

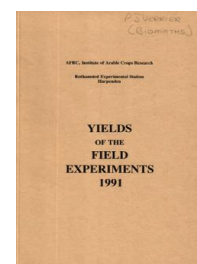
Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Yields of the Field Experiments 1991

[Full Table of Content](#)



91/R/BW/1 Control of Volunteers - W. Barley

Rothamsted Research

Rothamsted Research (1992) *91/R/BW/1 Control of Volunteers - W. Barley* ; Yields Of The Field Experiments 1991, pp 123 - 125 - DOI: <https://doi.org/10.23637/ERADOC-1-46>

91/R/BW/1

WINTER BARLEY

CONTROL OF VOLUNTEERS

Object: To compare methods of volunteer control in winter barley after w. wheat - Great Harpenden II.

Sponsor: D.G. Christian.

Design: 3 replicates of 8 x 3 criss-cross.

Column plot dimensions: 6.0 x 20.0.

Treatments: All combinations of:-

Column plots

1. **PRIMCULT** Primary cultivations:

NONE	None until just before sowing
DYNDRIVE	'Bomford Dynadrive'
PLOUGH	Plough
TINE	Tine

2. **CULTDATE** Dates of cultivation:

EARLY	13 Aug, 1990
LATER	3 Sept

Row plots

3. **PRSOWCON** Pre-sowing volunteer control using weedkillers:

GLYPHOS	Glyphosate at 0.27 kg in 200 l on 8 Oct, 1990
PARAQUAT	Paraquat at 0.60 kg ion in 200 l on 8 Oct
NONE	None

NOTES: (1) The 'Bomford Dynadrive' has a frame similar to a rotary cultivator but it has two rotating shafts containing flat, slightly twisted, spade-shaped tines. The front shaft drives the rear, it is fitted with twice the number of blades and rotates at about one third the speed of the rear shaft.

(2) All plots were heavy spring-tine cultivated on 9 Oct, 1990 then rotary harrowed and the seed sown on 10 Oct.

Basal applications: Manure: 'Nitram' at 460 kg. Weedkillers: Isoproturon at 1.3 kg and pendimethalin at 1.3 kg in 200 l with the insecticide. Fungicides: Prochloraz at 0.40 kg with tridemorph at 0.26 kg in 200 l. Propiconazole at 0.12 kg in 200 l. Insecticide: Deltamethrin at 6.2 g.

Seed: Magie, sown at 150 kg.

91/R/BW/1

Cultivations, etc.:- Weedkillers with the insecticide applied: 15 Nov, 1990. N applied: 26 Mar, 1991. Prochloraz with tridemorph applied: 23 Apr. Propiconazole applied: 23 May. Combine harvested: 12 Aug. Previous crops: Potatoes 1989, w. wheat 1990.

NOTES: (1) Ears of volunteer plants were counted at anthesis of the sown crop.
(2) Percentage contamination of harvested grain by volunteer grain was measured.

GRAIN TONNES/HECTARE

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

CULTDATE	EARLY	LATER	Mean	
PRIMCULT				
NONE	6.52	6.71	6.61	
DYNDRIVE	6.83	7.15	6.99	
PLOUGH	6.81	6.90	6.86	
TINE	6.99	7.41	7.20	
Mean	6.79	7.04	6.92	
PRCULT				
PRCULT	GLYPHOS	PARAQUAT	NONE	Mean
NONE	7.04	6.28	6.53	6.61
DYNDRIVE	7.07	7.09	6.83	6.99
PLOUGH	7.28	6.33	6.96	6.86
TINE	7.25	7.19	7.17	7.20
Mean	7.16	6.72	6.87	6.92
PRCULT				
PRCULT	GLYPHOS	PARAQUAT	NONE	Mean
CULTDATE				
EARLY	7.05	6.67	6.65	6.79
LATER	7.27	6.78	7.09	7.04
Mean	7.16	6.72	6.87	6.92
PRCULT				
PRCULT	GLYPHOS	PARAQUAT	NONE	Mean
CULTDATE	EARLY	LATER		
NONE	7.03	6.28	6.25	7.04
DYNDRIVE	6.87	7.06	6.58	7.27
PLOUGH	7.30	6.12	7.01	7.26
TINE	6.99	7.22	6.77	7.50
				7.17
				7.56

91/R/BW/1

GRAIN TONNES/HECTARE

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

	PRIMCULT	CULTDATE	PRSOWCON	PRIMCULT CULTDATE
	0.262	0.186	0.187	0.371
	PRIMCULT PRSOWCON	CULTDATE PRSOWCON	PRIMCULT CULTDATE PRSOWCON	
	0.387	0.280	0.541	
Except when comparing means with the same level(s) of				
PRIMCULT	0.343			
CULTDATE		0.250		
PRSOWCON	0.378	0.267	0.534	
PRIMCULT.CULTDATE			0.478	

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

Stratum	d.f.	s.e.	cv%
BLOCK.WP1	14	0.455	6.6
BLOCK.WP2	4	0.229	3.3
BLOCK.WP1.WP2	28	0.576	8.3

GRAIN MEAN DM% 84.4

SUB PLOT AREA HARVESTED 0.00094