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Yields of the Field Experiments 2008

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Results of the
Classical and other
Long-term Experiments
2008

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 measurool 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		

08/R/CS/477

		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

08/R/CS/477

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		

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 measuroI 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
- 19-Sep-08 a Swath straw barley plots
- 19-Sep-08 a Combine harvest discards
- 21-Sep-08 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

08/W/CS/478

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