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88/R/CS/140 Chemical Reference Plots - S. Barley

Rothamsted Research

Rothamsted Research (1989) *88/R/CS/140 Chemical Reference Plots - S. Barley* ; Yields Of The Field Experiments 1988, pp 85 - 89 - DOI: <https://doi.org/10.23637/ERADOC-1-43>

88/R/CS/140

CHEMICAL REFERENCE PLOTS

Object: To study the persistence in soil of agricultural chemicals applied annually, singly and in combination and their effects on soil microflora and on yield of continuous s. barley - Long Hoos V 3.

Sponsors: R.H. Bromilow, R. Macdonald.

The 15th year, s. barley.

For previous years see 74-87/R/CS/140.

Design: Single replicate of 32 plots.

Whole plot dimensions: 4.06 x 4.57.

Treatments, applied cumulatively except as stated:

All combinations of:-

1. **WEEDKLLR** Weedkiller in autumn:

NONE	None
GLYPHOS	Glyphosate at 1.4 kg to barley stubble each autumn from 1979 to 1984, at 0.72 kg in 1985, at 0.54 kg in 1986 and at 1.3 kg in 1987
2. **FUNGICIDE[1]** Fungicide in autumn:

NONE	None
TRIADIM	Triadimefon at 0.25 kg in autumn 1981, 1982, 1984, 1985, 1986 and 1987, 0.28 kg in autumn 1983
3. **FUNGICIDE[2]** Fungicide in spring:

NONE	None
BENOMYL	Benomyl at 4 kg to seedbed
4. **INSECTCIDE** Insecticide:

NONE	None
CHLORFEN	Chlorfenvinphos at 2 kg to the seedbed
5. **NEMACIDE** Nematicide:

NONE	None
ALDICARB	Aldicarb at 6 kg to the seedbed

NOTE: Glyphosate and triadimefon were applied in 220 l on 5 Oct, 1987 and 30 Oct respectively. Other treatments were applied on 7 Apr, 1988.

Basal applications: Manure: 'Nitro-Chalk' at 550 kg. Weedkillers: Bentazone at 0.80 kg, dichlorprop at 1.1 kg and MCPA at 0.64 kg in 220 l.

Seed: Doublet, seed not dressed, sown at 160 kg.

88/R/CS/140

Cultivations, etc.:- Ploughed: 27 Nov, 1987. N applied: 29 Feb, 1988.
Spring-time cultivated, seedbed treatments applied, rotary harrowed
and seed sown: 7 Apr. Weedkillers applied: 5 May. Combine
harvested: 22 Aug.

GRAIN TONNES/HECTARE

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

FUNGCIDE[1]	NONE	TRIADIM	Mean
WEEDKLLR			
NONE	4.31	4.17	4.24
GLYPHOS	4.29	4.38	4.34
Mean	4.30	4.28	4.29

FUNGCIDE[2]	NONE	BENOMYL	Mean
WEEDKLLR			
NONE	4.25	4.24	4.24
GLYPHOS	4.31	4.36	4.34
Mean	4.28	4.30	4.29

FUNGCIDE[2]	NONE	BENOMYL	Mean
FUNGCIDE[1]			
NONE	4.24	4.37	4.30
TRIADIM	4.32	4.24	4.28
Mean	4.28	4.30	4.29

INSTCDE	NONE	CHLORFEN	Mean
WEEDKLLR			
NONE	4.25	4.24	4.24
GLYPHOS	4.29	4.38	4.34
Mean	4.27	4.31	4.29

INSTCDE	NONE	CHLORFEN	Mean
FUNGCIDE[1]			
NONE	4.24	4.37	4.30
TRIADIM	4.30	4.25	4.28
Mean	4.27	4.31	4.29

INSTCDE	NONE	CHLORFEN	Mean
FUNGCIDE[2]			
NONE	4.24	4.32	4.28
BENOMYL	4.30	4.30	4.30
Mean	4.27	4.31	4.29

NEMACIDE	NONE	ALDICARB	Mean
WEEDKLLR			
NONE	4.05	4.44	4.24
GLYPHOS	4.21	4.47	4.34
Mean	4.13	4.45	4.29

88/R/CS/140

GRAIN TONNES/HECTARE

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

NEMACIDE	NONE	ALDICARB	Mean
FUNGCIDE[1]			
NONE	4.08	4.53	4.30
TRIADIM	4.18	4.38	4.28
Mean	4.13	4.45	4.29
NEMACIDE	NONE	ALDICARB	Mean
FUNGCIDE[2]			
NONE	4.16	4.40	4.28
BENOMYL	4.10	4.50	4.30
Mean	4.13	4.45	4.29
NEMACIDE	NONE	ALDICARB	Mean
INSCTCDE			
NONE	4.05	4.50	4.27
CHLORFEN	4.21	4.41	4.31
Mean	4.13	4.45	4.29
WEEDKLLR	FUNGCIDE[2]	NONE	BENOMYL
NONE	FUNGCIDE[1]		
	NONE	4.30	4.33
	TRIADIM	4.20	4.15
GLYPHOS	NONE	4.19	4.40
	TRIADIM	4.43	4.33
WEEDKLLR	INSCTCDE	NONE	CHLORFEN
NONE	FUNGCIDE[1]		
	NONE	4.24	4.38
	TRIADIM	4.26	4.09
GLYPHOS	NONE	4.24	4.35
	TRIADIM	4.34	4.41
WEEDKLLR	INSCTCDE	NONE	CHLORFEN
NONE	FUNGCIDE[2]		
	NONE	4.26	4.24
	BENOMYL	4.24	4.23
GLYPHOS	NONE	4.22	4.39
	BENOMYL	4.36	4.37
FUNGCIDE[1]	INSCTCDE	NONE	CHLORFEN
NONE	FUNGCIDE[2]		
	NONE	4.13	4.36
	BENOMYL	4.36	4.37
TRIADIM	NONE	4.36	4.27
	BENOMYL	4.24	4.23

88/R/CS/140

GRAIN TONNES/HECTARE

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

		NEMACIDE	NONE	ALDICARB
WEEDKLLR	FUNGCIDE[1]			
NONE	NONE		4.05	4.58
	TRIADIM		4.06	4.29
GLYPHOS	NONE		4.12	4.47
	TRIADIM		4.30	4.46
		NEMACIDE	NONE	ALDICARB
WEEDKLLR	FUNGCIDE[2]			
NONE	NONE		4.05	4.46
	BENOMYL		4.06	4.41
GLYPHOS	NONE		4.27	4.35
	BENOMYL		4.15	4.58
		NEMACIDE	NONE	ALDICARB
FUNGCIDE[1]	FUNGCIDE[2]			
NONE	NONE		4.03	4.46
	BENOMYL		4.14	4.59
TRIADIM	NONE		4.28	4.35
	BENOMYL		4.07	4.40
		NEMACIDE	NONE	ALDICARB
WEEDKLLR	INSCTCDE			
NONE	NONE		3.99	4.52
	CHLORFEN		4.12	4.36
GLYPHOS	NONE		4.11	4.47
	CHLORFEN		4.30	4.46
		NEMACIDE	NONE	ALDICARB
FUNGCIDE[1]	INSCTCDE			
NONE	NONE		3.94	4.54
	CHLORFEN		4.22	4.51
TRIADIM	NONE		4.16	4.45
	CHLORFEN		4.20	4.31
		NEMACIDE	NONE	ALDICARB
FUNGCIDE[2]	INSCTCDE			
NONE	NONE		4.02	4.47
	CHLORFEN		4.30	4.34
BENOMYL	NONE		4.08	4.52
	CHLORFEN		4.12	4.48

88/R/CS/140

GRAIN TONNES/HECTARE

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

Margins of two factor tables	0.063
Two factor tables	0.089
Three factor tables	0.126

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

Stratum	d.f.	s.e.	cv%
WP	6	0.178	4.1

GRAIN MEAN DM% 85.2

PLOT AREA HARVESTED 0.00075