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Yields of the Field Experiments 2003

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Results of the
Classical
and other
Long-term Experiments
2003

Rothamsted Research

03/W/CS/478 - Woburn Continuous Maize

Rothamsted Research

Rothamsted Research (2004) *03/W/CS/478 - Woburn Continuous Maize ; Yields Of The Field Experiments 2003*, pp 49 - 50 - DOI: <https://doi.org/10.23637/ERADOC-1-260>

03/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 sixth year, forage maize and s. barley.

For previous years see 97-02/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:

13-Sep-02 : T : BT, MT: Maize tops applied at 225 kg per plot.
19-Sep-02 : B : CleanCrop Egret at 4.0 l in 200 l.
20-Sep-02 : B : Muriate of potash at 180 kg.
: B : Triple superphosphate at 171 kg.
30-Oct-02 : B : Ploughed 25 cm wide furrows.
20-Mar-03 : B : Power harrowed.
21-Mar-03 : T : (M)B, BT, B: Drilled, Optic, tr. Raxil S plus Aventis Manganese 500, at 425 seeds/m² with the Accord drill.
22-Mar-03 : T : (M)B, BT, B: Rolled.
12-May-03 : 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.
14-May-03 : B : Sulphur Gold (30% N, 7.6% S) at 320 kg.
15-May-03 : B : (M)B, BT, B: tm)Ally at 30 g in 220 l.
: B : tm)Starane 2 at 0.75 l in 220 l.
13-Jun-03 : B : (B)M, MT, M: tm)Gesaprim at 3.0 l in 220 l.
: B : tm)Phase II at 2.0 l in 220 l.
10-Aug-03 : T : (M)B, BT, B: Combine harvested plots for yield.
12-Aug-03 : T : (M)B, BT, B: Baled.
27-Aug-03 : T : (B)M, MT, M: Cut sample areas, weighed, and sampled.
04-Sep-03 : T : (B)M, MT, M: Cut discards.

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

03/W/CS/478

MAIZE

GRAIN TONNES/HECTARE

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

CROP	
M	2.93
MT	3.81
(B)M	3.06
Mean	3.27

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

CROP
1.188

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	1.455	44.5

GRAIN MEAN DM% 32.5

PLOT AREA HARVESTED 0.00108

SPRING BARLEY

GRAIN TONNES/HECTARE

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

CROP	
(M)B	4.74
BT	3.97
B	3.29
Mean	4.00

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

CROP
0.150

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.184	4.6

GRAIN MEAN DM% 91.6

PLOT AREA HARVESTED 0.00525