

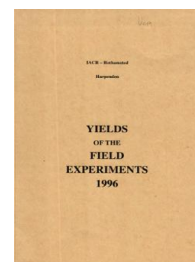
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## Yields of the Field Experiments 1996

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### 96/R/CS/311 Effects of Shallow Straw Incorporation - W. Wheat

#### Rothamsted Research

Rothamsted Research (1997) *96/R/CS/311 Effects of Shallow Straw Incorporation - W. Wheat* ; Yields Of The Field Experiments 1996, pp 67 - 68 - DOI: <https://doi.org/10.23637/ERADOC-1-51>

96/R/CS/311

## EFFECTS OF SHALLOW STRAW INCORPORATION

**Object:** To study the effects of straw incorporation by rotational ploughing, with shallow cultivation in the intervening years, on diseases and yield of winter wheat - West Barnfield I.

**Sponsors:** J.F. Jenkyn, R.J. Gutteridge, A.D. Todd.

The twelfth year, w. wheat.

For previous years see 85-95/R/CS/311.

**Design:** 6 x 4 criss-cross split into 2 sub-plots. Originally a single replicate of 3 x 2 x 2 x 2 x 2.

**Whole plot dimensions:** 4.5 x 12.0.

**Treatments:** Combinations of:-

Whole plots

1. **STRAW** Treatments to straw of previous wheat:

|         |                                       |
|---------|---------------------------------------|
| BURNT   | Burnt (duplicated)                    |
| BALED   | Baled and removed (duplicated)        |
| CHOPPED | Chopped and incorporated (duplicated) |

Criss-cross with

2. **CULTIVTN** Autumn cultivations since 1993, previously all shallow cultivated:

|         |                                                                      |
|---------|----------------------------------------------------------------------|
| (S)(S)S | Shallow tine cultivated to 10 cm                                     |
| (P)(S)S | Shallow tine cultivated to 10 cm, (ploughed to 23 cm in autumn 1993) |
| (S)(P)S | Shallow tine cultivated to 10 cm, (ploughed to 23 cm in autumn 1994) |
| (S)(S)P | Ploughed to 23 cm, (shallow tine cultivated previously)              |

**NOTE:** Only the last letter (the treatment in 1996) is used in the experimental diary.

### Experimental diary:

08-Aug-95 : T : **STRAW** BALED: Straw baled and removed.  
08-Aug-95 : T : **STRAW** CHOPPED: Straw chopped with trailed chopper.  
10-Aug-95 : T : **STRAW** BURNT: Straw burnt and ash incorporated with discs.  
29-Sep-95 : B : Gramoxone 100 at 3.0 l in 200 l.  
04-Oct-95 : T : **CULTIVTN** P: Ploughed.  
          : T : **CULTIVTN** S: Heavy spring-tine cultivated twice.  
16-Oct-95 : B : Rotary harrowed twice , Soissons, dressed Sibutol, drilled at 400 seeds per m<sup>2</sup>.  
30-Oct-95 : B : Avadex BW Granular at 22.5 kg.

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**Experimental diary:**

13-Nov-95 : B : MSS Iprofile at 2.6 l with Stomp 400 SC at 2.6 l in  
200 l.  
07-Mar-96 : B : 34.5% N at 116 kg.  
15-Apr-96 : B : 34.5% N at 493 kg.  
13-Jun-96 : B : Alto 100 SL at 0.6 l with Mallard 750 EC at 0.4 l in  
300 l.  
08-Aug-96 : B : Combine harvested.

NOTE: Samples were taken in July to assess root and stem base diseases.

**GRAIN TONNES/HECTARE**

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

| CULTIVTN | (S) (S) S | (P) (S) S | (S) (P) S | (S) (S) P | Mean |
|----------|-----------|-----------|-----------|-----------|------|
| STRAW    |           |           |           |           |      |
| BURNT    | 8.67      | 8.92      | 8.55      | 8.30      | 8.61 |
| BALED    | 8.13      | 8.22      | 8.63      | 8.51      | 8.37 |
| CHOPPED  | 8.26      | 8.22      | 8.58      | 8.79      | 8.46 |
| Mean     | 8.35      | 8.45      | 8.59      | 8.53      | 8.48 |

GRAIN MEAN DM% 86.6

SUB-PLOT AREA HARVESTED 0.00276