.93	2.00	1.97
Aldicarb	2.54	2.30	1.45	2.24	1.96	2.10
Dazomet	2.04	2.28	2.00	2.02	2.19	2.11
Formalin	1.66	1.84	2.22	2.00	1.81	1.91
	NRESID					
		63		2.11	1.94	2.02
		126		2.07	2.14	2.11
		189		1.97	1.89	1.93
Mean				2.05	1.99	2.02

	63		126		189	
	1971	1971/72	1971	1971/72	1971	1971/72
FUMIGANT						
None	1.76	1.94	2.02	1.99	2.02	2.08
Aldicarb	2.73	2.36	2.41	2.18	1.57	1.33
Dazomet	1.97	2.10	2.15	2.42	1.96	2.04
Formalin	1.96	1.35	1.71	1.97	2.33	2.11

Mean D.M. % 85.8