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93/R/CS/309 and 93/W/CS/309 Long-term Straw Incorporation - W. Wheat

Rothamsted Research

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93/R/CS/309 and 93/W/CS/309

Experimental diary:

Great Knott III (R):

22-Oct-92 : B : Draza at 5.5 kg.
13-Nov-92 : B : Avadex BW Granular at 22.5 kg.
24-Nov-92 : B : Draza at 5.5 kg.
24-Feb-93 : B : Panther at 2.0 l in 200 l.
08-Mar-93 : B : 34.5% N at 120 kg.
15-Apr-93 : B : Halo at 2.0 l and Tripart Brevis at 2.25 l in 200 l.
16-Apr-93 : B : 34.5% N at 460 kg.
22-Jun-93 : B : Corbel at 0.50 l and Radar at 0.50 l in 200 l.
19-Aug-93 : B : Combine harvested.

Far Field I (W):

27-Jul-92 : T : **STRAW CHOPPED**: Straw chopped and spread.
28-Jul-92 : T : **STRAW BURNT**: Straw baled and removed.
11-Aug-92 : B : Stubble topped, subsoiled to 45 cm with tines 1.5 m apart.
29-Sep-92 : B : Roundup at 4.0 l in 200 l.
05-Oct-92 : T : **CULTIVTN TINE 10**: Heavy spring-tine cultivated to 10 cm.
: T : **CULTIVTN TN10TN20**: Heavy spring-tine cultivated to 10 cm, deep-tine cultivated to 20 cm
07-Oct-92 : T : **CULTIVTN TINE 10, TN10TN20**: Discd twice to 10cm.
: T : **CULTIVTN PLOUGH20**: Ploughed to 20 cm.
09-Oct-92 : B : Rotary harrowed, Soissons, dressed Cerevax, drilled at 350 seeds per square metre.
: B : Avadex BW at 4.2 l in 200 l.
12-Oct-92 : B : Pre-Empty at 5.0 l and Scythe at 3.0 l in 200 l.
16-Oct-92 : B : Draza at 5.5 kg.
16-Mar-93 : B : 34.5% N at 120 kg.
15-Apr-93 : B : Starane 2 at 1.0 l with New 5C Cycocel at 2.5 l in 200 l.
30-Apr-93 : B : 34.5% N at 460 kg.
18-May-93 : B : Halo at 2.0 l and Mistral at 0.25 l in 200 l.
22-Jun-93 : B : Ashlade Mancozeb FL at 3.0 l and Corbel at 0.5 l in 200 l.
14-Aug-93 : B : Combine harvested.

- NOTES:** (1) At Rothamsted and Woburn on the **STRAW BURNT** plots previous w. rape straw proved difficult to burn and was subsequently removed.
- (2) Because of excessive weeds the yield from one plot at Rothamsted was lost with treatment **STRAW CHOPPED**, **CULTIVTN TINE 10**. An estimated value was used in the analysis. Plot cut 17-May-93 and cuttings removed; topped 17-June-93 and roundup at 5.0 l in 200 l applied 02-Jul-93.
- (3) Establishment counts were made in autumn and shoot numbers and total dry matter were measured in spring. Components of yield were measured and numbers of volunteer ears counted. Fungal diseases were measured at intervals during the season.

93/R/CS/309 GREAT KNOTT III (R)

GRAIN TONNES/HECTARE

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

CULTIVTN	TINE 10	TN10PL20	TN10TN20	PLOUGH20	Mean
STRAW					
BURNT	9.54	9.65	10.04	9.64	9.72
CHOPPED	9.26	8.82	8.88	8.62	8.90
Mean	9.35	9.09	9.27	8.96	9.17

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

STRAW	CULTIVTN	STRAW	CULTIVTN
		0.918	min.rep
0.398	0.530	0.795	max-min
		0.649	max.rep

STRAW

min.rep BURNT only
 max-min BURNT v CHOPPED
 max.rep CHOPPED only

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	36	1.298	14.2

GRAIN MEAN DM% 86.4

PLOT AREA HARVESTED 0.00588

93/W/CS/309 FAR FIELD I (W)

GRAIN TONNES/HECTARE

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

CULTIVTN	TINE 10	TN10PL20	TN10TN20	PLOUGH20	Mean
STRAW					
BURNT	7.80	8.32	8.98	8.61	8.43
CHOPPED	5.82	8.96	5.67	8.98	7.36
Mean	6.48	8.75	6.77	8.85	7.71

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

STRAW	CULTIVTN	STRAW	CULTIVTN
		1.335	min.rep
0.578	0.771	1.156	max-min
		0.944	max.rep

STRAW

min.rep BURNT only
 max-min BURNT v CHOPPED
 max.rep CHOPPED only

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	15	1.335	17.3
GRAIN MEAN DM%	83.5		
PLOT AREA HARVESTED	0.00636		