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97/R/WW/3 Plant N Indicators - W. Wheat

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97/R/WW/3

WINTER WHEAT

PLANT N INDICATORS

Object: To relate chlorophyll concentrations in individual leaves of two varieties of w. wheat to nitrogen supply and crop yield - Fosters.

Sponsors: P.B. Barraclough.

Design: 3 randomised blocks of 14 plots.

Whole plot dimensions: 3.0 x 20.0.

Treatments:

1. N Nitrogen (kg N):

-
50
100
150
200
250
300

2. VARIETY

H Hereward dressed Beret Gold
R Riband dressed Sibutol

Experimental diary:

04-Sep-96 : B : Ploughed and furrow pressed.
26-Sep-96 : B : Rolled, spring-tine cultivated.
 : T : Rotary harrowed, varieties drilled at 380 seeds per m².
27-Sep-96 : B : Rolled.
01-Oct-96 : B : Stefes Tiger 90 at 40 kg.
27-Nov-96 : B : Stefes IPU at 2.6 l with Stomp 400 SC at 3.1 l and
 Cyperkill 10 at 250 ml in 200 l.
11-Mar-97 : T : N 50, 100, 150, 200, 250, 300: 34.5% N at 118 kg.
10-Apr-97 : T : N 50, 100, 150, 200, 250, 300: 34.5% N at 27, 172, 317,
 462, 607 and 752 kg respectively.
18-Apr-97 : B : Starane 2 at 0.75 l with Barclay Holdup at 2.3 l in
 300 l.
30-May-97 : B : Folicur at 0.5 l with Mallard 750 EC at 0.3 l and
 Pointer at 0.5 l in 300 l.
18-Aug-97 : B : Combine harvested.

Previous crops: Set-aside 1995, w. rape 1996.

NOTES: (1) Stefes Tiger 90 is a sulphur fertilizer.
(2) Plants were sampled periodically for growth and chemical analysis. Chlorophyll was measured in the field with an experimental meter. Grain and straw was analysed for nitrogen content.

97/R/WW/3

GRAIN TONNES/HECTARE

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

VARIETY	H	R	Mean
N			
-	4.73	4.95	4.84
50	6.34	7.03	6.68
100	7.87	8.40	8.14
150	9.24	9.87	9.55
200	9.36	10.18	9.77
250	10.04	10.57	10.30
300	9.70	10.68	10.19
Mean	8.18	8.81	8.50

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

N	VARIETY	N	VARIETY
0.204	0.109	0.289	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	26	0.354	4.2
GRAIN MEAN DM%	85.7		
PLOT AREA HARVESTED	0.00360		