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96/W/CS/435 Ryegrass, Wheat Volunteers and Diseases - W. Wheat

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96/W/CS/435

RYEGRASS, WHEAT VOLUNTEERS AND DISEASE

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

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

The second year, w. wheat.

For previous year see 95/W/CS/435

Design: 4 randomised blocks of 10 x 2 plots.

Whole plot dimensions: 6.0 x 10.0.

Treatments:

1. CROP Crop, seed rate and soil inoculation in 1995:
- (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. CULT Time of ploughing in 1995:
- (PE) Early (12 May)
(PL) Late (17 Aug)

Experimental diary:

- 03-Oct-95 : B : Discd.
10-Oct-95 : B : Rotary harrowed, Hereward, dressed Fonofos Seed Treatment and Beret 050FS, drilled at 375 seeds per m².
20-Nov-95 : B : Panther at 2.0 l in 200 l.
08-Mar-96 : B : 34.5% N at 116 kg.
02-Apr-96 : B : Vytel Manganese at 3.0 l in 300 l.
18-Apr-96 : B : 34.5% N at 348 kg.
30-Apr-96 : B : Starane 2 at 1.0 l with Halo at 1.5 l in 200 l.
06-Jun-96 : B : Halo at 2.0 l with Mallard 750 EC at 0.5 l in 300 l.
16-Aug-96 : B : Combine harvested.

Previous crops: W. and s. rape 1993, w.wheat 1994.

NOTE: Plants were sampled to assess root and stem base diseases in April and July.

96/W/CS/435

GRAIN TONNES/HECTARE

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

| CULT | (PE) | (PL) | Mean |
|-------|-------|-------|-------|
| CROP | | | |
| (R) | 10.16 | 9.91 | 10.03 |
| (RW) | 9.89 | 10.63 | 10.26 |
| (RI) | 10.09 | 10.25 | 10.17 |
| (RWI) | 10.61 | 9.01 | 9.81 |
| (M) | 9.16 | 9.72 | 9.44 |
| (MW1) | 10.04 | 10.07 | 10.05 |
| (MW2) | 10.01 | 10.04 | 10.02 |
| (MW3) | 9.56 | 9.85 | 9.70 |
| (MW4) | 9.77 | 9.70 | 9.74 |
| (MW5) | 9.54 | 9.46 | 9.50 |
| Mean | 9.88 | 9.86 | 9.87 |

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

| CROP | CULT | CROP CULT |
|-------|-------|--------------|
| 0.482 | 0.215 | 0.681 |

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

| Stratum | d.f. | s.e. | cv% |
|----------|------|-------|-----|
| BLOCK.WP | 57 | 0.963 | 9.8 |

GRAIN MEAN DM% 87.9

PLOT AREA HARVESTED 0.00437