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Yields of the Field Experiments 1982

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

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82/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: G.G. Briggs, R. MacDonald.

The ninth year, s. barley.

For previous years see 74-81/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 1.5 kg to stubble of 1979, 1980 and 1981 s. barley. |
| 2. FUNGCIDE(1) | Fungicide in autumn: |
| NONE | None |
| TRIADIM | Triadimefon at 0.25 kg in autumn 1981 only, cumulative to chlortoluron in 1974 and 1976 only |
| 3. FUNGCIDE(2) | Fungicide in spring: |
| NONE | None |
| BENOMYL | Benomyl at 4 kg to the seedbed |
| 4. INSCTCDE | Insecticide: |
| NONE | None |
| CHLORFEN | Chlorfenvinphos at 2 kg to the seedbed |
| 5. NEMACIDE | Nematicide: |
| NONE | None |
| ALDICARB | Aldicarb at 6 kg to the seedbed as granules |

NOTE: Glyphosate was applied in 340 l on 22 Sept, 1981, triadimefon on 26 Nov. Other treatments were applied on 25 Mar, 1982.

Basal applications: Manure: 'Nitro-Chalk' at 450 kg. Weedkillers: Dicamba with mecoprop and MCPA (as 'Banlene Plus' at 4.9 l) in 340 l.

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

Cultivations, etc.: - Ploughed: 1 Dec, 1981. N applied, spring-tine cultivated: 24 Mar, 1982. Power harrowed, seed sown: 25 Mar.

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Weedkillers applied: 18 May. Combine harvested: 11 Aug.

NOTE: Mildew and aphids were assessed twice during the season, and soil was analysed for benomyl residues.

GRAIN TONNES/HECTARE

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

FUNGCIDE(1)	NONE	TRIADIM	MEAN
WEEDKLLR			
NONE	5.05	5.57	5.31
GLYPHOS	4.86	5.31	5.08
MEAN	4.95	5.44	5.20
FUNGCIDE(2)	NONE	BENOMYL	MEAN
WEEDKLLR			
NONE	5.17	5.45	5.31
GLYPHOS	5.01	5.16	5.08
MEAN	5.09	5.30	5.20
FUNGCIDE(2)	NONE	BENOMYL	MEAN
FUNGCIDE(1)			
NONE	4.82	5.09	4.95
TRIADIM	5.35	5.52	5.44
MEAN	5.09	5.30	5.20
INSCTCDE	NONE	CHLORFEN	MEAN
WEEDKLLR			
NONE	5.18	5.43	5.31
GLYPHOS	4.97	5.20	5.08
MEAN	5.08	5.31	5.20
INSCTCDE	NONE	CHLORFEN	MEAN
FUNGCIDE(1)			
NONE	4.96	4.94	4.95
TRIADIM	5.19	5.68	5.44
MEAN	5.08	5.31	5.20
INSCTCDE	NONE	CHLORFEN	MEAN
FUNGCIDE(2)			
NONE	4.98	5.20	5.09
BENOMYL	5.18	5.43	5.30
MEAN	5.08	5.31	5.20
NEMACIDE	NONE	ALDICARB	MEAN
WEEDKLLR			
NONE	5.17	5.45	5.31
GLYPHOS	5.14	5.03	5.08
MEAN	5.15	5.24	5.20

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GRAIN TONNES/HECTARE

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

NEMACIDE	NONE	ALDICARB	MEAN	
FUNGICIDE(1)				
NONE	4.96	4.94	4.95	
TRIADIM	5.35	5.53	5.44	
MEAN	5.15	5.24	5.20	
NEMACIDE	NONE	ALDICARB	MEAN	
FUNGICIDE(2)				
NONE	5.19	4.99	5.09	
BENOMYL	5.12	5.49	5.30	
MEAN	5.15	5.24	5.20	
NEMACIDE	NONE	ALDICARB	MEAN	
INSECTCDE				
NONE	5.06	5.10	5.08	
CHLORFEN	5.25	5.38	5.31	
MEAN	5.15	5.24	5.20	
FUNGICIDE(1)	NONE		TRIADIM	
FUNGICIDE(2)	NONE	BENOMYL	NONE	BENOMYL
WEEDKLLR				
NONE	4.91	5.19	5.43	5.70
GLYPHOS	4.73	4.98	5.28	5.34
FUNGICIDE(1)	NONE		TRIADIM	
INSECTCDE	NONE	CHLORFEN	NONE	CHLORFEN
WEEDKLLR				
NONE	4.98	5.12	5.39	5.74
GLYPHOS	4.95	4.77	4.99	5.63
FUNGICIDE(2)	NONE		BENOMYL	
INSECTCDE	NONE	CHLORFEN	NONE	CHLORFEN
WEEDKLLR				
NONE	5.10	5.23	5.27	5.62
GLYPHOS	4.86	5.16	5.09	5.24
FUNGICIDE(2)	NONE		BENOMYL	
INSECTCDE	NONE	CHLORFEN	NONE	CHLORFEN
FUNGICIDE(1)				
NONE	4.69	4.95	5.24	4.93
TRIADIM	5.27	5.44	5.12	5.93
FUNGICIDE(1)	NONE		TRIADIM	
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
WEEDKLLR				
NONE	4.96	5.13	5.37	5.76
GLYPHOS	4.96	4.75	5.32	5.30

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GRAIN TONNES/HECTARE

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

FUNGCIDE(2)	NONE	ALDICARB	BENOMYL	ALDICARB
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
WEEDKLLR				
NONE	5.06	5.27	5.27	5.62
GLYPHOS	5.31	4.70	4.97	5.35
FUNGCIDE(2)	NONE	ALDICARB	BENOMYL	ALDICARB
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
FUNGCIDE(1)				
NONE	4.90	4.73	5.02	5.15
TRIADIM	5.47	5.24	5.22	5.82
INSCTCDE	NONE	ALDICARB	CHLORFEN	ALDICARB
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
WEEDKLLR				
NONE	5.14	5.23	5.20	5.66
GLYPHOS	4.98	4.96	5.30	5.10
INSCTCDE	NONE	ALDICARB	CHLORFEN	ALDICARB
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
FUNGCIDE(1)				
NONE	4.90	5.03	5.03	4.86
TRIADIM	5.22	5.16	5.47	5.90
INSCTCDE	NONE	ALDICARB	CHLORFEN	ALDICARB
NEMACIDE	NONE	ALDICARB	NONE	ALDICARB
FUNGCIDE(2)				
NONE	5.03	4.93	5.35	5.04
BENOMYL	5.09	5.26	5.15	5.71

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

MARGINS OF TWO FACTOR TABLES	0.103
TWO FACTOR TABLES	0.145
THREE FACTOR TABLES	0.205

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

STRATUM	DF	SE	CV%
WP	6	0.290	5.6

GRAIN MEAN DM% 86.7

PLOT AREA HARVESTED 0.00075