

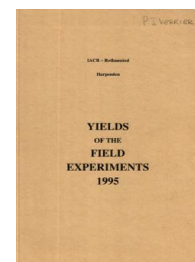
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Rothamsted Research (1996) *95/R/CS/311 Effects of Shallow Straw Incorporation - W. Wheat* ; Yields Of The Field Experiments 1995, pp 68 - 69 - DOI: <https://doi.org/10.23637/ERADOC-1-50>

95/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 eleventh year, w. wheat.

For previous years see 85-94/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 | |
| S | Shallow tine cultivated to 10 cm (duplicated) |
| S(P) | Shallow tine cultivated to 10 cm, ploughed to 23 cm in autumn 1993 |
| P | Ploughed to 23 cm |

Experimental diary:

- 08-Aug-94 : T : **STRAW** BALED: Straw baled and removed.
 : T : **STRAW** BURNT: Straw burnt and ash incorporated with discs.
 : T : **STRAW** CHOPPED: Straw chopped with trailed chopper.
- 02-Sep-94 : B : PK as (0:20:32) at 1317 kg.
- 06-Sep-94 : B : Sting CT at 2.0 l in 200 l.
- 04-Oct-94 : T : **CULTIVTN** P: Ploughed.
 : T : **CULTIVTN** S, S(P): Heavy spring-tine cultivated twice.
- 07-Oct-94 : B : Rotary harrowed.
 : T : **CULTIVTN** S, S(P): Cultivated by rotary grubber.
 : B : Rotary harrowed, Soissons, dressed Beret 050FS, drilled at 380 seeds per m².
- 18-Nov-94 : B : Auger at 3.0 l with Stomp 400 at 2.5 l in 200 l.
- 25-Nov-94 : B : Atlas Dimethoate 40 at 850 ml in 200 l.
- 10-Mar-95 : B : 34.5% N at 118 kg.
- 11-Apr-95 : B : 34.5% N at 580 kg.
- 03-May-95 : B : Halo at 2.0 l in 200 l.

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Experimental diary:

16-Jun-95 : B : Bravo 500 at 1.0 l with Silvacur at 0.5 l in 300 l.
04-Aug-95 : B : Combine harvested.

- NOTES:** (1) All plots were shallow cultivated until the rotational ploughing was introduced in autumn 1993.
(2) Ears of volunteers and grass weeds were counted in June. Crop samples were taken in April and June to measure disease affecting the stem bases and roots.

GRAIN TONNES/HECTARE

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

CULTIVTN	S	S(P)	P	Mean
STRAW				
BU	8.60	8.48	8.70	8.59
BA	8.00	8.54	8.42	8.24
CH	8.58	8.70	8.45	8.58
Mean	8.39	8.57	8.52	8.47

GRAIN MEAN DM% 92.1

SUB-PLOT AREA HARVESTED 0.00276