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Results of the Classical and Other Long-term Experiments 2006

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06/W/CS/478 - Woburn Continuous Maize

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06/W/CS/478

CONTINUOUS MAIZE

Object: To monitor the fate of organic carbon in the soil organic matter - Woburn, Stackyard A I.

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

The 10th year, forage maize and s. barley.

For previous years see 97-05/W/CS/478.

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 9.0 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 spring barley, straw removed
BT	Continuous spring barley, straw removed plus 10 t maize tops incorporated
B	Continuous spring barley, straw removed

Experimental diary:

09-Nov-05	: T :	BT, MT	: Maize tops applied at 10 tonnes.
16-Nov-05	: B :		: Muriate of potash at 181 kg.
	: B :		: Triple superphosphate at 171 kg.
	: B :		: Ploughed 30 cm wide furrows.
05-Apr-06	: B :		: Flexitined.
	: T :	(M)B, BT, B:	Drilled, Optic, tr. Raxil Pro, at 350 seeds/m ² , rolled.
11-May-06	: B :		: Double Top (27% N, 12% S) at 356 kg.
	: T :	(B)M, MT, M:	Power harrowed.
12-May-06	: T :	(B)M, MT, M:	Drilled, Hudson, tr. Thiram, Methiocarb, Fludioxonil, Metalaxyl M, at 10.2 seeds/m ²
17-May-06	: B :	(M)B, BT, B:	tm)Quantum SX at 30.0 g in 200 l.
	: B :		: tm)Acanto at 0.5 l in 200 l.
	: B :		: tm)Corbel at 0.5 l in 200 l.
	: B :		: tm)Manganese 15% Mn at 3.0 l in 200 l.
	: B :		: tm)Unix at 0.5 kg in 200 l.
	: B :		: tm)Duplosan KV at 2.0 l in 200 l.
07-Jun-06	: T :	(B)M, MT, M:	tm)Jester at 0.5 kg in 200 l.
			tm)Griffin Gex 1664 at 0.2 l in 200 l.
27-Aug-06	: T :	(M)B, BT, B:	Combine harvested plots for yield, swathed straw.
	: T :	(M)B, BT, B:	Combine harvested discards, swathed straw.
	: T :	(M)B, BT, B:	Baled.
05-Oct-06	: T :	(B)M, MT, M:	Cut sample areas, weighed, and sampled.
16-Oct-06	: T :	(B)M, MT, M:	Cut discards.

NOTE: Forage maize and barley grain samples were taken for N analysis.

06/W/CS/478

MAIZE

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

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

CROP	
M	11.24
MT	11.86
(B)M	9.86
Mean	10.99

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

CROP
1.216

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	1.490	13.6

MEAN DM% 42.1

PLOT AREA HARVESTED 0.00108

SPRING BARLEY

GRAIN TONNES/HECTARE

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

CROP	
(M)B	2.46
BT	3.32
B	2.58
Mean	2.79

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

CROP
0.149

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.183	6.6

MEAN DM% 86.0

AVERAGE PLOT AREA HARVESTED 0.00513