

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 1988  
The copyright in this document is held by the Rothamsted Research Institute. It is published by permission of the Director of the Institute. All rights reserved. No part of this document may be reproduced without the prior written permission of the Rothamsted Research Institute.  
Printed: Rothamsted, Bedfordshire  
Rothamsted 1988

## 87/R/M/1 and 87/W/M/1 Inputs for Winter Cereals - W. Triticale, Wheat, Barley, Rye - Mixed Crops

### Rothamsted Research

Rothamsted Research (1988) *87/R/M/1 and 87/W/M/1 Inputs for Winter Cereals - W. Triticale, Wheat, Barley, Rye - Mixed Crops* ; Yields Of The Field Experiments 1987, pp 268 - 271 - DOI: <https://doi.org/10.23637/ERADOC-1-37>

87/R/M/1 and 87/W/M/1

MIXED 1

INPUTS FOR WINTER CEREALS

Object: To compare amounts of disease and the yield of triticale with those of w. wheat, w. barley and w. rye on two contrasted sites each given contrasted amounts of agrochemicals - Rothamsted Summerdells I (R), Woburn Great Hill II (W).

Sponsors: R.J. Gutteridge, D. Hornby, R.D. Prew (R), P.R. Scott, W. Hollins, R.L. Gregory (P.B.I., Cambridge).

Design: 3 randomised blocks of 10 plots.

Whole plot dimensions: 3.0 x 10.0 (R), 4.0 x 10.0 (W).

Treatments: All combinations of :-

1. CROP VAR	Crop and variety:	(R)	(W)
B PANDA	W. barley, Panda sown at	230 kg	230 kg
R DOMINT	W. rye, Dominant sown at	170 kg	170 kg
T LASKO	W. triticale, Lasko sown at	170 kg	160 kg
T CWT	W. triticale, CWT/1977/290 sown at	180 kg	170 kg
W AVALON	W. wheat, Avalon sown at	190 kg	190 kg

2. INPUT Inputs of agrochemicals, in addition to basals:

LARGE	(R): Manures: N at 40 kg: 11 Feb, 1987, and at 160 kg: 2 Apr, both as 'Nitro-Chalk'. Fungicides: Prochloraz at 0.40 kg, carbendazim at 0.15 kg, tridemorph at 0.52 kg in 220 l: 8 May. Carbendazim at 0.25 kg, maneb at 1.6 kg with propiconazole at 0.12 kg in 220 l: 2 July. Growth regulators: Mepiquat chloride at 0.61 kg with 2-chloroethylphosphonic acid at 0.31 kg in 220 l to barley, chlormequat at 1.1 kg in 220 l to wheat and triticale: 8 May.
	(W): Manures: N at 40 kg: 13 Feb, 1987 and at 160 kg: 31 Mar, both as 'Nitram'. Fungicides: Prochloraz at 0.40 kg, carbendazim at 0.15 kg, tridemorph at 0.52 kg in 240 l: 21 Apr. Propiconazole at 0.12 kg, tridemorph at 0.52 kg in 200 l: 27 May. Propiconazole at 0.12 kg, carbendazim at 0.25 kg in 200 l: 29 June. Growth regulators: Mepiquat chloride at 0.53 kg with 2-chloroethylphosphonic acid at 0.27 kg in 200 l, to barley and triticale: 7 May.
SMALL	(R) Manures: 120 kg N as 'Nitro-Chalk': 2 Apr, 1987. (W) Manures: 160 kg N as 'Nitram': 31 Mar.

87/R/M/1 and 87/W/M/1

Basal applications:

Summerdells (R): Manures: Chalk at 5.0 t. Weedkillers: Paraquat at 0.60 kg ion in 200 l. Methabenzthiazuron at 1.6 kg in 200 l. Isoproturon at 2.5 kg with bromoxynil and ioxynil (as 'Deloxil' at 2.0 l) in 380 l to barley only. Diclofop-methyl at 1.1 kg with bromoxynil and ioxynil (as 'Deloxil' at 2.0 l) in 380 l to rye, triticale and wheat.

Great Hill II (W): Weedkillers: Bromoxynil and ioxynil (as 'Deloxil' at 2.0 l) in 240 l. Fluroxypyr at 0.20 kg in 400 l to barley and wheat.

Cultivations, etc.:-

Summerdells (R): Heavy spring-tine cultivated and disced: 19 Aug, 1986. Chalk applied: 4 Sept. Paraquat applied: 11 Sept. Spring-tine cultivated, rotary harrowed, seed sown, harrowed: 24 Sept. Rolled: 27 Sept. Methabenzthiazuron applied: 30 Sept. Isoproturon, bromoxynil and ioxynil applied to barley, diclofop-methyl, bromoxynil and ioxynil applied to rye, triticale and wheat: 17 Apr, 1987. Combine harvested barley: 7 Aug, rye, triticale and wheat: 1 Sept. Previous crops: W. wheat 1985, w. barley 1986.

Great Hill II (W): Ploughed, rolled: 20 Sept, 1986. Rotary harrowed with crumbler attached, seed sown: 25 Sept. Bromoxynil and ioxynil applied: 17 Apr, 1987. Fluroxypyr applied to barley and wheat: 23 Apr. Combine harvested barley: 5 Aug, rye, triticale and wheat: 18 Aug. Previous crops: Lucerne 1985, w. wheat 1986.

- NOTES: (1) Soil samples were taken for take-all bioassay before sowing and after harvest.  
(2) Assessments were made of foot and root rots and foliar diseases during the season.

87/R/M/1

GRAIN TONNES/HECTARE

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

INPUT	LARGE	SMALL	Mean
CROP VAR			
B PANDA	6.59	6.46	6.53
R DOMINT	6.54	6.04	6.29
T LASKO	5.74	4.62	5.18
T CWT	6.02	5.81	5.91
W AVALON	6.66	6.17	6.42
Mean	6.31	5.82	6.06

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

Table	CROP VAR	INPUT	CROP VAR INPUT
s.e.d.	0.270	0.170	0.381

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	18	0.467	7.7

GRAIN MEAN DM% 85.0

PLOT AREA HARVESTED 0.00274

87/W/M/1

GRAIN TONNES/HECTARE

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

INPUT	LARGE	SMALL	Mean
CROP VAR			
B PANDA	6.56	6.16	6.36
R DOMINT	6.39	5.66	6.02
T LASKO	4.42	3.79	4.11
T CWT	4.57	4.70	4.64
W AVALON	4.72	3.70	4.21
Mean	5.33	4.80	5.07

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

Table	CROP VAR	INPUT	CROP VAR INPUT
s.e.d.	0.396	0.251	0.560

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP	18	0.686	13.5

GRAIN MEAN DM% 80.1

PLOT AREA HARVESTED 0.00275