

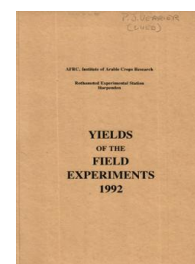
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92/R/CS/311 Effects of Shallow Straw Incorporation - W. Wheat

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92/R/CS/311

EFFECTS OF SHALLOW STRAW INCORPORATION

Object: To study the effects of shallow straw incorporation on pests and diseases and on the establishment, growth and yield of winter wheat - West Barnfield I.

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The eighth year, w. wheat.

For previous years see 85-91/R/CS/311.

Design: Single replicate of 3 x 2 x 2 x 2 x 2.

Whole plot dimensions: 9.0 x 57.0.

Treatments: Combinations of:-

Whole plots

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

BURNT	Burnt
BALED	Baled and removed
CHOPPED	Chopped

2. **CULTTIME** Time of cultivation, to 10 cm depth:

EARLY	As soon as possible after harvest
LATER	At least 14 days after EARLY

Sub plots

3. **FUNGICIDE** Fungicides:

0	None
FULL	Full programme:- Triadimefon and carbendazim in winter, prochloraz in spring plus propiconazole alone and with chlorothalonil in summer

4. **INSECTICIDE** Insecticides:

0	None
CYP+PIR	Cypermethrin in autumn and pirimicarb in summer

5. **MOLLICIDE** Molluscicide:

0	None
METHCARB	Methiocarb after drilling

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Experimental Diary:

22-Aug-91 : T : **STRAW** BALED: Straw baled and removed.
 27-Aug-91 : T : **STRAW** BURNT: Straw burnt.
 : T : **STRAW** CHOPPED: Straw chopped with trailed straw chopper.
 28-Aug-91 : T : **STRAW** BURNT: Discd.
 : T : **CULTTIME** EARLY: Cultivated by rotary grubber.
 23-Sep-91 : B : (0:16:36) at 1040 kg.
 11-Oct-91 : T : **CULTTIME** LATER: Cultivated by rotary grubber.
 12-Oct-91 : B : Rotary harrowed, Haven drilled at 220 kg, rolled.
 18-Oct-91 : T : **MOLLCIDE** METHCARB: Draza at 5.5 kg.
 12-Nov-91 : T : **INSCTCDE** CYP+PIR: Ripcord at 0.20 l in 200 l.
 27-Nov-91 : B : Stefes IPU at 2.5 l and Stomp 400 at 3.3 l in 200 l.
 14-Jan-92 : T : **FUNGICIDE** FULL: Bayleton BM at 1.0 kg in 200 l.
 25-Feb-92 : B : 34.5% N at 120 kg.
 14-Apr-92 : B : 34.5% N at 580 kg.
 15-May-92 : T : **FUNGICIDE** FULL: Sportak 45 at 0.90 l in 200 l.
 20-May-92 : B : Terpal at 2.0 l with Farmon Blue at 0.80 l in 200 l.
 04-Jun-92 : T : **FUNGICIDE** FULL: Radar at 0.50 l in 200 l.
 22-Jun-92 : T : **FUNGICIDE** FULL: Radar at 0.50 l and Chiltern
 Chlorothalonil 500 at 1.0 l in 200 l.
 : T : **INSCTCDE** CYP+PIR: Aphox at 0.28 kg in 200 l.
 28-Jul-92 : B : Roundup at 4.0 l in 200 l.
 19-Aug-92 : B : Combine harvested.

NOTE: Growth was measured and incidence of diseases assessed at intervals during the season. Incidence of stem-borers was assessed in spring. Ears of volunteers were counted prior to harvest and components of yield were measured.

GRAIN TONNES/HECTARE

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

CULTTIME	EARLY	LATER	Mean
STRAW			
BURNT	8.62	8.58	8.60
BALED	8.24	8.57	8.40
CHOPPED	8.23	8.56	8.39
Mean	8.36	8.57	8.47
FUNGICIDE	O	FULL	Mean
STRAW			
BURNT	7.79	9.40	8.60
BALED	7.54	9.26	8.40
CHOPPED	7.52	9.27	8.39
Mean	7.62	9.31	8.47

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GRAIN TONNES/HECTARE

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

FUNGCIDE	O	FULL	Mean
CULTTIME			
EARLY	7.53	9.20	8.36
LATER	7.71	9.42	8.57
Mean	7.62	9.31	8.47

INSCDCDE	O	CYP+PIR	Mean
STRAW			
BURNT	8.46	8.73	8.60
BALED	8.43	8.38	8.40
CHOPPED	8.39	8.40	8.39
Mean	8.43	8.50	8.47

INSCDCDE	O	CYP+PIR	Mean
CULTTIME			
EARLY	8.34	8.38	8.36
LATER	8.52	8.62	8.57
Mean	8.43	8.50	8.47

INSCDCDE	O	CYP+PIR	Mean
FUNGCIDE			
O	7.62	7.62	7.62
FULL	9.24	9.38	9.31
Mean	8.43	8.50	8.47

MOLLCIDE	O	METHCARB	Mean
STRAW			
BURNT	8.59	8.61	8.60
BALED	8.39	8.41	8.40
CHOPPED	8.43	8.35	8.39
Mean	8.47	8.46	8.47

MOLLCIDE	O	METHCARB	Mean
CULTTIME			
EARLY	8.37	8.36	8.36
LATER	8.58	8.56	8.57
Mean	8.47	8.46	8.47

MOLLCIDE	O	METHCARB	Mean
FUNGCIDE			
O	7.63	7.61	7.62
FULL	9.31	9.31	9.31
Mean	8.47	8.46	8.47

92/R/CS/311

GRAIN TONNES/HECTARE

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

MOLLCIDE	O	METHCARB	Mean
INSCTCDE			
O	8.50	8.36	8.43
CYP+PIR	8.45	8.55	8.50
Mean	8.47	8.46	8.47

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

FUNGCIDE	INSCTCDE	MOLLCIDE	STRAW*
			FUNGCIDE
0.084	0.084	0.084	0.145
CULTTIME*	STRAW	CULTTIME	FUNGCIDE
FUNGCIDE	INSCTCDE	INSCTCDE	INSCTCDE
0.119	0.145	0.119	0.119
STRAW*	CULTTIME*	FUNGCIDE	INSCTCDE
MOLLCIDE	MOLLCIDE	MOLLCIDE	MOLLCIDE
0.145	0.119	0.119	0.119

* Within the same level of STRAW, CULTTIME or STRAW.CULTTIME only

***** Stratum standard errors and coefficients of variation *****

Stratum	d.f.	s.e.	cv%
WP.SP	27	0.291	3.4

GRAIN MEAN DM% 87.0

SUB PLOT AREA HARVESTED 0.00276