

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1991

[Full Table of Content](#)



91/W/CS/347 Green Crops for Set-aside - W. Wheat, Ryegrass, Clover

Rothamsted Research

Rothamsted Research (1992) 91/W/CS/347 *Green Crops for Set-aside - W. Wheat, Ryegrass, Clover* ; Yields Of The Field Experiments 1991, pp 93 - 95 - DOI: <https://doi.org/10.23637/ERADOC-1-46>

91/W/CS/347

GREEN CROPS FOR SET-ASIDE

Object: To obtain information on the establishment and maintenance of sown crops and unsown vegetation in a long term, up to five-year, set-aside area given no chemical inputs. Effects on soil nitrate and leaching after ploughing are also studied - Woburn, Horsepool Lane Close II.

Sponsors: R.D. Prew, E.T.G. Bacon, M.V. Hewitt, D.P. Yeoman.

Design: 6 randomised blocks of 6 plots.

Whole plot dimensions: 6.5 x 26.0.

The second year, w. wheat, ryegrass, clover.

For previous year see 90/W/CS/347.

Treatments in 1990 and 1991:

CROPS	Crops:
RY LF	Ryegrass, cuttings left in situ
RY+CL LF	Ryegrass + clover, cuttings left in situ
RY+CL RE	Ryegrass + clover, cuttings removed
RY+N RE	Ryegrass given 100 kg N in spring, cuttings removed
TU LF	Tumbledown, natural regrowth, cuttings left in situ
W WHEAT	Winter wheat

NOTE: Yields were taken from the w. wheat and from the ley plots from which cuttings were removed.

Standard applications:

All crops except w. wheat and tumbledown: Manures: P205 at 25 kg to RY+CL RE and at 39 kg to RY+N RE as 'Triple superphosphate'. K20 at 122 kg to RY+CL RE and at 223 kg to RY+N RE as 'Muriate of potash'. N at 100 kg as 'Nitram' to RY+N RE plots only.

W. wheat: Manures: N at 40 kg and on a second occasion at 160 kg as 'Nitram'. Fungicides: Fenpropimorph at 0.38 kg in 210 l and on a second occasion with chlorothalonil at 0.49 kg and flutriafol at 0.078 kg in 300 l.

Seed: W. wheat: Mercia sown at 150 kg.
Ryegrass and clover sown in 1989.

Cultivations, etc.:-

All crops except w. wheat and tumbledown: P and K applied to RY+CL RE and RY+N RE plots: 20 Feb, 1991. N applied to RY+N RE plots: 18 Mar. RY LF and RY+CL LF plots topped: 30 May, 15 July and 18 Sept. RY+CL RE and RY+N RE plots cut and produce removed: 3 June, 17 July and 16 Sept.

Tumbledown plots: Topped: 7 Nov, 1990, 30 May, 1991, 15 July and 18 Sept.

W. wheat plots: Ploughed: 21 Sept, 1990. Rotary harrowed, seed sown, rolled: 25 Sept. N applied: 18 Mar, 1991 and 17 Apr. Fenpropimorph applied: 24 Apr. Remaining fungicides applied: 20 June. Combine harvested: 20 Aug.

91/W/CS/347

NOTE: Assessments were made of soil nitrogen in autumn 1990 and spring 1991, and plant numbers and plant cover in spring and autumn 1991.

GRASS

1ST CUT (3/6/91) DRY MATTER TONNES/HECTARE

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

CROPS	RY+CL RE	RY+N RE	Mean
	1.38	5.66	3.52

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

CROPS
0.236

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	5	0.408	11.6
1ST CUT MEAN DM%	24.6		

2ND CUT (17/7/91) DRY MATTER TONNES/HECTARE

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

CROPS	RY+CL RE	RY+N RE	Mean
	1.84	2.39	2.12

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

CROPS
0.229

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	5	0.396	18.7
2ND CUT MEAN DM%	34.8		

91/W/CS/347

3RD CUT (16/9/91) DRY MATTER TONNES/HECTARE

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

CROPS	RY+CL RE	RY+N RE	Mean
	0.48	0.47	0.47

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

CROPS
0.146

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	5	0.252	53.3
3RD CUT MEAN DM%	35.8		

TOTAL OF 3 CUTS DRY MATTER TONNES/HECTARE

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

CROPS	RY+CL RE	RY+N RE	Mean
	3.70	8.52	6.11

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

CROPS
0.430

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	5	0.746	12.2
TOTAL OF 3 CUTS MEAN DM%	31.7		
PLOT AREA HARVESTED	0.00264		

WHEAT

GRAIN TONNES/HECTARE 9.254

GRAIN MEAN DM% 86.3

PLOT AREA HARVESTED 0.00546