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00/R/WW/10 Varieties and N - W. Wheat

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00/R/WW/10

WINTER WHEAT

VARIETIES AND N

Object: To compare chlorophyll meter readings on different varieties of wheat as an indicator of nitrogen content and potential yield - Appletree.

Sponsors: C.G. Peters, J. Kyte, P.B. Barraclough.

Design: 4 randomised blocks of 3 x 5.

Whole plot dimensions: 3.0 x 11.0.

Treatments: All combinations of:-

1. NITROGEN	Kg N:		
	Early	Later	Total
N1	0	0	0
N2	50	0	50
N3	50	50	100
N4	50	100	150
N5	50	150	200

2. CULTIVAR

CH	Charger
MD	Madrigal
ML	Malacca
RI	Rialto
SH	Shamrock
SV	Savannah

Experimental diary:

06-Sep-99 : B : : Glyphogan at 3.0 l in 200 l (to ex-99/R/RAW/1 site only).
14-Sep-99 : B : : PBI Slug Pellets at 8.0 kg.
01-Oct-99 : T : : Combination drilled, varieties, tr. Sibutol, at 380 seeds/m² with the Accord drill.
02-Oct-99 : B : : Genesis at 5.0 kg.
08-Oct-99 : B : : Genesis at 5.0 kg.
08-Nov-99 : B : : tm)Duplosan at 0.5 l in 200 l.
: B : : tm)Tolkan Liquid at 2.0 l in 200 l.
: B : : tm)Cyperkill 10/Toppel 10 (ratio 2:3) at 250 ml in 200 l.
26-Feb-00 : B : : tm)Ally at 20 g in 200 l.
: B : : tm)Hawk at 2.0 l in 200 l.
: B : : tm)Cropoil at 1.0 l in 200 l.
14-Mar-00 : T : N2,N3,N4,N5 : 34.5% N at 145 kg.
01-Apr-00 : B : : tm)BASF 3C Chlormequat 720 at 2.0 l in 200 l.
: B : : tm)Moddus at 0.2 l in 200 l.
27-Apr-00 : B : : tm)Boxer at 100 ml in 200 l.
: B : : tm)Amistar at 0.6 l in 200 l.
: B : : tm)Opus at 0.4 l in 200 l.

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Experimental diary:

03-May-00 : T : N3 : 34.5% N at 145 kg.
 : T : N4 : 34.5% N at 290 kg.
 : T : N5 : 34.5% N at 435 kg.
 22-May-00 : B : : tm)Amistar at 0.8 l in 100 l.
 : B : : tm)Folicur at 0.5 l in 100 l.
 13-Aug-00 : B : : Combine harvested.

NOTES: (1) Some plots were severely lodged before harvest.
 (2) Soils were sampled in February for nitrogen content. Chlorophyll meter readings were taken in spring and summer and crop sampled for nitrogen and chlorophyll content of leaves. Lodging assessments were made in July and August. Grain was analysed for nitrogen content.

Previous crops: W. barley 1998, w. rape 1999.

GRAIN TONNES/HECTARE

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

NITROGEN CULTIVAR	N1	N2	N3	N4	N5	Mean
CH	9.53	9.80	10.49	10.07	9.63	9.90
MD	10.13	10.32	11.49	11.29	10.81	10.81
ML	9.90	10.11	10.43	10.65	10.54	10.33
RI	9.01	9.86	10.11	10.57	10.23	9.96
SH	8.90	9.51	10.23	10.60	10.47	9.94
SV	10.33	10.81	11.10	11.18	10.60	10.81
Mean	9.63	10.07	10.64	10.73	10.38	10.29

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

CULTIVAR	NITROGEN	CULTIVAR NITROGEN
0.157	0.143	0.351

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	87	0.496	4.8
GRAIN MEAN DM%	86.5		

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STRAW TONNES/HECTARE

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

NITROGEN CULTIVAR	N1	N2	N3	N4	N5	Mean
CH	6.54	7.02	7.37	7.10	7.26	7.06
MD	6.86	6.69	7.52	7.74	8.04	7.37
ML	7.54	8.02	7.83	7.99	8.14	7.90
RI	7.90	8.97	8.87	9.11	8.82	8.73
SH	7.59	8.40	8.26	8.56	8.32	8.23
SV	7.69	7.87	7.82	8.50	7.92	7.96
Mean	7.35	7.83	7.94	8.17	8.08	7.88

STRAW MEAN DM% 75.3

PLOT AREA HARVESTED 0.00216