

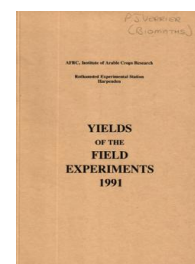
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91/R/CS/140 Chemical Reference Plots - S. Barley

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91/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, A.A. Evans, P.H. Nicholls.

The 18th year, s. barley.

For previous years see 74-90/R/CS/140.

Design: Single replicate of 32 plots.

Whole plot dimensions: 4.06 x 4.57.

Treatments, applied cumulatively every year 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, at 1.3 kg in 1987 and at 1.5 kg in 1988 to 1990.
2. **FUNGICIDE[1]** Fungicide in autumn:

NONE	None
TRIADIM	Triadimefon at 0.25 kg in autumn 1981, 1982, 1984 to 1990, 0.28 kg in autumn 1983
3. **FUNGICIDE[2]** Fungicide in spring:

NONE	None
BENOMYL	Benomyl at 4 kg to seedbed
4. **INSECTCDE** 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 28 Sept, 1990. Other treatments were applied on 8 Apr, 1991.

Basal applications: Manures: Muriate of potash at 520 kg. Magnesian limestone at 2.9 t. 'Nitram' at 440 kg. Weedkiller: Fluroxypyr at 0.15 kg in 200 l.

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

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Cultivations, etc.:— K applied: 14 Sept, 1990. Magnesian limestone applied: 4 Oct. Ploughed: 5 Dec. N applied, heavy spring-tine cultivated, rotary harrowed: 8 Apr, 1991. Seed sown, rolled: 9 Apr. Weedkiller applied: 16 June. Combine harvested: 21 Aug.

GRAIN TONNES/HECTARE

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

FUNGCIDE[1]	NONE	TRIADIM	Mean
WEEDKILLR			
NONE	6.07	6.07	6.07
GLYPHOS	6.11	6.09	6.10
Mean	6.09	6.08	6.08
FUNGCIDE[2]	NONE	BENOMYL	Mean
WEEDKILLR			
NONE	6.01	6.13	6.07
GLYPHOS	6.07	6.13	6.10
Mean	6.04	6.13	6.08
FUNGCIDE[2]	NONE	BENOMYL	Mean
FUNGCIDE[1]			
NONE	6.04	6.14	6.09
TRIADIM	6.04	6.12	6.08
Mean	6.04	6.13	6.08
INSCTCDE	NONE	CHLORFEN	Mean
WEEDKILLR			
NONE	5.97	6.17	6.07
GLYPHOS	5.95	6.25	6.10
Mean	5.96	6.21	6.08
INSCTCDE	NONE	CHLORFEN	Mean
FUNGCIDE[1]			
NONE	6.02	6.16	6.09
TRIADIM	5.90	6.26	6.08
Mean	5.96	6.21	6.08
INSCTCDE	NONE	CHLORFEN	Mean
FUNGCIDE[2]			
NONE	5.90	6.18	6.04
BENOMYL	6.02	6.24	6.13
Mean	5.96	6.21	6.08
NEMACIDE	NONE	ALDICARB	Mean
WEEDKILLR			
NONE	6.00	6.14	6.07
GLYPHOS	6.14	6.06	6.10
Mean	6.07	6.10	6.08

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GRAIN TONNES/HECTARE

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

NEMACIDE	NONE	ALDICARB	Mean
FUNGCIDE[1]			
NONE	6.01	6.17	6.09
TRIADIM	6.13	6.03	6.08
Mean	6.07	6.10	6.08

NEMACIDE	NONE	ALDICARB	Mean
FUNGCIDE[2]			
NONE	6.09	5.99	6.04
BENOMYL	6.05	6.21	6.13
Mean	6.07	6.10	6.08

NEMACIDE	NONE	ALDICARB	Mean
INSCDCDE			
NONE	5.95	5.96	5.96
CHLORFEN	6.19	6.23	6.21
Mean	6.07	6.10	6.08

FUNGCIDE[1]	NONE	TRIADIM
WEEDKLLR FUNGCIDE[2]	NONE BENOMYL	NONE BENOMYL
NONE	5.98 6.16	6.05 6.09
GLYPHOS	6.10 6.13	6.03 6.14

FUNGCIDE[1]	NONE	TRIADIM
WEEDKLLR INSCDCDE	NONE CHLORFEN	NONE CHLORFEN
NONE	6.05 6.09	5.89 6.26
GLYPHOS	5.99 6.24	5.91 6.26

FUNGCIDE[2]	NONE	BENOMYL
WEEDKLLR INSCDCDE	NONE CHLORFEN	NONE CHLORFEN
NONE	5.85 6.18	6.08 6.17
GLYPHOS	5.95 6.19	5.95 6.32

FUNGCIDE[2]	NONE	BENOMYL
FUNGCIDE[1] INSCDCDE	NONE CHLORFEN	NONE CHLORFEN
NONE	6.02 6.06	6.02 6.27
TRIADIM	5.78 6.30	6.02 6.22

FUNGCIDE[1]	NONE	TRIADIM
WEEDKLLR NEMACIDE	NONE ALDICARB	NONE ALDICARB
NONE	5.92 6.21	6.08 6.06
GLYPHOS	6.10 6.13	6.18 5.99

FUNGCIDE[2]	NONE	BENOMYL
WEEDKLLR NEMACIDE	NONE ALDICARB	NONE ALDICARB
NONE	6.00 6.02	6.00 6.25
GLYPHOS	6.18 5.95	6.10 6.17

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GRAIN TONNES/HECTARE

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

FUNGICIDE [2]		NONE		BENOMYL	
FUNGICIDE [1]	NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
NONE		6.06	6.02	5.97	6.31
TRIADIM		6.13	5.95	6.13	6.10
INSCTCDE		NONE		CHLORFEN	
WEEDKLLR	NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
NONE		5.88	6.05	6.12	6.22
GLYPHOS		6.02	5.88	6.26	6.24
INSCTCDE		NONE		CHLORFEN	
FUNGICIDE [1]	NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
NONE		5.98	6.06	6.05	6.28
TRIADIM		5.93	5.87	6.33	6.19
INSCTCDE		NONE		CHLORFEN	
FUNGICIDE [2]	NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
NONE		5.93	5.87	6.25	6.11
BENOMYL		5.97	6.06	6.13	6.36

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

Margins of two factor tables 0.129
Two factor tables 0.182
Three factor tables 0.257

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

Stratum	d.f.	s.e.	cv%
WP	6	0.364	6.0

GRAIN MEAN DM% 88.8

PLOT AREA HARVESTED 0.00069