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Yields of the Field Experiments 2001

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Yields of the
Classical
and other
Long-term Experiments
2001

IRACR - Rothamsted

01/R/CS/326 and 01/W/CS/326 - Amount of Straw

Rothamsted Research

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01/R/CS/326 and 01/W/CS/326

AMOUNTS OF STRAW

Object: To study the effects of different amounts of straw, incorporated into the soil, on w. wheat - Rothamsted (R) Great Knott III, Woburn (W) Far Field I.

Sponsors: M.J. Glendining, P.C. Brookes.

The 15th year, w. wheat

For previous years see 87-00/R & W/CS/326.

Design: 4 randomised blocks of 4 plots (R).
3 randomised blocks of 4 plots (W).

Whole plot dimensions: 3.0 x 13.5 (R).
3.0 x 14.5 (W).

Treatments:

STRAW Amounts of straw incorporated into the seedbed (t per ha 85% DM), cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	5.1	3.0
2 NORMAL	Twice normal	10.2	6.0
4 NORMAL	Four times normal	20.4	12.0

Experimental diary:

Great Knott III (R):

16-Aug-00 : T : - : Straw/removed
22-Aug-00 : T : : Chopped loaded straw.
: T : 1 : Straw/normal, 15.5 kg per plot.
: T : 2 : Straw/2 x normal, 31.0 kg per plot.
: T : 4 : Straw/4 x normal, 62.0 kg per plot.
13-Oct-00 : B : : Ploughed, /e.
19-Oct-00 : B : : Combination drilled, Hereward, tr. Sibutol, at 350
s/m² with the Accord drill.
17-Nov-00 : B : : Decoy Wetex at 5.0 kg.
26-Mar-01 : B : : 33.5% N at 149 kg.
09-Apr-01 : B : : tm)Harmony M at 75 g in 100 l.
: B : : tm)Topik at 125 ml in 100 l.
: B : : tm)Toil at 1.0 l in 100 l.
05-May-01 : B : : 33.5% N at 299 kg.
08-May-01 : B : : tm)Amistar at 0.5 l in 100 l.
: B : : tm)Unix at 0.5 kg in 100 l.
: B : : tm)BASF 3C Chlormequat 720 at 1.25 l in 100 l.
: B : : tm)Moddus at 0.2 l in 100 l.
04-Jun-01 : B : : tm)Amistar at 0.7 l in 100 l.
: B : : tm)Folicur at 0.5 l in 100 l.
25-Aug-01 : B : : Combine harvested plots for yield.
: B : : Swathed straw.
29-Aug-01 : B : : Combine harvested, all remaining wheat.
: B : : Sampled, baled and weighed straw.
: B : : Swathed straw.

01/R/CS/326 and 01/W/CS/326

Experimental diary:

Far Field I (W):

01-Sep-00 : B : : Muriate of potash at 200 kg.
03-Sep-00 : B : : Azural at 4.0 l in 200 l.
13-Sep-00 : T : : Chopped loaded straw.
 : T : 1 : Straw applied at 11.5 kg per plot.
 : T : 2 : Straw applied at 23.0 kg per plot.
 : T : 4 : Straw applied at 46.0 kg per plot.
21-Sep-00 : B : : Sting ECO at 2.0 l in 200 l.
25-Sep-00 : B : : Ploughed, /se.
03-Oct-00 : B : : Rotary harrowed.
 : B : : Drilled, Hereward, tr. Sibutol and Rhodoman, at 350
 s/m² with the 4.0 m Accord drill.
20-Oct-00 : B : : Avadex Excel 15 g at 15.0 kg.
15-Dec-00 : B : : Lexus Class at 60 g in 200l.
30-Mar-01 : B : : Sulphur Gold 30.0% N, 7.6% S at 167 kg
 : B : : Sulphur Gold 30.0% N, 7.6% S at 167 kg
13-Apr-01 : B : : tm)Harmony M at 75 g in 200 l.
 : B : : tm)Starane 2 at 0.5 l in 200 l.
30-Apr-01 : B : : Sulphur Gold 30.0% N, 7.6% S at 333 kg.
 : B : : Sulphur Gold 30.0% N, 7.6% S at 333 kg.
08-May-01 : B : : tm)Opus at 0.5 l in 200 l.
 : B : : tm)BASF 3C Chlormequat 720 at 2.0 l in 200 l.
31-May-01 : B : : Opus at 0.7 l in 200 l.
21-Aug-01 : B : : Combine harvested, plots for yield, and discards.
 : B : : Swathed straw.
23-Aug-01 : B : : Sampled, baled and weighed straw.

Note: Grain & straw samples were taken for N analysis.

01/R/CS/326 GREAT KNOTT III (R)

GRAIN TONNES/HECTARE

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

STRAW	
NONE	6.55
NORMAL	6.50
2 NORMAL	6.31
4 NORMAL	6.26
Mean	6.40

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

STRAW
0.181

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.256	4.0
GRAIN MEAN DM%	86.8		

STRAW TONNES/HECTARE

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

STRAW	
NONE	2.51
NORMAL	2.52
2 NORMAL	2.43
4 NORMAL	2.50
Mean	2.49

STRAW MEAN DM% 91.8

PLOT AREA HARVESTED 0.00324

01/W/CS/326 FAR FIELD I (W)

GRAIN TONNES/HECTARE

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

STRAW	
NONE	6.48
NORMAL	6.37
2 NORMAL	6.55
4 NORMAL	6.60
Mean	6.50

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

STRAW
0.311

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.381	5.9
GRAIN MEAN DM%			86.3

STRAW TONNES/HECTARE

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

STRAW	
NONE	3.23
NORMAL	3.47
2 NORMAL	3.97
4 NORMAL	3.67
Mean	3.59

STRAW MEAN DM% 89.4

PLOT AREA HARVESTED 0.00348