

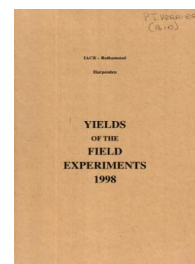
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98/W/CS/446

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 96-97/W/CS/446.

The third 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 m²
 - (RI) Ryegrass at 30 kg + soil inoculated with *Phialophora graminicola*
 - (RWI) Ryegrass at 30 kg + wheat at 50 seeds per m² + soil inoculated with *P. graminicola*
 - (M) Mustard at 300 seeds per m²
 - (MW1) Mustard at 100 seeds per m² + wheat at 4 seeds per m²
 - (MW2) Mustard at 100 seeds per m² + wheat at 9 seeds per m²
 - (MW3) Mustard at 100 seeds per m² + wheat at 50 seeds per m²
 - (MW4) Mustard at 100 seeds per m² + wheat at 200 seeds per m²
 - (MW5) Mustard at 30 seeds per m² + wheat at 400 seeds per m²
2. **PLOUGH** Time of ploughing in 1996:
 - (PE) Early (17 May)
 - (PL) Late (14 Aug)

Experimental diary:

12-Sep-97 : B : Ploughed.
16-Sep-97 : B : Rolled.
25-Sep-97 : B : Rotary harrowed, Hereward, dressed Sibutol, drilled at 350 seeds per m².
28-Sep-97 : B : Rolled.
25-Nov-97 : B : Stomp 400 SC at 2.0 l with Javelin Gold at 2.0 l and Cyperkill 10 at 0.25 l in 200 l.
06-Feb-98 : B : Ashlade Nu Trace at 2.5 l in 200 l.
12-Feb-98 : B : 34.5% N at 145 kg.
25-Feb-98 : B : Vytel Manganese at 2.0 l in 200 l.
31-Mar-98 : B : 34.5% N at 377 kg.

98/W/CS/446

Experimental diary:

01-Apr-98 : B : Phosyn Manganese at 2.5 l with Profol Copper at 0.25 l in 200 l.
 27-Apr-98 : B : Alto 100 SL at 0.6 l with Tripart Brevis at 2.0 l, Phosyn Manganese at 2.0 l and Profol Copper at 0.25 l in 200 l.
 21-May-98 : B : Ally at 15 g with Cheetah Super at 0.5 l, Starane 2 at 0.5 l and Chiltern Cropoil at 1.0 l in 200 l.
 31-May-98 : B : Opus at 0.8 l in 200 l.
 12-Jun-98 : B : Folicur at 0.3 l with Bavistin DF at 0.3 kg in 200 l.
 02-Aug-98 : B : Roundup Biactive at 4.0 l in 200 l.
 13-Aug-98 : B : Combine harvested.

NOTE: Plant samples were taken in April and June to assess root and stem base diseases.

GRAIN TONNES/HECTARE

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

CULT CROP	(PE)	(PL)	Mean
(R)	5.18	4.12	4.65
(RW)	3.77	4.85	4.31
(RI)	5.91	5.58	5.75
(RWI)	5.06	6.88	5.97
(M)	4.94	4.42	4.68
(MW1)	4.76	4.79	4.78
(MW2)	4.71	3.52	4.12
(MW3)	4.22	3.32	3.77
(MW4)	3.45	2.61	3.03
(MW5)	2.99	3.14	3.07
Mean	4.50	4.32	4.41

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

CROP	CULT	CROP CULT
0.690	0.308	0.975

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	57	1.379	31.3

GRAIN MEAN DM% 88.5

PLOT AREA HARVESTED 0.00460