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Yields of the Field Experiments 2008

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R/CS/477 & W/CS/478 Continuous Maize

Rothamsted Research

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08/R/CS/477

CONTINUOUS MAIZE

Object: To monitor the fate of organic carbon in the soil organic matter – Hoosfield

Sponsors: P. R. Poulton and A. J. Macdonald

The 12th year, forage maize and s. barley

For previous years see Yield Books for 97-07/R/CS/477

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 12.0 x 25.0

Treatments:-

CROP	Crop and straw treatments:
M	Continuous maize, stubble incorporated
(M)B	S. barley after five years maize, stubble incorporated
MT	Maize, stubble plus 10 t maize tops incorporated
(B)M	Maize, after three years of s. barley with straw removed
BT	Continuous spring barley, straw removed plus 10 t maize tops incorporated
B	Continuous spring barley, straw removed

Experimental diary

			Rate	Unit
27-Sep-07	a	Apply maize tops, plots 3, 6, 9, 12, 16, and 18 @ 300 kg/plot	10.00	t/ha
2-Oct-07	f	Muriate of Potash	181.00	kg/ha
	f	Triple Superphosphate	171.00	kg/ha
10-Oct-07	a	Plough/S		
2-Apr-08	a	Combination Drilled		
	s	Optic Tr Raxil Pro	350.00	seeds/m2
8-May-08	f	Double Top	356.00	kg/ha
12-May-08	a	Flexitined maize		
	a	Power harrowed maize		
	a	Nodet drilled maize		
	s	Hudson tr measurol maize	10.20	seeds/m2
13-May-08	a	Rolled barley and maize	1.00	
20-May-08	p	Harmony M SX, barley	100.00	g/200 l/ha
	p	Duplosan KV, barley	1.00	l/200 l/ha
	p	Acanto Prima, barley	1.25	l/200 l/ha
2-Jun-08	p	Decoy Wetex	5.00	kg/ha
5-Jun-08	p	Decoy Wetex, barley and maize	5.00	kg/ha
9-Jun-08	p	Acanto, barley	0.50	l/200 l/ha
	p	Unix, barley	0.50	kg/200 l/ha
16-Jun-08	a	Mow / Rotavate paths		

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			Rate	Unit
24-Jun-08	p	Samson, maize	1.50	l/200 l/ha
29-Jun-08	p	Callisto, maize	1.00	l/200 l/ha
25-Jul-08	a	Rogue wild oats/thistles/weeds		
6-Aug-08	a	Mow / Rotavate paths		
12-Sep-08	a	Combine harvest, plots for yield		
	a	Swath straw		
19-Sep-08	a	Combine harvest		
	a	Swath straw		
23-Sep-08	a	Cut harvest strips, weighed and sampled, maize plots		
	a	Forage harvest maize discards		
29-Sep-08	a	Forage harvest maize discards completed		
	a	Baled		

MAIZE

WHOLE CROP (AT 100% DRY MATTER) TONNES/HECTARE

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

```
    Treatment
            M       6.79
         (B)M       8.63
           MT       7.21

         Mean       7.54

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

Table            Treatment
s.e.d.               1.062

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

Stratum                    d.f.          s.e.         cv%

Blocks.Plots                 4         1.301        17.2

MEAN DM%  23.1

PLOT AREA HARVESTED   0.00108
```


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SPRING BARLEY

GRAIN TONNES/HECTARE

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

Treatment	
(M)B	3.75
BT	4.24
B	3.90
Mean	3.96

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

Table	Treatment
s.e.d.	0.263

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.322	8.1

GRAIN MEAN DM% 81.2

PLOT AREA HARVESTED 0.00525

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08/W/CS/478

CONTINUOUS MAIZE

Object: To monitor the fate of organic carbon in the soil organic matter – Woburn, Stackyard AI

Sponsors: P. R. Poulton and A. J. Macdonald

The 12th year, forage maize and s. barley

For previous years see Yield Books for 97-07/W/CS/478

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 9.0 x 25.00

Treatments:-

CROP	Crop and straw treatments:
M	Continuous maize, stubble incorporated
(M)B	S. barley after five years maize, stubble incorporated
MT	Maize, stubble plus 10 t maize tops incorporated
(B)M	Maize, after three years of s. barley with straw removed
BT	Continuous spring barley, straw removed plus 10 t maize tops incorporated
B	Continuous spring barley, straw removed

Experimental diary

			Rate	Unit
26-Sep-07	a	Apply maize tops to MT and BT plots	10.00	t/ha
2-Oct-07	a	Spread maize tops		
	a	Topped		
14-Oct-07	f	Triple Superphosphate	171.00	kg/ha
	f	Muriate of Potash	181.00	kg/ha
22-Oct-07	a	Plough/SW	1.00	
9-Apr-08	a	Power Harrowed	1.00	
	a	Accord Drilled	1.00	
	s	Optic Raxil pro (awaiting seed sheet)	425.00	seeds/m2
	a	Rolled		
14-May-08	a	Power harrowed maize plots		
	a	Nodet drilled maize plots		
	s	Hudson tr measurol maize plots	10.20	seeds/m2
18-May-08	p	Acanto Prima Sp barley plots	1.25	kg/200 l/ha
	p	Harmony M SX Sp barley plots	100.00	g/200 l/ha
	p	Duplosan KV Sp barley plots	1.00	l/200 l/ha
6-Jun-08	p	Samson- maize	1.50	l/200 l/ha
1-Jul-08	p	Callisto maize plots	1.00	l/220 l/ha

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18-Sep-08	a	Combine harvest plots for yield barley plots
	a	Swath straw barley plots
19-Sep-08	a	Combine harvest discards
	a	Swath straw
21-Sep-08	a	Baled
26-Sep-08	a	Cut harvest strips, weighed and sampled maize plots
2-Oct-08	a	Forage harvest maize discards

MAIZE

WHOLE CROP (AT 100% DRY MATTER) TONNES/HECTARE

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

```
    Treatment
            M       7.43
           MT      10.15
         (B)M       6.76

         Mean       8.11

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

Table            Treatment
s.e.d.               0.570


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

Stratum                        d.f.          s.e.         cv%

Blocks.Plots                      4         0.699         8.6

MEAN DM%  29.7

PLOT AREA HARVESTED  0.00108
```


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SPRING BARLEY

GRAIN TONNES/HECTARE

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

```
   Treatment
        (M)B        1.88
          BT        2.43
           B        1.85

        Mean        2.05

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

s.e.d.             0.282


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

Stratum                      d.f.          s.e.         cv%

Blocks.Plots                    4         0.345        16.8

GRAIN MEAN DM%  83.2

PLOT AREA HARVESTED   0.00525
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