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Yields of the Field Experiments 2002

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Yields of the
Classical
and other
Long-term Experiments
2002

IACR - Rothamsted

02/R/CS/326 and 02/W/CS/326 - Amount of Straw

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02/R/CS/326 and 02/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 16th year, w. wheat.

For previous years see 87-01/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, cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	2.5	3.6
2 NORMAL	Twice normal	5.0	7.2
4 NORMAL	Four times normal	10.0	14.4

Experimental diary:

Great Knott III (R):

29-Aug-01 : T : : Straw treatments applied.
30-Aug-01 : T : : Chopped straw.
14-Sep-01 : B : : Ploughed.
26-Sep-01 : B : : Combination drilled, Hereward, tr. Sibutol Secur, at
350 seeds/m² with the Accord 2 drill.
28-Sep-01 : B : : Rolled.
01-Nov-01 : B : : tm)Lexus 50 DF at 20 g in 200 l.
: B : : tm)Stomp 400 SC at 3.0 l in 200 l.
14-Mar-02 : B : : 33.5% N at 150 kg.
04-Apr-02 : B : : tm)Opus at 0.4 l in 100 l.
: B : : tm)Twist at 0.6 l 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.
25-Apr-02 : B : : 33.5% N at 418 kg.
31-May-02 : B : : tm)Opus at 0.5 l in 200 l.
: B : : tm)Twist at 0.8 l in 200 l.
01-Aug-02 : B : : Roundup Biactive at 3.0 l in 100 l.
13-Aug-02 : T : : Combine harvested plots for yield, and discards.
Chopped discard straw.
14-Aug-02 : T : : Sampled, baled and weighed straw.
30-Aug-02 : T : : Spread and chopped straw as plan.

02/R/CS/326 and 02/W/CS/326

Experimental diary:

Far Field I (W):

03-Aug-01 : B : : Muriate of potash at 250 kg
23-Aug-01 : T : : Straw treatments applied.
20-Sep-01 : B : : Ploughed.
21-Sep-01 : B : : Rolled.
22-Sep-01 : B : : Rotary harrowed. Drilled, Hereward, tr. Sibutol +
Aventis Manganese 500 at 350 seeds/m² with the
Accord drill. Rolled.
13-Oct-01 : B : : Avadex Excel 15g at 15.0 kg.
16-Nov-01 : B : : tm)Stomp 400 S at 4.0 l in 200 l.
: B : : tm)Tolkan liquid at 2.5 l in 200 l.
12-Mar-02 : B : : Sulphur Gold 30% N, 7.6% S at 167 kg.
: B : : Sulphur Gold 30% N, 7.6% S at 167 kg.
12-Apr-02 : B : : tm)Opus at 0.5 l in 200 l.
: B : : tm)BASF 3C Chlormequat 720 at 2.0 l in 200 l.
02-May-02 : B : : Ally at 30 g in 200 l.
07-May-02 : B : : Sulphur Gold 30% N, 7.6% S at 333 kg.
: B : : Sulphur Gold 30% N, 7.6% S at 333 kg
27-May-02 : B : : Opus at 0.75 l in 200 l.
23-Aug-02 : T : : Combine harvested plots for yield. Swathed straw.
30-Aug-02 : T : : Sampled, baled and weighed straw.
31-Aug-02 : B : : Baled and removed straw.

NOTE: Grain and straw samples were taken for N analysis.

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

GRAIN TONNES/HECTARE

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

Straw	
NONE	7.64
NORMAL	7.24
2 NORMAL	7.21
4 NORMAL	7.39
Mean	7.37

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

Straw
0.456

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	9	0.645	8.8
GRAIN MEAN DM%	84.6		

STRAW TONNES/HECTARE

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

Straw	
NONE	3.27
NORMAL	3.82
2 NORMAL	3.93
4 NORMAL	4.00
Mean	3.75

STRAW MEAN DM% 91.3

PLOT AREA HARVESTED 0.00284

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

GRAIN TONNES/HECTARE

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

Straw	
NONE	2.58
NORMAL	3.39
2 NORMAL	2.66
4 NORMAL	2.67
Mean	2.83

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

Straw
0.650

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	6	0.796	28.2
GRAIN MEAN DM%	83.9		

STRAW TONNES/HECTARE

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

Straw	
NONE	1.85
NORMAL	2.11
2 NORMAL	1.88
4 NORMAL	1.97
Mean	1.95

STRAW MEAN DM% 89.5

PLOT AREA HARVESTED 0.00305