

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 1987

[Full Table of Content](#)

ARC, Institute of Arable Crops Research
Rothamsted Experimental Station
Harpenden
Herts
SG8 5LR
United Kingdom
ARC
The copyright in this document is owned by the Rothamsted Research Ltd
and is registered with the Copyright Licensing Agency. All rights reserved.
This document is available on the internet at <https://www.era.doc/10.23637/ERADOC-1-37>
For more information, please contact the Rothamsted Research Library
ARC, Rothamsted Experimental Station, Harpenden, Herts, SG8 5LR
Printed: 2018/08/08
Rothamsted 2018

87/R/RN/8 Cultivation/WEEDKILLER - W. Barley

Rothamsted Research

Rothamsted Research (1988) *87/R/RN/8 Cultivation/WEEDKILLER - W. Barley* ; Yields Of The Field Experiments 1987, pp 62 - 63 - DOI: <https://doi.org/10.23637/ERADOC-1-37>

87/R/RN/8

CULTIVATION/WEEDKILLER

Object: To study the long-term effects of different methods of primary cultivation on a sequence of crops; weedkillers were also tested until 1981 - Great Harpenden I.

Sponsor: R. Moffitt.

The 27th year, w. barley.

For previous years see 'Details' 1967 and 1973 and 74-86/R/RN/8.

Design: 2 randomised blocks of 12 plots.

Whole plot dimensions: 12.8 x 12.2.

Treatments: All combinations of:-

Whole plots

1. CLT CHOP Primary cultivations annually; straw chopped since 1985:

PLOUGH	Ploughed: 27 Aug, 1986
ROTA DIG	Cultivated by rotary digger: 8 Sept
DEEPTINE	Deep-tine cultivated, 3 times: 27 Aug

2. SUBSOIL[82] Subsoiling in September 1982:

NONE	None
CNVNTIAL	Conventional vertical tine
PARAPLOW	'Paraplow'

XTR BURN	plus three extra treatments with straw burnt since 1985 direct drilled until 1984, heavy spring-tine cultivated twice on 27 August, 1986 in addition to basal cultivating, differing in subsoiling in September 1982:
----------	---

NONE	None
CNVNTIAL	Conventional vertical tine
PARAPLOW	'Paraplow'

- NOTES: (1) Straw was chopped on 6 Aug, 1986 and was burnt on XTR BURN on 13 Aug and these plots were spring-tine cultivated on 14 Aug. All plots were sprayed with paraquat at 0.60 kg ion in 200 l on 29 Sept, rotary harrowed on 30 Sept and drilled on 1 Oct.
- (2) The conventional vertical tine subsoiler had tines 76 cm apart and worked at a depth of about 50 cm.
- (3) The 'Paraplow' had rigid tines set at a 45 degree angle. The tip of each tine was in line with the attachment of an adjacent tine. The tines were 51 cm apart and worked at a depth of about 38 cm.

87/R/RN/8

Basal applications: Manures: Chalk at 5.0 t. 'Nitram' at 460 kg.
 Weedkillers: Isoproturon at 2.5 kg with clopyralid at 0.07 kg and
 bromoxynil at 0.34 kg and mecoprop at 2.5 kg in 200 l.

Seed: Igri, sown at 150 kg.

Cultivations, etc.:- Chalk applied: 24 Sept, 1986. N applied: 20 Mar,
 1987. Weedkillers applied: 16 Apr. Combine harvested: 7 Aug.

GRAIN TONNES/HECTARE

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

SUBSOIL[82]	NONE	CNVNTIAL	PARAPLOW	Mean
CLT CHOP				
PLOUGH	5.58	5.58	5.78	5.65
ROTA DIG	5.78	5.61	6.19	5.86
DEEPTINE	5.79	5.54	5.86	5.73
Mean	5.72	5.57	5.95	5.75
XTR BURN	NONE	CNVNTIAL	PARAPLOW	Mean
	5.89	4.34	4.29	4.84

Grand mean 5.52

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

Table	XTR BURN	CLT CHOP	SUBSOIL[82]	CLT CHOP SUBSOIL[82]
s.e.d.	0.463	0.267	0.267	0.463

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	11	0.463	8.4

GRAIN MEAN DM% 85.0

PLOT AREA HARVESTED 0.00280