

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 1994

[Full Table of Content](#)



94/W/CS/386 Cover Crops and Nitrogen - W. Barley

Rothamsted Research

Rothamsted Research (1995) *94/W/CS/386 Cover Crops and Nitrogen - W. Barley* ; Yields Of The Field Experiments 1994, pp 83 - 85 - DOI: <https://doi.org/10.23637/ERADOC-1-49>

94/W/CS/386

COVER CROPS AND NITROGEN

Object: To assess how effectively cover crops take up nitrogen and to assess how much of that nitrogen is subsequently available to the following crop - Woburn, Stackyard A I.

Sponsors: D.G. Christian, A.J. Macdonald, P.R. Poulton.

The second year, w. barley.

For previous year see 93/W/CS/386.

Design: 3 blocks of 9 plots split into 2 sub-plots.

Whole plot dimensions: 9.0 x 12.0.

Treatments: All combinations of:-

Whole plots

1. **CROPS** Cover crops, sown in autumn 1992, tumbledown and fallow; all, except (WB), ploughed in spring 1993 and sown to s. barley:

(FA)	Fallow
(FR)	Forage rape
(PH)	Phacelia
(RG)	Ryegrass
(RY)	Rye
(R+M)	Rye and white mustard
(TD)	Tumbledown
(WM)	White mustard
(WB)	W. barley taken to maturity

Sub-plots

2. **N** Nitrogen fertilizer (kg N) applied in spring 1993:

	S. barley	W. barley
(-)	None	None
(N)	75	150

Experimental diary:

24-Aug-93 : B : Deep tine cultivated.
11-Sep-93 : B : Dolomite at 7.5 t.
15-Sep-93 : B : Ploughed.
16-Oct-93 : B : Rotary harrowed, Puffin, dressed Panocrine Plus, drilled at 350 seeds per m².
14-Apr-94 : B : 34.5% N at 464 kg.
01-May-94 : B : Oxytril CM at 1.5 l with Duplosan New system CMPP at 2.0 l and Punch C at 0.5 l in 200 l.
29-May-94 : B : Radar at 0.5 l with Mistral at 0.5 l in 200 l.
26-Jul-94 : B : Combine harvested.

94/W/CS/386

GRAIN TONNES/HECTARE

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

N	(-)	(N)	Mean
CROPS			
(FA)	6.70	6.31	6.50
(FR)	6.80	6.77	6.78
(PH)	6.76	6.52	6.64
(RG)	6.49	6.70	6.59
(RY)	6.79	6.94	6.86
(R+M)	7.09	7.12	7.10
(TD)	6.51	6.48	6.50
(WM)	6.62	6.60	6.61
(WB)	6.62	6.95	6.79
Mean	6.71	6.71	6.71

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

CROPS	N	CROPS
		N
0.265	0.090	0.327
Except when comparing means with the same level(s) of		
CROPS		0.270

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	16	0.325	4.8
BLOCK.WP.SP	18	0.331	4.9

GRAIN MEAN DM% 87.5

94/W/CS/386

STRAW TONNES/HECTARE

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

N	(-)	(N)	Mean
CROPS			
(FA)	2.44	2.02	2.23
(FR)	3.38	3.16	3.27
(PH)	3.25	3.82	3.53
(RG)	2.93	2.78	2.85
(RY)	4.45	1.61	3.03
(R+M)	3.70	3.39	3.54
(TD)	3.96	3.60	3.78
(WM)	2.41	3.77	3.09
(WB)	2.77	3.54	3.16
Mean	3.25	3.08	3.17

STRAW MEAN DM% 89.2

SUB PLOT AREA HARVESTED 0.00083