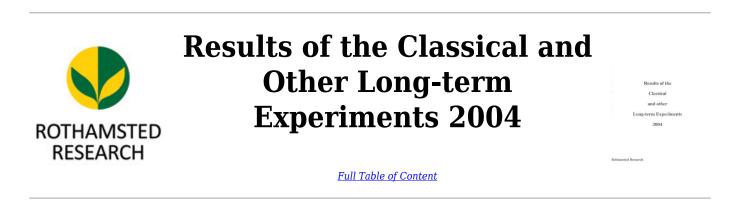
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04/R/CS/477 - Rothamsted Continuous Maize

Rothamsted Research

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04/R/CS/477

CONTINUOUS MAIZE

Object: To monitor the fate of organic carbon in the soil organic matter - Hoosfield.

Sponsors: P.R. Poulton.

The eighth year, forage maize and s. barley.

For previous years see 97-03/R/CS/477

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 12.0 x 25.0.

Treatments: -

CROP Crop and straw treatments:

М	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 s. barley with straw removed
BT	Continuous spring barley, straw removed plus 10 t maize
	tops incorporated
В	Continuous spring barley, straw removed

Experimental diary:

Dupor ratoriour	~			•
26-Sep-03	:	В	:	: Muriate of potash at 180 kg.
	:	В	:	: Triple superphosphate at 170 kg.
05-Nov-03	:	т	:	BT, MT: Maize tops at 300 kg per plot
	:	В	:	: Ploughed 30 cm wide furrows.
09-Apr-04	:	В	:	: Glydate at 3.0 l in 200 l to maize plots.
14-Apr-04	:	В	:	: Power harrow.
	:	т	:	(M)B, BT, B: Combination drilled, Optic, tr. Raxil S, at
				350 seeds/m ² with the Accord 2 drill.
	:	т	:	(M)B, BT, B: Rolled.
26-Apr-04	:	В	:	: Sulphur Gold (30% N, 7.6% S) at 320 kg.
03-May-04	:	т	:	(M)B, BT, B: Harmony M at 60 g in 200 l.
14-May-04	:	т	:	(B)M, MT, M: Flexitined.
19-May-04	:	т	:	(B)M, MT, M: Power harrowed.
20-May-04	:	т	:	(B)M, MT, M: Drilled, Hudson, tr. Mesurol, at 10.2
				seeds/m ² with the Nodet Gougis drill.
22-Jun-04	:	т	:	(B)M, MT, M tm)Samson at 1.5 l in 200 l.
26-Aug-04	:	т	:	(M)B, BT, B: Combine harvested plots for yield, swathed
				straw.
01-Sep-04	:	т	:	(M)B, BT, B: Baled.
20-Sep-04	:	т	:	(B)M, MT, M: Cut sample areas by hand, weighed and
_				sampled.

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

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04/R/CS/477
MAIZE
Whole crop (at 100% dry matter) TONNES/HECTARE
***** Tables of means *****
        CROP
                 11.28
           М
         (B)M
                 12.26
                 11.45
           MT
                 11.66
         Mean
*** Standard errors of differences of means ***
          CROP
         1.113
***** Stratum standard errors and coefficients of variation *****
                                                    CV8
                          d.f.
                                       s.e.
Stratum
                                                    11.7
                                       1.364
                             4
Blocks.Plots
MEAN DM% 27.0
PLOT AREA HARVESTED 0.00108
SPRING BARLEY
GRAIN TONNES/HECTARE
***** Tables of means *****
         CROP
                   4.46
          (M)B
                   3.98
           BT
                   3.90
            В
                   4.11
         Mean
 *** Standard errors of differences of means ***
          CROP
         0.110
 ***** Stratum standard errors and coefficients of variation *****
                                                3.3
                                       0.134
                              4
Blocks.Plots
 GRAIN MEAN DM% 83.2
 AVERAGE PLOT AREA HARVESTED 0.00512
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