ROTHAMSTED RESEARCH

Yields of the Field Experiments 1997

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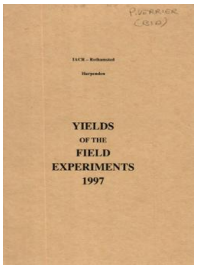

97/R/CS/140 Chemical Reference Plots - S. Barley

Rothamsted Research

Rothamsted Research (1998) *97/R/CS/140 Chemical Reference Plots - S. Barley ;* Yields Of The Field Experiments 1997, pp 55 - 58 **- DOI: https://doi.org/10.23637/ERADOC-1-53**

97/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 yield of continuous s. barley - Long Hoos V 3.

Sponsors: R.H. Bromilow, A.A. Evans, P.H. Nicholls.

The 24th year, s. barley.

For previous years see 74-96/R/CS/140.

Design: Single replicate of 32 plots.

Whole plot dimensions: 4.06 x 4.57.

Treatments: Applied cumulatively every year until 1993, none since.

All combinations of:-

1. **WEEDKLLR** — Weedkiller in autumn:

   (NONE) — None
   (GLYPHOS) — Glyphosate to barley stubble

2. **FUNGCIDE[1]** — Fungicide in autumn:

   (NONE) — None
   (TRIADIM) — Triadimefon in autumn

3. **FUNGCIDE[2]** — Fungicide in spring:

   (NONE) — None
   (BENOMYL) — Benomyl to the seedbed

4. **INSCTCDE** — Insecticide:

   (NONE) — None
   (CHLORFEN) — Chlorfenvinphos to the seedbed

5. **NEMACIDE** — Nematicide:

   (NONE) — None
   (ALDICARB) — Aldicarb to the seedbed

Experimental diary:

02-Dec-96 : B : PK as (0:20:32) at 1563 kg.
20-Jan-97 : B : Ploughed.
11-Mar-97 : B : Spring-tine cultivated.
12-Mar-97 : B : Rotary harrowed, Alexis undressed, drilled at 350 seeds per m^2.
14-May-97 : B : 34.5% N at 435 kg.
26-May-97 : B : Campbell's CMPP at 2.1 l with Vindex at 1.0 l in 300 l.
09-Jul-97 : B : Hand pulled wild oats.

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Experimental diary:
21-Jul-97 : B : Hand pulled wild oats.
21-Aug-97 : B : Combine harvested.

GRAIN TONNES/HECTARE

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

FUNGCIDE[1]	(NONE)	(TRIADIM)	Mean
WEEDKLLR			
(NONE)	4.72	5.02	4.87
(GLYPHOS)	5.47	5.21	5.34
Mean	5.10	5.11	5.10

FUNGCIDE[2]	(NONE)	(BENOMYL)	Mean
WEEDKLLR			
(NONE)	4.82	4.93	4.87
(GLYPHOS)	5.26	5.41	5.34
Mean	5.04	5.17	5.10

FUNGCIDE[2]	(NONE)	(BENOMYL)	Mean
FUNGCIDE[1]			
(NONE)	5.09	5.10	5.10
(TRIADIM)	4.99	5.24	5.11
Mean	5.04	5.17	5.10

INSCTCDE	(NONE)	(CHLORFEN)	Mean
WEEDKLLR			
(NONE)	5.01	4.74	4.87
(GLYPHOS)	5.34	5.34	5.34
Mean	5.17	5.04	5.10

INSCTCDE	(NONE)	(CHLORFEN)	Mean
FUNGCIDE[1]			
(NONE)	5.05	5.15	5.10
(TRIADIM)	5.29	4.93	5.11
Mean	5.17	5.04	5.10

INSCTCDE	(NONE)	(CHLORFEN)	Mean
FUNGCIDE[2]			
(NONE)	5.07	5.01	5.04
(BENOMYL)	5.27	5.07	5.17
Mean	5.17	5.04	5.10

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

NEMACIDE / WEEDKLLR	(NONE)	(ALDICARB)	Mean
(NONE)	4.85	4.89	4.87
(GLYPHOS)	5.43	5.24	5.34
Mean	5.14	5.07	5.10

NEMACIDE / FUNGCIDE[1]	(NONE)	(ALDICARB)	Mean
(NONE)	5.16	5.04	5.10
(TRIADIM)	5.13	5.10	5.11
Mean	5.14	5.07	5.10

NEMACIDE / FUNGCIDE[2]	(NONE)	(ALDICARB)	Mean
(NONE)	4.91	5.17	5.04
(BENOMYL)	5.37	4.97	5.17
Mean	5.14	5.07	5.10

NEMACIDE / INSCTCDE	(NONE)	(ALDICARB)	Mean
(NONE)	5.24	5.10	5.17
(CHLORFEN)	5.04	5.03	5.04
Mean	5.14	5.07	5.10

	FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR	FUNGCIDE[2]	(NONE)	(BENOMYL)	(NONE)	(BENOMYL)
(NONE)		4.59	4.86	5.04	4.99
(GLYPHOS)		5.59	5.35	4.93	5.48

	FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR	INSCTCDE	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		4.78	4.66	5.23	4.81
(GLYPHOS)		5.31	5.63	5.36	5.05

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
WEEDKLLR	INSCTCDE	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		4.79	4.84	5.22	4.63
(GLYPHOS)		5.36	5.17	5.31	5.51

	FUNGCIDE[2]	(NONE)		(BENOMYL)	
FUNGCIDE[1]	INSCTCDE	(NONE)	(CHLORFEN)	(NONE)	(CHLORFEN)
(NONE)		5.09	5.09	5.00	5.21
(TRIADIM)		5.05	4.92	5.54	4.94

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GRAIN TONNES/HECTARE

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

FUNGCIDE[1]	(NONE)		(TRIADIM)	
WEEDKLLR NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	4.72	4.72	4.97	5.07
(GLYPHOS)	5.59	5.35	5.28	5.13

FUNGCIDE[2]	(NONE)		(BENOMYL)	
WEEDKLLR NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	4.63	5.00	5.07	4.79
(GLYPHOS)	5.19	5.34	5.68	5.15

FUNGCIDE[2]	(NONE)		(BENOMYL)	
FUNGCIDE[1] NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	5.01	5.17	5.30	4.91
(TRIADIM)	4.80	5.17	5.45	5.02

INSCTCDE	(NONE)		(CHLORFEN)	
WEEDKLLR NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	5.08	4.93	4.62	4.85
(GLYPHOS)	5.41	5.26	5.46	5.22

INSCTCDE	(NONE)		(CHLORFEN)	
FUNGCIDE[1] NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	5.18	4.91	5.13	5.16
(TRIADIM)	5.30	5.29	4.95	4.91

INSCTCDE	(NONE)		(CHLORFEN)	
FUNGCIDE[2] NEMACIDE	(NONE)	(ALDICARB)	(NONE)	(ALDICARB)
(NONE)	5.09	5.06	4.73	5.28
(BENOMYL)	5.40	5.14	5.35	4.79

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

Margins of two factor tables	0.254
Two factor tables	0.359
Three factor tables	0.507

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

Stratum	d.f.	s.e.	cv%
WP	6	0.718	14.1

GRAIN MEAN DM% 88.0

PLOT AREA HARVESTED 0.00110

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