ROTHAMSTED RESEARCH

Yields of the Field Experiments 1997

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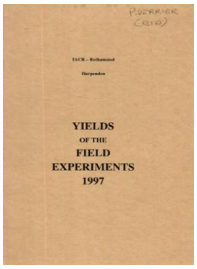

97/W/CS/446 Ryegrass, Wheat Volunteers and Diseases - W. Wheat

Rothamsted Research

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97/W/CS/446

RYEGRASS, WHEAT VOLUNTEERS AND DISEASES

Object: To study how different populations of cereal volunteers and ryegrass sown as a cover crop affect the survival of cereal diseases - Woburn, White Horse.

Sponsors: J.F. Jenkyn, R.J. Gutteridge.

For previous year see 96/W/CS/446.

The second year, w. wheat.

Design: 4 randomised blocks of 10 x 2 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments:

Whole plots

1.	**COV CROP**	Crop, seed rate and soil inoculation in 1996:
	(R)	Ryegrass at 30 kg
	(RW)	Ryegrass at 30 kg + wheat at 50 seeds per m^2
	(RI)	Ryegrass at 30 kg + soil inoculated with *Phialophora graminicola*
	(RWI)	Ryegrass at 30 kg + wheat at 50 seeds per m^2 + soil inoculated with *P. graminicola*
	(M)	Mustard at 300 seeds per m^2
	(MW1)	Mustard at 100 seeds per m^2 + wheat at 4 seeds per m^2
	(MW2)	Mustard at 100 seeds per m^2 + wheat at 9 seeds per m^2
	(MW3)	Mustard at 100 seeds per m^2 + wheat at 50 seeds per m^2
	(MW4)	Mustard at 100 seeds per m^2 + wheat at 200 seeds per m^2
	(MW5)	Mustard at 30 seeds per m^2 + wheat at 400 seeds per m^2
2.	**PLOUGH**	Time of ploughing in 1996:
	(PE)	Early (17 May)
	(PL)	Late (14 Aug)

Experimental diary:

24-Sep-96 : B : Disced.
25-Sep-96 : B : Rotary harrowed, Hereward, dressed Sibutol, drilled at 375 seeds per m^2.
12-Dec-96 : B : Javelin Gold at 5.0 l in 200 l.
07-Mar-97 : B : 34.5% N at 116 kg.
11-Mar-97 : B : Vytel Manganese at 3.0 l with Vassgro Non-ionic at 30 ml in 200 l.
12-Mar-97 : B : Stefes Tiger 90 at 15 kg.
15-Apr-97 : B : 34.5% N at 348 kg.
23-May-97 : B : Standon Fluroxypyr at 0.75 l with Halo at 2.0 l in 300 l.
16-Aug-97 : B : Combine harvested.

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NOTES: (1) Stefes Tiger 90 is a sulphur fertilizer.
(2) Plant samples were taken in April and July to assess root and stem base diseases.

GRAIN TONNES/HECTARE

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

PLOUGH / COV CROP	(PE)	(PL)	Mean
(R)	6.25	4.92	5.59
(RW)	5.39	6.38	5.89
(RI)	6.93	5.93	6.43
(RWI)	7.40	7.72	7.56
(M)	7.87	6.03	6.95
(MW1)	7.42	7.31	7.37
(MW2)	7.74	6.41	7.08
(MW3)	7.36	6.17	6.76
(MW4)	5.43	4.06	4.74
(MW5)	5.22	4.51	4.86
Mean	6.70	5.94	6.32

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

COV CROP	PLOUGH	COV CROP PLOUGH
0.621	0.278	0.878

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	57	1.241	19.6

GRAIN MEAN DM% 89.3

PLOT AREA HARVESTED 0.00478

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