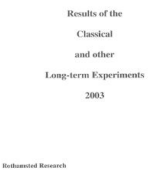
ROTHAMSTED RESEARCH

Yields of the Field Experiments 2003



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Rothamsted Research

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03/R/CS/477

CONTINUOUS MAIZE

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

Sponsors: P.R. Poulton.

The sixth year, forage maize and s. barley.

For previous years see 97-02/R/CS/477

Design: 3 randomised blocks of 6 plots.

Plot dimensions: 12.0 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 s. barley with straw removed
BT	Continuous spring barley, straw removed plus 10 t maize tops incorporated
B	Continuous spring barley, straw removed

Experimental diary:

12-Sep-02	**T**	BT, MT: Maize tops at 300 kg per plot
16-Oct-02	B	: Muriate of potash at 181 kg.
	B	: Triple superphosphate at 170 kg.
18-Oct-02	B	: Ploughed 25 cm wide furrows.
19-Mar-03	B	: Springtined.
	T	(M)B, BT, B: Combination drilled, Optic, tr. Raxil S, at 350 seeds/m^2 with the Accord 2 drill.
	T	(M)B, BT, B: Rolled.
11-Apr-03	**T**	(B)M, MT, M: Sting Eco at 4.0 l in 200 l.
14-Apr-03	B	: Sulphur Gold (30% N, 7.6% S) at 317 kg.
23-Apr-03	**T**	(M)B, BT, B: tm)Ally at 30 g in 200 l.
	T	(M)B, BT, B: tm)Oxytril CM at 0.75 l in 200 l.
30-Apr-03	**T**	(B)M, MT, M: Springtined.
01-May-03	**T**	(B)M, MT, M: Springtined.
07-May-03	**T**	(B)M, MT, M: Power harrowed.
	T	(B)M, MT, M: Drilled, Hudson, tr. Mesurol, at 10 seeds/m^2 with the Nodet Gougis drill.
11-May-03	**T**	(M)B, BT, B: tm)Opus at 0.25 l in 200 l.
	T	(M)B, BT, B: tm)Unix at 0.4 kg in 200 l.
	T	(M)B, BT, B: tm)Amistar at 0.4 l in 200 l.
08-Jun-03	**T**	(M)B, BT, B: tm)Opus at 0.25 l in 200 l.
	T	(M)B, BT, B: tm)Acanto at 0.4 l in 200 l.
16-Jun-03	**T**	(B)M, MT, M: tm)Gesaprim at 3.0 l in 200 l.
	T	(B)M, MT, M tm)Phase II at 2.0 l in 200 l.
28-Jul-03	**T**	(M)B, BT, B: tm)Touchdown at 4.0 l in 200 l.
04-Aug-03	**T**	(M)B, BT, B: Combine harvested plots for yield.
07-Aug-03	**T**	(M)B, BT, B: Baled.
20-Aug-03	**T**	(B)M, MT, M: Cut sample areas by hand, weighed and sampled.
29-Aug-03	**T**	(B)M, MT, M: Cut discards.

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

03/R/CS/477

MAIZE

GRAIN TONNES/HECTARE

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

CROP	
M	8.16
(B)M	7.59
MT	8.06
Mean	7.94

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

CROP
1.198

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	1.467	18.5

GRAIN MEAN DM% 25.8

PLOT AREA HARVESTED 0.00108

SPRING BARLEY

GRAIN TONNES/HECTARE

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

CROP	
(M)B	6.63
BT	6.08
B	5.90
Mean	6.20

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

CROP
0.202

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.248	4.0

GRAIN MEAN DM% 89.6

PLOT AREA HARVESTED 0.00525