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Yields of the Field Experiments 2009

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

Rothamsted Research

Rothamsted Research (2010) *R/CS/326 & W/CS/326 Amounts of Straw ;* Yields Of The Field Experiments 2009, pp 50 - 53 **- DOI: https://doi.org/10.23637/ERADOC-1-219**

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09/R/CS/326 and 09/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 23rd year, w. wheat

For previous years see Yield Books for 87-08/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	6.00	3.98
2 NORMAL	Twice normal	12.00	7.96
4 NORMAL	Four times normal	24.00	15.92

Experimental Diary

Great Knott III (R)

			Rate	Unit
28-Aug-08	a	Load straw Normal plots	24.30	kg/plot
	a	Load straw x 2 Plots	48.60	kg/plot
	a	Load straw x 4 Plots	97.20	kg/plot
	a	Topped to chop straw		
12-Sep-08	p	Dow Agrosciences Glyphosate 360	2.00	l/200 l/ha
02-Oct-08	a	Plough/ E		
04-Oct-08	a	Cultipressed		
16-Oct-08	a	Combination Drilled		
	s	Hereward tr Anchor	350.00	seeds/m2
22-Oct-08	p	Liberator	0.60	l/200 l/ha
24-Oct-08	p	Decoy Wetex	7.00	kg/ha
20-Nov-08	p	Karan	5.00	kg/ha
27-Nov-08	p	Avadex Excel 15G	15.00	kg/ha
10-Dec-08	p	Alpha Pendimethalin 330 EC	4.00	l/ha
	p	Arelon 500	3.00	l/ha
	p	Hallmark with Zeon Technology	50.00	ml
03-Mar-09	f	Double Top	185.00	kg/ha
14-Apr-09	p	Pacifica	0.40	kg/ha
	p	Biopower	1.00	l/ha
21-Apr-09	f	Nitram	174.00	kg/ha

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			Rate	Unit
02-May-09	p	Splice	1.00	l/ha
	p	Bravo 500	1.00	l/ha
	p	Talius	0.13	l/ha
	p	BASF 3C Chlormequat 720	2.25	l/ha
04-May09	p	Ally Max SX	42.00	g/ha
	p	Agriguard Fluroxypyr	0.75	l/ha
14-May-09	f	Nitram	145.00	kg/ha
28-May-09	p	Brutus	1.50	l/ha
	p	Amistar Opti	1.25	l/ha
25-Jun-09	a	Mow / Rotavate paths		
13-Aug-09	a	Combine harvest discards		
15-Aug-09	a	Combine harvest, plots for yield		
	a	Sample, bale and weigh straw		
19-Aug-09	a	Sample, bale and weigh straw		

Far Field I (W)

			Rate	Unit
16-Sep-08	a	Load straw Normal plots	17.31	kg/plot
	a	Load straw x 2 Plots	34.63	kg/plot
	a	Load straw x 4 Plots	69.25	kg/plot
25-Sep-08	a	Topped to chop straw		
14-Oct-08	a	Plough/ NW		
	a	Power Harrowed		
	a	Accord Drilled		
	s	Hereward tr Anchor	350.00	seeds/m2
	a	Rolled	1.00	
11-Dec-08	p	Avadex Excel 15G	15.00	kg/ha
11-Mar-09	f	Double Top	185.00	kg/ha
20-Apr-09	p	Pacifica	0.50	kg/ha
	p	Biopower	1.00	l/ha
29-Apr-09	f	Nitram	145.00	kg/ha
10-May-09	p	Cherokee	1.25	l/ha
	p	Cycocel	2.25	l/ha
	p	Headland Manganese 500	1.00	L in 200 l/ha
03-Jun-09	p	Opus	0.80	L in 200 l/ha
	p	Amistar	1.00	L in 200 l/ha
05-Jun-09	f	Nitram	116.00	kg/ha
24-Aug-09	a	Combine harvest, plots for yield		
	a	Sample, bale and weigh straw		

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09/R/CS/326

GRAIN TONNES/HECTARE

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

```
    Treatment
            -      7.68
            1      7.97
            2      8.28
            4      8.39

         Mean      8.08

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

Table            Treatment
s.e.               0.308

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

Stratum                        d.f.          s.e.         cv%

Blocks.Plots                      9         0.436         5.4

Grain mean dm%  85.6
```

STRAW TONNES/HECTARE

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

```
    Treatment
            -       4.27
            1       4.23
            2       4.67
            4       4.71

         Mean       4.47

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

Table             Treatment
s.e.                0.387

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

Straw (at 85% dry matter) tonnes/hectare

Stratum                        d.f.          s.e.         cv%

Blocks.Plots                      9         0.548        12.3

Straw mean dm%  89.4

Plot area harvested   0.00270
```


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09/W/CS/326

GRAIN TONNES/HECTARE

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

```
    Treatment
            -       4.58
            1       5.23
            2       4.91
            4       4.80
         Mean       4.88

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

Table              Treatment
s.e.                   0.569

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

Stratum                        d.f.          s.e.         cv%

Blocks.Plots                      6         0.697        14.3


GRAIN MEAN DM%  88.3
```

STRAW TONNES/HECTARE

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

```
    Treatment
            -       3.21
            1       3.18
            2       3.21
            4       3.04
         Mean       3.16

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

Table            Treatment
s.e.                 0.406

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

Stratum                        d.f.          s.e.         cv%

Blocks.Plots                      6         0.497        15.7

STRAW MEAN DM%  86.8

Plot area harvested   0.00290
```


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