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Results of the Classical and Other Long-term Experiments 2005

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05/W/CS/478 - Woburn Continuous Maize

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05/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 ninth year, forage maize and s. barley.

For previous years see 97-04/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:

05-Oct-04	: T :	BT, MT	: Maize tops applied at 225 kg per plot.
01-Nov-04	: B :		: Muriate of potash at 250 kg.
	: B :		: Triple superphosphate at 180 kg.
03-Nov-04	: B :		: Ploughed 30 cm wide furrows.
07-Apr-05	: B :		: Rotary harrowed.
	: T :	(M)B, BT, B:	Drilled, Optic, tr. Raxil S, at 375 seeds/m ² with the Accord drill, rolled.
04-May-05	: T :	(B)M, MT, M:	Rotary harrowed, drilled, Hudson, tr. Thiram, Methiocarb, Fludioxonil, Metalaxyl M, at 10.2 seeds/m ² with the Nodet drill.
10-May-05	: T :	(B)M, MT, M:	pdq at 4.0 l in 220l.
14-May-05	: B :		: Sulphur Gold (30% N, 7.6% S) at 320 kg.
30-May-05	: B :	(M)B, BT, B:	tm)Corbel at 0.5 l in 220 l.
	: B :		: tm)Acanto at 0.5 l in 220 l.
	: B :		: tm)Harmony M SX at 100 g in 220 l.
	: B :		: tm)Mn 500 Headland at 1.0 kg in 220 l.
	: B :		: tm)Unix at 0.5 kg in 220 l.
	: B :		: tm)Duplosan KV at 1.5 l in 220 l.
08-Jun-05	: T :	(B)M, MT, M:	tm)Gesaprim at 3.0 l in 220l. tm)Phase 2 at 3.0 l in 220 l.
27-Jun-05	: T :	(B)M, MT, M:	Bromotrill P at 2.5 l in 200l.
	: T :	(M)B, BT, B:	tm)Amistar Opti at 0.5 l in 200 l.
	: B :		: tm)Opus at 0.5 l in 200 l.
03-Sep-05	: T :	(M)B, BT, B:	Combine harvested plots for yield, swathed straw
04-Sep-05	: T :	(M)B, BT, B:	Combine harvested discards, swathed straw
08-Sep-05	: T :	(M)B, BT, B:	Baled.
22-Sep-05	: T :	(B)M, MT, M:	Cut sample areas, weighed, and sampled.
09-Nov-05	: T :	(B)M, MT, M:	Cut discards.

05/W/CS/478

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

MAIZE

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

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

CROP	
M	9.68
MT	7.12
(B)M	8.42
Mean	8.41

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

CROP
1.788

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	2.190	26.0

MEAN DM% 37.8

PLOT AREA HARVESTED 0.00108

SPRING BARLEY

GRAIN TONNES/HECTARE

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

CROP	
(M)B	2.88
BT	2.26
B	2.20
Mean	2.45

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

CROP
0.179

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.219	9.0

GRAIN MEAN DM% 86.9

PLOT AREA HARVESTED 0.00525