

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 1978

[Full Table of Content](#)



78/R/B/2 Factors Affecting Yield and Disease Control - Barley

Rothamsted Research

Rothamsted Research (1979) *78/R/B/2 Factors Affecting Yield and Disease Control - Barley* ; Yields Of The Field Experiments 1978, pp 379 - 383 - DOI: <https://doi.org/10.23637/ERADOC-1-30>

78/R/B/2

WINTER BARLEY

FACTORS AFFECTING YIELD AND DISEASE CONTROL

Object: To study the effects and interactions of sowing date, seed rate, timing of mildew control and spring nitrogen on the incidence of mildew and on yield of winter barley - Scout.

Sponsors: A. Bainbridge, J.F. Jenkyn, M.E. Finney.

Design: 3 x 2 x 2 x 2 x 2 in 2 blocks of 24 plots with confounding.

Whole plot dimensions: 2.13 x 6.10.

Treatments: All combinations of:-

1. S DATE T Sowing date and autumn tridemorph:
6 OCT+T 6 October, tridemorph spray in autumn on 18 Nov, 1977
6 OCT 0 6 October, no tridemorph spray in autumn
2 NOV 0 2 November, no tridemorph spray in autumn
2. SEEDRATE Seed rates (kg):
78
156
3. TRIDEMOR(1) Tridemorph in early spring:
NONE None
SPRAYED Sprayed (3 May, 1978)
4. TRIDEMOR(2) Tridemorph in late spring:
NONE None
SPRAYED Sprayed (26 May, 1978)
5. N TIME Time of applying nitrogen (at 75 kg):
6 MAR 6 March
25 APR 25 April

NOTES: (1) Tridemorph was applied at 0.53 kg in 340 l.

- (2) The experiment had a surround of 18.3 m sown to winter barley, variety Athene, on 6 October, 1977 and each plot was separated from its neighbours by sidelands of 2.13 m and internal headlands of 9.14 m sown to Athene on this date.

Basal applications: Manures: (10:24:24) at 250 kg, combine drilled. Weedkiller: Mecoprop at 3.1 kg in 220 l.

Seed: Hoppel.

Cultivations, etc.: - Straw burned: 11 Sept, 1977. Chisel ploughed twice: 16 Sept and 19 Sept. Rotary harrowed: 28 Sept. Weedkiller applied: 4 May, 1978. Combine harvested: 11 Aug. Previous crops: Wheat 1976, Barley 1977.

NOTE: Emergence counts were made for both sowings. Mildew was assessed three times during the season. Numbers of fertile tillers, grains per ear and thousand grain weights were assessed.

78/R/B/2

GRAIN TONNES/HECTARE

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

SEEDRATE	78	156	MEAN
S DATE T			
6 OCT+T	5.78	5.48	5.63
6 OCT 0	5.49	5.48	5.49
2 NOV 0	3.60	3.60	3.60
MEAN	4.96	4.85	4.91
TRIDEMOR(1)	NONE	SPRAYED	MEAN
S DATE T			
6 OCT+T	5.45	5.81	5.63
6 OCT 0	5.28	5.70	5.49
2 NOV 0	3.63	3.57	3.60
MEAN	4.79	5.02	4.91
TRIDEMOR(1)	NONE	SPRAYED	MEAN
SEEDRATE			
78	4.73	5.18	4.96
156	4.84	4.86	4.85
MEAN	4.79	5.02	4.91
TRIDEMOR(2)	NONE	SPRAYED	MEAN
S DATE T			
6 OCT+T	5.55	5.70	5.63
6 OCT 0	5.24	5.74	5.49
2 NOV 0	3.47	3.72	3.60
MEAN	4.75	5.06	4.91
TRIDEMOR(2)	NONE	SPRAYED	MEAN
SEEDRATE			
78	5.22	4.70	4.96
156	4.29	5.41	4.85
MEAN	4.75	5.06	4.91

78/R/B/2

GRAIN TONNES/HECTARE

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

TRIDEMOR(2)	NONE	SPRAYED	MEAN	
TRIDEMOR(1)				
NONE	4.44	5.13	4.79	
SPRAYED	5.07	4.98	5.02	
MEAN	4.75	5.06	4.91	
N TIME	6 MAR	25 APR	MEAN	
S DATE T				
6 OCT+T	5.93	5.32	5.63	
6 OCT 0	5.61	5.37	5.49	
2 NOV 0	3.11	4.09	3.60	
MEAN	4.88	4.93	4.91	
N TIME	6 MAR	25 APR	MEAN	
SEEDRATE				
78	4.81	5.10	4.96	
156	4.95	4.75	4.85	
MEAN	4.88	4.93	4.91	
N TIME	6 MAR	25 APR	MEAN	
TRIDEMOR(1)				
NONE	4.80	4.78	4.79	
SPRAYED	4.97	5.08	5.02	
MEAN	4.88	4.93	4.91	
N TIME	6 MAR	25 APR	MEAN	
TRIDEMOR(2)				
NONE	4.82	4.68	4.75	
SPRAYED	4.94	5.17	5.06	
MEAN	4.88	4.93	4.91	
SEEDRATE	78		156	
TRIDEMOR(1)	NONE	SPRAYED	NONE	SPRAYED
S DATE T				
6 OCT+T	5.63	5.92	5.27	5.69
6 OCT 0	5.11	5.88	5.45	5.52
2 NOV 0	3.46	3.74	3.81	3.39
SEEDRATE	78		156	
TRIDEMOR(2)	NONE	SPRAYED	NONE	SPRAYED
S DATE T				
6 OCT+T	6.29	5.27	4.81	6.14
6 OCT 0	5.57	5.42	4.91	6.06
2 NOV 0	3.79	3.41	3.16	4.04
TRIDEMOR(1)	NONE		SPRAYED	
TRIDEMOR(2)	NONE	SPRAYED	NONE	SPRAYED
S DATE T				
6 OCT+T	5.17	5.72	5.93	5.68
6 OCT 0	4.83	5.74	5.65	5.74
2 NOV 0	3.33	3.94	3.62	3.51
			381	

78/R/B/2

GRAIN TONNES/HECTARE

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

TRIDEMOR(1)	NONE		SPRAYED	
TRIDEMOR(2)	NONE	SPRAYED	NONE	SPRAYED
SEEDRATE				
78	4.86	4.60	5.57	4.80
156	4.02	5.67	4.57	5.16
SEEDRATE	78		156	
N TIME	6 MAR	25 APR	6 MAR	25 APR
S DATE T				
6 OCT+T	5.95	5.60	5.91	5.05
6 OCT 0	5.49	5.50	5.73	5.24
2 NOV 0	3.00	4.20	3.21	3.98
TRIDEMOR(1)	NONE		SPRAYED	
N TIME	6 MAR	25 APR	6 MAR	25 APR
S DATE T				
6 OCT+T	5.95	4.95	5.91	5.70
6 OCT 0	5.18	5.38	6.04	5.35
2 NOV 0	3.27	4.00	2.94	4.19
TRIDEMOR(1)	NONE		SPRAYED	
N TIME	6 MAR	25 APR	6 MAR	25 APR
SEEDRATE				
78	4.71	4.75	4.92	5.45
156	4.89	4.80	5.02	4.71
TRIDEMOR(2)	NONE		SPRAYED	
N TIME	6 MAR	25 APR	6 MAR	25 APR
S DATE T				
6 OCT+T	6.05	5.05	5.81	5.60
6 OCT 0	5.09	5.39	6.13	5.35
2 NOV 0	3.33	3.61	2.88	4.57
TRIDEMOR(2)	NONE		SPRAYED	
N TIME	6 MAR	25 APR	6 MAR	25 APR
SEEDRATE				
78	5.05	5.38	4.58	4.82
156	4.60	3.99	5.30	5.52
TRIDEMOR(2)	NONE		SPRAYED	
N TIME	6 MAR	25 APR	6 MAR	25 APR
TRIDEMOR(1)				
NONE	4.55	4.34	5.05	5.22
SPRAYED	5.10	5.03	4.83	5.13

78/R/B/2

GRAIN TONNES/HECTARE

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

TABLE	S DATE T	SEEDRATE	TRIDEMOR(1)	TRIDEMOR(2)
SED	0.188	0.154	0.154	0.154

TABLE	N TIME	S DATE T SEEDRATE	S DATE T TRIDEMOR(1)	SEEDRATE TRIDEMOR(1)
SED	0.154	0.267	0.267	0.218

TABLE	S DATE T TRIDEMOR(2)	SEEDRATE TRIDEMOR(2)	TRIDEMOR(1) TRIDEMOR(2)	S DATE T N TIME
SED	0.267	0.218	0.218	0.267

TABLE	SEEDRATE N TIME	TRIDEMOR(1) N TIME	TRIDEMOR(2) N TIME	S DATE T SEEDRATE TRIDEMOR(1)
SED	0.218	0.218	0.218	0.377

TABLE	S DATE T SEEDRATE TRIDEMOR(2)	S DATE T TRIDEMOR(1) TRIDEMOR(2)	SEEDRATE TRIDEMOR(1) TRIDEMOR(2)	S DATE T SEEDRATE N TIME
SED	0.377	0.377	0.308	0.377

TABLE	S DATE T TRIDEMOR(1) N TIME	SEEDRATE TRIDEMOR(1) N TIME	S DATE T TRIDEMOR(2) N TIME	SEEDRATE TRIDEMOR(2) N TIME
SED	0.377	0.308	0.377	0.308

TABLE	TRIDEMOR(1) TRIDEMOR(2) N TIME
SED	0.308

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

STRATUM	DF	SE	CV%
BLOCK.WP	10	0.533	10.9

GRAIN MEAN DM% 84.9

PLOT AREA HARVESTED 0.00130