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Results of the Classical and Other Long-term Experiments 2004

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Classical
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Long-term Experiments

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04/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.

The eighth year, forage maize and s. barley.

For previous years see 97-03/W/CS/478.

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 9.0×25.0 .

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
В	Continuous spring barley, straw removed

Experimental diary:

```
05-Sep-03 : T : BT, MT: Maize tops applied at 225 kg per plot.
02-Oct-03 : B : : Muriate of potash at 250 kg. : B : : Triple superphosphate at 180 kg.
                     : Ploughed 30 cm wide furrows.
07-Oct-03 : B :
                  : Glydate at 3.0 1 in 200 1.
: Power harrowed.
09-Apr-04 : B : 12-Apr-04 : B :
           : \mathbf{T} : (M)B, BT, B: Drilled, Optic, tr. Sibutol, at 400
                          seeds/m² with the Accord drill, rolled.
                      : Sulphur Gold (30% N, 7.6% S) at 320 kg.
07-May-04 : B :
12-May-04 : T : (B)M, MT, M: Rotary harrowed.
           : T : (B)M, MT, M: Drilled, Hudson, tr. Mesurol, at 10.2
                          seeds/m2 with the Nodet drill.
03-Jun-04 : B : (M)B, BT, B: tm)Opus at 0.4 1 in 200 1
                             : tm)Acanto at 0.5 1 in 200 1.
           : B :
04-Sep-04: T: (M)B, BT, B: Combine harvested plots for yield.
           : T : (M)B, BT, B: Swathed straw
08-Sep-04 : T : (M)B, BT, B: Baled.
22\text{-Sep-04}: \mathbf{T}: (B)M, MT, M: Cut sample areas, weighed, and sampled.
05-Oct-04 : T : (B)M, MT, M: Cut discards.
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NOTE: Forage maize and barley grain samples were taken for N analysis.

04/W/CS/478

MAIZE

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Whole Crop (at 100% dry matter) TONNES/HECTARE
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**** Tables of means ****

CROP

M 7.77 MT 7.26

(B)M 5.42

Mean 6.82

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

CROP

0.893

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

Stratum

d.f. s.e.

Blocks.Plots 4 1.094 16.0

MEAN DM% 37.8

PLOT AREA HARVESTED 0.00108

SPRING BARLEY

GRAIN TONNES/HECTARE

**** Tables of means ****

CROP

(M)B 3.54 BT 2.85 B 2.27

Mean 2.88

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

CROP

0.140

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

Stratum

d.f.

s.e.

CV8

CV8

Blocks.Plots

4

0.171

5.9

GRAIN MEAN DM% 86.5

PLOT AREA HARVESTED 0.00525