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Yields of the Field Experiments 2012

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

Rothamsted Research

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12/R/CS/326 and 12/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 26th year, w. wheat

For previous years see Yield Books for 87-11/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	2.67	1.56
2 NORMAL	Twice normal	5.34	3.12
4 NORMAL	Four times normal	10.68	6.24

Experimental Diary

Great Knott III (R)

Date		Application	Rate	Units
17-Aug-11	a	Straw applied to treatments, as per plan	-	-
30-Aug-11	p	Sprayed Statis 360 water volume = 200 lt/ha (Sprayed stubble prior to primary cultivations)	1.5 lt/ha	l/ha
15-Sep-11	p	Sprayed Symbol water volume = 200 lt/ha (Stubble glyphosate prior to primary cultivations)	1.5 lt/ha	l/ha
17-Sep-11	a	Ploughed - started	-	
19-Sep-11	a	Ploughed - finished	-	
20-Sep-11	a	Cultipressed	-	
07-Oct-11	s	Drilled Hereward trt Beret Gold	350	seeds/m^2
13-Oct-11	p	Sprayed Liberator + Cinder in 200l/ha of water	Li@0.6 Ci@2.0	l/ha
28-Nov-11	p	Sprayed Hallmark with Zeon Technology in 200l/ha of water	50	ml/ha
29-Feb-12	p	Sprayed Pacifica and Bio-Power in 150 l/ha of water	P@0.4* B@1.0	*kg/ha l/ha
15-Mar-12	p	Sprayed Cherokee SE and Justice in 200 l/ha of water	Ch@1.0 Ju@0.125	l/ha
12-Apr-12	f	Applied Nitram Fertiliser	262	kg/ha

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16-Apr-12	a	Mowed Paths	-	
23-Apr-12	p	Sprayed Bravo 500, Tracker, Agriguard and Starane2 in 200l/ha of water	Br@1.0 Tr@0.8 Ag2.25 St@0.50	l/ha
06-May-12	p	Sprayed Ally Max in 200l/ha of water	42	g/ha
16-May-12	a	Cut paths	-	
17-May-12	f	Applied Nitram	262	kg/ha
22-May-12	p	Sprayed Topik and Adigor	To@0.125 Ad@1.0	l/ha
23-May-12	p	Sprayed Comet, Bravo 500 and Opus	Co@0.6 Br@1.0 Op@0.8	l/ha
13-Jun-12	p	Sprayed w/ Amistar and Prosaro in 100l/ha of water	Am@0.3 Pro@0.7	l/ha
15-Jun-12	a	Cut paths	-	
09-Jul-12	a	Topped/Cut Paths	-	
30-Jul-12	a	Paths Cut	-	
23-Aug-12	a	Plots harvested, straw weighed and baled.	-	
19-Sep-12	a	Sub Soiled	-	
20-Sep-12	a	Ploughed	-	
13-Oct-12	f	Spread MOP onto Stubble	227	kg/ha

Far Field I (W)

Date		Application	Rate	Units
08-Sep-11	a	Straw applied to treatments, as per plan	-	-
15-Sep-11	p	Sprayed Symbol (glyphosate) on 326 area, ex rye area and 12m headland around whole field	3.0	l/ha
23-Sep-11	a	Ploughed, soil thrown west		
10-Oct-11	s	Drilled Hereward trt Redigo Deter	350	seeds/m^2
11-Oct-11	a	Cambridge Rolled.	-	
11-Oct-11	a	Rolled	-	
11-Oct-11	a	Errected rabbit netting	-	
17-Nov-11	p	Sprayed Sherman, Tawny and Seal Z in 200l/ha of water	Sh@2.5 Ta@2.0 Se@50*	l/ha *ml/ha
28-Mar-12	f	Double Top applied @ 148 kg/ha= 40 kg/ha N	148	kg/ha
29-Mar-12	p	Spray Cherokee	1.25	l/ha
29-Mar-12	p	Spray Pacifica + biopower - headland only and 4 tramlines from beans and triangle E of ww1250.	Sp@0.4 Bi@* 1.0	l/ha *kg/ha
10-May-12	f	Nitram	203	kg/ha
13-May-12	p	Spray fungicide T1 - Ignite + Bravo 500+ Chlormequat + Mn in 200 l/ha of water	Ig@1.0 Br@1.0 Ch@2.0 Mn@2.0	l/ha
24-May-12	f	Nitram applied as per plan	203	kg/ha
06-Sep-12	a	Combined Plots	-	
07-Sep-12	a	Straw weights	-	

NOTE: Samples of grain and straw were taken for chemical analyses for both experiments.

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12/R/CS/326

GRAIN TONNES/HECTARE

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

Straw_	
-	7.12
1	7.39
2	7.88
4	7.86
Mean	7.56

Standard errors of differences of means

Table	Straw_
s.e.d.	0.274

Stratum standard errors and coefficients of variation
==========

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.387	5.1

Grain mean DM% 86.2

STRAW TONNES/HECTARE

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

Straw_	
-	5.56
1	6.23
2	6.14
4	6.50
Mean	6.11

Standard errors of differences of means

Table	Straw_
s.e.d.	0.395

Stratum standard errors and coefficients of variation
==========

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.558	9.1

Straw mean DM% 83.1

Plot area harvested 0.00284

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12/W/CS/326

GRAIN TONNES/HECTARE

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

Straw_	
-	6.13
1	6.46
2	6.54
4	6.46
Mean	6.39

Standard errors of differences of means

Table	Straw_
s.e.d.	0.116

Stratum standard errors and coefficients of variation
==========

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.142	2.2

Grain mean DM% 86.9

STRAW TONNES/HECTARE

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

Straw_	
-	4.94
1	4.76
2	5.23
4	5.25
Mean	5.05

Standard errors of differences of means

Table	Straw_
s.e.d.	0.303

Stratum standard errors and coefficients of variation
==========

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.371	7.4

Straw mean DM% 95.1

Plot area harvested 0.00305

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