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99/R/WW/4 Fusarium Study - W. Wheat

Rothamsted Research

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99/R/WW/3

Experimental diary:

19-May-99 : B : : tm) Sypex at 1.5 l in 200 l.
 : B : : tm) Enhance at 80 ml in 200 l.
 21-May-99 : B : : Irrigated, 11 mm.
 28-May-99 : T : : Nitrogen applied as 34.5% N (GS 51).
 : B : : tm) Opus at 1.0 l in 200 l.
 : B : : tm) Sipcam UK Rover 500 at 1.0 l in 200 l.
 16-Jun-99 : B : : Policur at 0.25 l in 100 l.
 06-Aug-99 : B : : Combine harvested.

Previous crops: W. rape and turnip rape 1997, w. oats 1998.

GRAIN TONNES/HECTARE

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

NITROGEN

-	4.13
A	7.70
B	9.12
C	10.36
D	9.45
E	10.65
F	11.27
G	10.23
H	11.05
I	11.24
J	10.67
K	5.95
L	7.60
M	8.72
N	6.80
O	8.39
P	10.46
Q	11.03

Mean 9.16

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

NITROGEN

0.248

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	34	0.304	3.3

GRAIN MEAN DM% 86.0

PLOT AREA HARVESTED 0.00352

99/R/WW/4

WINTER WHEAT

FUSARIUM STUDY

Object: To assess effects of different inocula and inoculum sources on ear blight development in mist-irrigated w. wheat - Little Knott I.

Sponsors: G.L. Bateman, J.F. Jenkyn, R.J. Gutteridge.

Design: 3 randomised blocks of 6 x 2 plots

Whole plot dimensions: 6.0 x 8.5.

Treatments: All combinations of:-

1. T Seed and *Fusarium* inocula:

D O Diseased seed, no inoculum
H O Healthy seed, no inoculum
H A Healthy seed, inoculated with *Fusarium culmorum* to soil in spring
H B Healthy seed, inoculated with *Fusarium culmorum* to ears at anthesis
H C Healthy seed, inoculated with *Microdochium nivale* to ears at anthesis
2. IRRIGATN Irrigation:

- None
I Irrigated

Experimental diary:

- 14-Sep-98 : B : : Ploughed and furrow pressed.
19-Sep-98 : B : : Rotary harrowed.
23-Sep-98 : T : D : Combination drilled, Charger, homesaved, at 380 seeds/m² with the Accord drill.
 : T : H : Combination drilled, Charger, tr. Beret Gold, at 380 seeds/m² with the Accord drill.
23-Feb-99 : B : : tm)Isoguard at 1.0 l in 200 l.
 : B : : tm)Unite A at 0.125 l in 200 l.
 : B : : tm)Unite B at 1.0 l in 200 l.
 : B : : tm)Cropoil at 1.0 l in 200 l.
12-Mar-99 : B : : 34.5% N at 145 kg.
18-Mar-99 : B : : Triple superphosphate at 300 kg.
31-Mar-99 : T : H A : Inoculated with colonised sterile oat grain, at 1.1 kg to the central 6 x 3 metre area of each plot.
15-Apr-99 : B : : 34.5% N at 435 kg.
31-May-99 : T : I : Plots misted during anthesis, four at a time, for 2 days, between 31-May and 8-Jun, immediately after spore inoculum applied to ears.
 : T : H B : Inoculated between 31-May and 6-Jun, by spraying spore suspensions onto plots during anthesis.
 : T : H C : Inoculated 31-May to 6-Jun, by spraying spore suspensions onto plots during anthesis.
30-Jul-99 : B : : Combine harvested.