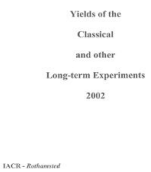
ROTHAMSTED RESEARCH

Yields of the Field Experiments 2002



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Rothamsted Research

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02/R/CS/477

CONTINUOUS MAIZE

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

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The sixth year, forage maize and s. barley.

For previous years see 97-01/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:

06-Nov-01	B		: Sulphate of potash at 217 kg.
	B		: Triple superphosphate at 171 kg.
	T	BT, MT	: Maize tops at 300 kg per plot.
12-Nov-01	B		: Ploughed, started.
13-Nov-01	B		: Ploughed, completed.
08-Apr-02	B	(M)B, BT, B	: Sting ECO at 4.0 l in 200 l.
09-Apr-02	T	(M)B, BT, B	: Combination drilled, Optic, tr. Raxil S, at 350 seeds/m^2 with the Accord 2 drill.
10-Apr-02	T	(B)M, MT, M	: Flexitined.
	T	(M)B, BT, B	: Rolled.
02-May-02	B		: 33.5% N at 284 kg.
03-May-02	T	(B)M, MT, M	: Rotary harrowed.
	T	(B)M, MT, M	: Drilled, Hudson, tr. Mesurol, at 102,000 seeds/ha with the Nodet Gougis drill.
	T	(M)B, BT, B	: tm)Ally at 30 g in 200 l.
	T		: tm)Duplosan KV at 1.0 l in 200 l.
	T		: tm)Amistar at 0.4 l in 200 l.
	T		: tm)Unix at 0.5 kg in 200 l
19-Jun-02	T	(B)M, MT, M	: tm)Lentagran WP at 1.5 kg in 200 l.
	T		: tm)Mutiny at 0.6 l in 200 l.
27-Aug-02	T	(M)B, BT, B	: Combine harvested plots for yield. Swathed straw.
28-Aug-02	T	(M)B, BT, B	: Combine harvested discards, started. Swathed straw.
02-Sep-02	B	(M)B, BT, B	: Combine harvested all remaining barley. Swathed straw. Baled straw.
03-Sep-02	B	(M)B, BT, B	: Carted bales.
11-Sep-02	T	(B)M, MT, M	: Cut discard maize. Cut sample areas by hand, weighed and sampled.

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

02/R/CS/477 MAIZE

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

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

Treatment	
M	9.22
(B)M	9.29
MT	9.40
Mean	9.30

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

Treatment
1.412

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	1.729	18.6

GRAIN MEAN DM% 25.1

PLOT AREA HARVESTED 0.00108

S. BARLEY

GRAIN TONNES/HECTARE

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

Treatment	
(M)B	3.57
BT	2.76
B	2.55
Mean	2.96

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

Treatment
0.237

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

Stratum	d.f.	s.e.	cv%
Blocks.Plots	4	0.290	9.8

GRAIN MEAN DM% 83.9

PLOT AREA HARVESTED 0.00525