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# Yields of the Field Experiments 2007

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Results of the  
Classical and other  
Long-term Experiments  
2007

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

### Rothamsted Research

Rothamsted Research (2007) *R/CS/326 & W/CS/326 Amounts of Straw* ; Yields Of The Field Experiments 2007, pp 51 - 54 - DOI: <https://doi.org/10.23637/ERADOC-1-217>

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 21<sup>st</sup> 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 <sup>2</sup> |
| 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 <sup>2</sup> |
| 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 \*\*\*\*\*

| <b>TREATMENT</b> |      |
|------------------|------|
| -                | 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 \*\*\*\*\*

| <b>TREATMENT</b> |      |
|------------------|------|
| -                | 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 \*\*\*\*\*

| <b>TREATMENT</b> |      |
|------------------|------|
| -                | 3.63 |
| 1                | 4.33 |
| 2                | 3.90 |
| 4                | 3.62 |
| Mean             | 3.87 |

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

| <b>TREATMENT</b> |       |
|------------------|-------|
|                  | 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 \*\*\*\*\*

| <b>TREATMENT</b> |      |
|------------------|------|
| -                | 3.10 |
| 1                | 2.80 |
| 2                | 2.73 |
| 4                | 2.94 |
| Mean             | 2.89 |

Straw mean dm% 80.2

Plot area harvested 0.00299