

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED  
RESEARCH

## Yields of the Field Experiments 1998

[Full Table of Content](#)



---

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

#### Rothamsted Research

Rothamsted Research (1999) *98/R/CS/311 Effects of Shallow Straw Incorporation - W. Wheat* ; Yields Of The Field Experiments 1998, pp 62 - 63 - DOI: <https://doi.org/10.23637/ERADOC-1-52>

98/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, W. Powell, A.D. Todd.

The 14th year, w. wheat.

For previous years see 85-97/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 P94	Shallow tine cultivated to 10 cm, (ploughed to 20 cm in autumn 1993)
S P95	Shallow tine cultivated to 10 cm, (ploughed to 20 cm in autumn 1994)
S P96	Shallow tine cultivated to 10 cm, (ploughed to 20 cm in autumn 1995)
S P97	Shallow tine cultivated to 10 cm, (ploughed to 20 cm in autumn 1996)

**Experimental diary:**

11-Aug-97 : T : **STRAW** BALED: Straw baled and removed.  
          : T : **STRAW** BURNT: Straw burnt and ash incorporated.  
          : T : **STRAW** CHOPPED: Straw chopped with trailed chopper.  
12-Aug-97 : B : Discd.  
05-Sep-97 : B : Scythe LC at 1.5 l with Vassgro Non Ionic at 1.0 l in 200 l.  
11-Oct-97 : B : Scythe LC at 3.0 l in 200 l.  
14-Oct-97 : B : Heavy spring-tine cultivated to 10 cm.  
14-Oct-97 : B : Rotary harrowed, Soissons, dressed Anchor, drilled at 400 seeds per m<sup>2</sup>.  
16-Oct-97 : B : Draza at 5.5 kg.

98/R/CS/311

**Experimental diary:**

13-Jan-98 : B : Hawk at 2.5 l with Sprayprover at 1.0 l in 200 l.  
17-Feb-98 : B : 34.5% N at 120 kg.  
16-Mar-98 : B : Ally at 20 g with MSS Optica at 1.0 l in 200 l.  
28-Apr-98 : B : 34.5% N at 580 kg. Tripart Brevis at 1.5 l in 200 l.  
29-May-98 : B : Folicur at 0.7 l in 200 l.  
04-Jun-98 : T : **CULTIVTN** S P95: Roundup at 3.0 l in 200 l.  
12-Jun-98 : B : Bavistin DF at 0.5 kg with Folicur at 0.5 l in 100 l.  
08-Aug-98 : B : Combine harvested.

- NOTES:** (1) Plant samples were taken in July to assess root and stem base diseases.  
(3) All **CULTIVTN** S P95 plots were destroyed with herbicide to reduce brome infestation in readiness for modifications to the experiment, these are omitted from the table of results.

**GRAIN TONNES/HECTARE**

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

<b>CULTIVTN</b>	S P94	S P96	S P97	Mean
<b>STRAW</b>				
BURNT	8.66	8.19	8.50	8.45
BALED	6.04	6.05	7.59	6.56
CHOPPED	5.57	6.83	7.81	6.74
Mean	6.76	7.02	7.97	7.25

GRAIN MEAN DM% 87.8

SUB-PLOT AREA HARVESTED 0.00276