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Yields of the Field Experiments 2010

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Results of the
Classical and other
Long-term Experiments

2010

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

Rothamsted Research

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10/R/CS/326 and 10/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: A Macdonald and M. J. Glendining,

The 24th year, w. wheat

For previous years see Yield Books for 87-09/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	4.30	3.20
2 NORMAL	Twice normal	8.60	6.40
4 NORMAL	Four times normal	17.20	12.80

Experimental Diary

Great Knott III (R)

			Rate	Unit
19-Aug-09	a	Load straw		
11-Sep-09	p	Nufosate Ace - on stubble	1.50	l/ha
05-Oct-09	a	Combination Drilled		
	s	Hereward - At 350 seeds per m2	145.00	kg/ha
	p	Liberator - 200 lt water	0.60	l/ha
12-Mar-10	f	Double top	185.00	kg/ha
08-Apr-10	p	Unix - 146 lt water	1.00	l/ha
	p	Unix - 146 lt water	1.00	l/ha
	p	Cherokee - 146 lt water	1.00	l/ha
	p	Cherokee - 146 lt water	1.00	l/ha
15-Apr-10	f	Nitram	232.00	kg/ha
17-Apr-10	p	Pacifica - Winter wheat only (146 lt water)	0.50	kg/ha
	p	Biopower - Started (146 lt water)	1.00	l/ha
04-May-10	a	Mow / Rotavate paths		

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			Rate	Unit
05-May-10	p	Bravo 500	1.00	l/ha
	p	Splice	1.00	l/ha
	p	Tracker	1.00	l/ha
	p	Talius	0.13	l/ha
	p	Talius	0.13	l/ha
	p	Agriguard Chlormequat 720	2.25	l/ha
	p	Chlormequat 3C	2.25	l/ha
10-May-10	a	Mow / Rotavate paths		
18-May-10	f	Nitram	174.00	kg/ha
19-May-10	p	Ally Max SX	42.00	g/ha
	p	Tomahawk	1.00	l/ha
31-May-10	p	Comet 200 - 200 lt water	0.60	l/ha
	p	Opus - 200 lt water	0.60	l/ha
07-Jun-10	a	Cut paths		
17-Jun-10	a	Cut paths		
14-Jul-10	a	Mow / Rotavate paths		
31-Aug-10	a	Combine harvest, plots for yield		
	a	Sample, bale and weigh straw		
01-Sep-10	a	Sample, bale and weigh straw		
04-Sep-10	a	Baled		

Far Field I (W)

			Rate	Unit
01-Oct-09	a	Combination Drilled		
	a	Rolled		
	s	Hereward - At 350 seeds per m2		
10-Dec-09	p	Atlantis - 200 l/ha water	400.00	g/ha
	p	Stomp 400 SC - 200 l/ha water	3.00	lt/ha
	p	Biopower - 200 l/ha water	1.00	lt/ha
18-Mar-10	f	Double Top	185.00	kg/ha
10-Apr-10	p	Atlantis WG - 200 lt water	0.40	lt/ha
	p	Biopower - 200 lt water	1.00	lt/ha
15-Apr-10	f	Nitram - Winter wheat	232.00	kg/ha
17-May-10	f	Nitram 34.5%	115.00	kg/ha
02-Jun-10	p	Opus - 200 lt water	0.60	l/ha
	p	Comet - 200 lt water	0.6	l/ha
06-Sep-10	a	Cut harvest strips, weighed and sampled		
	a	Swath straw		
13-Sep-10	a	Sample, bale and weigh straw		
10-Oct-10	a	Other operation - straw treatments applied, chopped and spread (1=15.3kg)		

10/R/CS/326

GRAIN TONNES/HECTARE

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

Treatment	
-	7.35
1	7.47
2	7.34
4	7.63
Mean	7.45

Standard errors of differences of means

Table	Treatment
s.e.d.	0.219

Stratum standard errors and coefficients of variation

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.310	4.2

Grain mean dm% 85.6

STRAW TONNES/HECTARE

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

Treatment	
-	3.53
1	3.50
2	3.65
4	3.87
Mean	3.64

Standard errors of differences of means

Table	Treatment
s.e.d.	0.212

Stratum standard errors and coefficients of variation

Straw (at 85% dry matter) tonnes/hectare

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.300	8.2

Straw mean dm% 89.4

Plot area harvested 0.00270

10/W/CS/326

GRAIN TONNES/HECTARE

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

Treatment	
-	6.43
1	6.36
2	6.20
4	6.24
Mean	6.31

Standard errors of differences of means

Table	Treatment
s.e.d.	0.2.78

Stratum standard errors and coefficients of variation

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.341	5.4

GRAIN MEAN DM% 88.3

STRAW TONNES/HECTARE

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

Treatment	
-	3.12
1	3.09
2	3.13
4	3.14
Mean	3.12

Standard errors of differences of means

Table	Treatment
s.e.d.	0.321

Stratum standard errors and coefficients of variation

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.393	12.6

STRAW MEAN DM% 86.8

Plot area harvested 0.00290