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Yields of the Field Experiments 2007

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Results of the
Classical and other
Long-term Experiments
2007

R/CS/326 & W/CS/326 Amounts of Straw

Rothamsted Research

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07/R/CS/326 and 07/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 21st year, w. wheat

For previous years see Yield Books for 87-06/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). 0.004 ha
3.0 x 14.5 (W).

Treatments:

STRAW Amounts of straw incorporated into the seedbed (t/ha), cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	5.47	3.54
2 NORMAL	Twice normal	10.93	7.08
4 NORMAL	Four times normal	22.00	14.16

Experimental Diary:

Great Knott III (R)

			Rate	Unit
16-Aug-06	a	Baled remove straw		
06-Sep-06	p	Azural	3.00	l/200 l/ha
12-Oct-06	a	Load straw normal	22.14	kg/plot
	a	Load Straw - 2 x Normal	44.28	kg/plot
	a	Load Straw - 4 x Normal	89.12	kg/plot
19-Oct-06	a	Plough/ E		
29-Oct-06	a	Combination Drilled		
	s	Hereward tr Redigo Twin + Deter	350.00	seeds/m ²
03-Nov-06	p	Ice	4.00	l/200 l/ha
07-Nov-06	p	Decoy Wetex	5.00	kg/ha
04-Dec-06	p	Entice	7.00	kg/ha
16-Mar-07	f	Double Top	148.00	kg/ha
05-Apr-07	p	Hallmark with Zeon Technology	50.00	ml/200 l/ha
11-Apr-07	p	Pacifica	0.50	kg/200 l/ha
	p	Biopower	1.00	l/200 l/ha
13-Apr-07	p	Clean Crop Wanderer	1.00	l/200 l/ha
	p	Splice	1.00	l/200 l/ha
26-Apr-07	f	Nitraprill	435.00	kg/ha
22-May-07	p	Amistar Opti	1.25	l/200 l/ha
	p	Landgold Epoxiconazole	0.60	l/200 l/ha
20-Jun-07	a	Mow / Rotavate paths		

07/R/CS/326 and 07/W/CS/326

03-Sep-07 a Combine harvest, plots for yield
a Swath straw
a Sample, bale and weigh straw

Experimental Diary:

Far Field I (W)

			Rate	Unit
27-Aug-06	a	Baled, remove straw		
26-Sep-06	p	Azural	4.00	l/200 l/ha
30-Sep-06	f	Muriate of Potash	200.00	kg/ha
01-Oct-06	f	Triple Superphosphate	300.00	kg/ha
18-Oct-06	a	Load Straw normal	15.40	kg/plot
	a	Load straw Normal x 2	30.80	kg/plot
	a	Load straw Normal x 4	61.60	kg/plot
19-Oct-06	a	Topped to chop straw		
20-Oct-06	a	Plough/NW		
29-Oct-06	a	Power Harrowed		
	a	Accord Drilled		
	s	Hereward tr Redigo Twin +Deter	375.00	seeds/m ²
19-Dec-06	p	Hallmark with Zeon Technology	50.00	ml/200 l/ha
15-Mar-07	f	Double Top	148.00	kg/ha
27-Mar-07	p	Pacifica	0.50	kg/200 l/ha
	p	Biopower	1.00	l/200 l/ha
20-Apr-07	p	Splice	1.00	l/200 l/ha
	p	Jupital	1.00	l/200 l/ha
02-May-07	f	Double Top	518.00	kg/ha
20-May-07	p	Opus	0.75	l/200 l/ha
	p	Vivid	0.40	l/200 l/ha
	p	Bravo 500	1.00	l/200 l/ha
	p	Sedema Manganese Sulphate	5.00	kg/200 l/ha
05-Sep-07	a	Combine harvest, plots for yield		
	a	Swath straw		
07-Sep-07	a	Weighed and sampled straw		

NOTE: Grain and straw samples were taken for analysis.

07/R/CS/326

GRAIN TONNES/HECTARE

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

TREATMENT	
-	6.44
1	6.39
2	6.87
4	6.86
Mean	6.64

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

Treatment
0.183

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.258	3.9
GRAIN MEAN DM%	84.4		

STRAW TONNES/HECTARE

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

TREATMENT	
-	2.72
1	2.82
2	3.15
4	3.16
Mean	2.96

STRAW MEAN DM% 90.4

PLOT AREA HARVESTED 0.00284

07/W/CS/326

GRAIN TONNES/HECTARE

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

TREATMENT	
-	3.63
1	4.33
2	3.90
4	3.62
Mean	3.87

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

TREATMENT	
	0.390

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.478	12.3
Grain mean dm%	85.7		

STRAW TONNES/HECTARE

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

TREATMENT	
-	3.10
1	2.80
2	2.73
4	2.94
Mean	2.89

Straw mean dm% 80.2

Plot area harvested 0.00299