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Yields of the Field Experiments 2002

[Full Table of Content](#)

Yields of the
Classical
and other
Long-term Experiments
2002

IACR - Rothamsted

02/W/CS/478 - Woburn Continuous Maize

Rothamsted Research

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02/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, J. Gaunt.

The sixth year, forage maize and s. barley.

For previous years see 97-01/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:

31-Oct-01 : T : BT, MT: Maize tops applied at 225 kg per plot.
05-Nov-01 : B : : Sulphate of potash at 217 kg. Triple superphosphate at 171 kg. Ploughed.
23-Mar-02 : B : : Sting ECO at 4.0 l in 200 l.
09-Apr-02 : B : : Potassium sulphate at 217 kg. Rotary harrowed.
10-Apr-02 : T : (M)B, BT, B: Drilled, Optic, tr. Raxil S, at 400 seeds/m² with the Accord drill.
11-Apr-02 : B : : Rolled.
12-Apr-02 : T : (M)B, BT, B: Stomp 400 SC at 2.0 l in 200 l.
08-May-02 : B : : 33.5% N at 287 kg.
09-May-02 : T : (B)M, MT, M: Rotary harrowed. Drilled, Hudson, tr. Mesuroil, at 10 seeds/m² with the Nodet drill.
13-Jun-02 : B : (M)B, BT, B: tm)Copper 500 at 1.0 l in 200 l.
 : B : : tm)Landmark at 0.75 l in 200 l.
20-Jun-02 : B : (B)M, MT, M: tm)Gesaprim at 3.0 l in 220 l.
 : B : : tm)Cropoil at 5.0 l in 220 l.
29-Aug-02 : T : (M)B, BT, B: Combine harvested plots for yield. Swathed straw.
30-Aug-02 : B : (M)B, BT, B: Combine harvested all remaining barley. Swathed straw.
31-Aug-02 : B : (M)B, BT, B: Baled and removed straw.
12-Sep-02 : T : (B)M, MT, M: Cut discards. Cut sample areas, weighed, and sampled.

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

02/W/CS/478 MAIZE

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

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

Treatment	
M	9.08
MT	7.41
(B)M	7.87
Mean	8.12

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

Treatment
1.465

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	1.794	22.1

GRAIN MEAN DM% 28.0

PLOT AREA HARVESTED 0.00108

S. BARLEY

GRAIN TONNES/HECTARE

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

Treatment	
(M)B	5.35
BT	4.62
B	4.19
Mean	4.72

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

Treatment
0.068

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.084	1.8

GRAIN MEAN DM% 84.0

PLOT AREA HARVESTED 0.00525