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# Yields of the Field Experiments 1985

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## 85/R/CS/317 Worm-worked Wastes - Old Grass

### Rothamsted Research

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85/R/CS/317

OLD GRASS

WORM-WORKED WASTES

Object: To study the effects of the residues of pig manure, after it has been worked by earthworms, and of calcified seaweed on numbers of earthworms in, and the yield of, old grass - Highfield Weighbridge Piece.

Sponsors: K.E. Fletcher, J.R. Lofty, I. Burrows.

The first year, old grass.

Design: 3 randomised blocks of 10 plots.

Whole plot dimensions: 2.74 x 7.62.

Treatments:

MANURE	Fertilizers and organic manures:
NONE	None
NC 60	'Nitro-Chalk' (27.5% N) supplying 60 kg N per cut
NC 90	'Nitro-Chalk' (27.5% N) supplying 90 kg N per cut
NC 120	'Nitro-Chalk' (27.5% N) supplying 120 kg N per cut
CSW 300	Calcified seaweed at 300 kg in spring only
CSW 600	Calcified seaweed at 600 kg in spring only
CSW 900	Calcified seaweed at 900 kg in spring only
WW 9800	Worm-worked pig manure at 9800 kg per cut
WW 14700	Worm-worked pig manure at 14700 kg per cut
WW 19600	Worm-worked pig manure at 19600 kg per cut

NOTE: All calcified seaweed plots were also given 'Nitro-Chalk' (27.5% N) supplying 90 kg N per cut.

Basal applications: Manures: Chalk at 10.0 t.

Cultivations, etc.:- Chalk applied: 23 Aug, 1984. Treatments applied: 25 Apr, 1985, 4 June, 1 Aug. Cut: 30 May, 26 July, 8 Nov. Previous crops: Old grass 1983 and 1984.

NOTE: All plots were sampled for earthworms in November.

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1ST CUT (30/5/85) DRY MATTER TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

MANURE	
NONE	3.82
NC 60	4.60
NC 90	4.25
NC 120	4.38
CSW 300	4.39
CSW 600	4.34
CSW 900	4.24
WW 9800	4.11
WW 14700	3.87
WW 19600	4.27
MEAN	4.23

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	MANURE
-----	-----
SED	0.346

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP	18	0.423	10.0
1ST CUT MEAN DM%	21.3		

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2ND CUT (26/7/85) DRY MATTER TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

MANURE	
NONE	1.39
NC 60	2.56
NC 90	2.80
NC 120	2.85
CSW 300	2.76
CSW 600	2.90
CSW 900	2.75
WW 9800	1.32
WW 14700	1.42
WW 19600	1.61
MEAN	2.24

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	MANURE
-----	-----
SED	0.264

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK .WP	18	0.323	14.4
2ND CUT MEAN DM%	25.7		

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3RD CUT (8/11/85) DRY MATTER TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

MANURE	
NONE	5.11
NC 60	3.62
NC 90	4.35
NC 120	5.40
CSW 300	4.16
CSW 600	4.74
CSW 900	4.07
WW 9800	2.80
WW 14700	2.82
WW 19600	3.66
MEAN	4.07

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	MANURE
-----	-----
SED	0.901

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP	18	1.104	27.1
3RD CUT MEAN DM%	24.8		

85/R/CS/317

TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

\*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

MANURE	
NONE	10.32
NC 60	10.78
NC 90	11.40
NC 120	12.63
CSW 300	11.31
CSW 600	11.98
CSW 900	11.06
WW 9800	8.23
WW 14700	8.11
WW 19600	9.53
MEAN	10.53

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	MANURE
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SED	1.216

\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP	18	1.489	14.1

TOTAL OF 3 CUTS MEAN DM% 23.9

PLOT AREA HARVESTED 0.00077