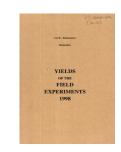
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Yields of the Field Experiments 1998



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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 \times 4 criss-cross split into 2 sub-plots. Originally a single replicate of 3 \times 2 \times 2 \times 2 \times 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. CT	ULTIVTN	THE RESERVE OF THE PARTY OF THE	cultiv ivated		since	1993	3, pr	reviously	all	sha	allo	W
S	P94	Shallow	tine	cultiva	ated t	0 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 time 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 : Disced.

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 1 in 200 1.

14-Oct-97 : B : Heavy spring-time cultivated to 10 cm.

14-Oct-97 : B : Rotary harrowed, Soissons, dressed Anchor, drilled at 400

seeds per m2.

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 1 in 200 1.
- 04-Jun-98 : T : CULTIVTN S P95: Roundup at 3.0 1 in 200 1.
- 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 CULTIVIN 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 *****

CULTIVTN	S P94	S P96	S P97	Mean
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