

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 1971

[Full Table of Content](#)



71/R/WW/1 and 71/W/WW/1 Varieties and N - W. Wheat

Rothamsted Research

Rothamsted Research (1972) *71/R/WW/1 and 71/W/WW/1 Varieties and N - W. Wheat* ; Yields Of The Field Experiments 1971, pp 235 - 238 - DOI: <https://doi.org/10.23637/ERADOC-1-97>

71/R/WW/1 and 71/W/WW/1

WINTER WHEAT

VARIETIES AND N

Object: To study the yield of newer varieties of wheat grown at a range of nitrogen levels on land in rotation or after several cereals - Rothamsted (R) Summerdells I (pathogen free) and Claycroft (pathogen infected), and Woburn (W) White Horse Field (pathogen free).

Design: 3 randomised blocks of 8 plots, split into 4.

Whole plot dimensions:- Summerdells (R): 4.27 x 36.9. Claycroft (R) and White Horse Field (W): 4.27 x 39.3. Sub plot area harvested: Summerdells (R): 0.00243. Claycroft (R) and White Horse Field (W): 0.00260.

Treatments: All combinations of:-

Whole plots: 1. Varieties: Champlein (CH), Cama (CM), Cappelle (CP), Joss Cambier (JC), Maris Beacon (MB), Maris Nimrod (MN), Maris Widgeon (MW), Tommy (TO).

Sub plots: 2. Rates of nitrogen (in kg N): 63, 126, 189 in spring, and 126 in spring plus 63 at flowering. All N as 'Nitro-Chalk'.

Basal applications:-

All fields: 314 kg (8:20:16) combine drilled. Weedkiller: 2,4-D at 0.56 kg plus dichlorprop at 2.2 kg in 225 l (281 l on White Horse Field (W)).

Claycroft (R) only: Weedkiller: Paraquat at 0.28 kg ion in 225 l.

Cultivations, etc.:

Summerdells (R): Ploughed: 18 Sept, 1970. Seed combine drilled at 200 kg: 8 Oct. Weedkiller applied: 13 Apr, 1971. Spring N applied: 16 Apr. Late N applied: 3 June. Combine harvested: 26 Aug. Previous crops: Spring beans 1969 and 1970.

Claycroft (R): Paraquat applied: 17 Sept, 1970. Deep-tine cultivated: 23 Sept. Deep-tine cultivated 2nd time: 5 Oct. Seed combine drilled at 200 kg: 8 Oct. Weedkiller applied: 13 Apr, 1971. Spring N applied: 16 Apr. Late N applied: 3 June. Combine harvested: 26 Aug. Previous crops: Winter wheat 1969 and 1970.

71/R/WW/1 and 71/W/WW/1

White Horse Field (W): Deep-tine cultivated: 12 Oct, 1970. Seed combine drilled at 191 kg: 13 Oct. Weedkiller applied: 31 Mar, 1971. Spring N applied: 15 Apr. Late N applied: 3 June. Combine harvested: 27 Aug. Previous crops: Fallow 1969, potatoes 1970.

Standard errors per plot.	Grain, tonnes/hectare:
Summerdells (R):	Whole plot: 0.433 or 6.3% (14 d.f.)
	Sub plot: 0.492 or 7.1% (48 d.f.)
Claycroft (R):	Whole plot: 0.300 or 4.5% (14 d.f.)
	Sub plot: 0.661 or 9.8% (48 d.f.)
White Horse Field (W):	Whole plot: 0.225 or 4.0% (14 d.f.)
	Sub plot: 0.349 or 6.2% (48 d.f.)

71/R/WW/1 and 71/W/WW/1

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	CH	CM	CP	JC	MB	MN	MW	TO	Mean
SUMMERDELLS (R) PATHOGEN FREE									
N: KG/HA	(1) and (2)								(± 0.100)
63	7.73	7.35	6.57	7.28	7.11	8.60	6.13	6.71	7.18
126	8.12	6.87	7.04	7.09	6.24	7.71	5.84	7.24	7.02
189	7.77	6.73	6.43	6.37	5.36	6.06	5.76	6.90	6.42
126+63	7.93	7.03	7.04	7.09	6.01	7.34	6.28	7.36	7.01
Mean (± 0.250)	7.89	6.99	6.77	6.96	6.18	7.43	6.00	7.05	6.91

(1) (± 0.351) For use in horizontal and interaction comparisons only

(2) (± 0.284) For use in vertical and diagonal comparisons only

Mean D.M. %: 81.5

CLAYCROFT (R) PATHOGEN INFECTED

N: KG/HA	(1) and (2)								(± 0.135)
63	6.43	5.72	5.75	6.85	7.15	7.14	5.43	6.33	6.35
126	7.21	6.36	6.19	6.81	7.38	8.24	5.96	6.84	6.87
189	6.97	6.95	6.48	6.51	5.96	7.57	5.82	6.64	6.61
126+63	7.51	6.59	6.74	7.14	7.38	8.06	6.11	6.64	7.02
Mean (± 0.173)	7.03	6.40	6.29	6.83	6.97	7.75	5.83	6.61	6.71

(1) (± 0.373) For use in horizontal and interaction comparisons only

(2) (± 0.381) For use in vertical and diagonal comparisons only

Mean D.M. %: 82.0

71/R/WW/1 and 71/W/WW/1

GRAIN: TONNES/HECTARE

WHITE HORSE FIELD (W) PATHOGEN FREE

	CH	CM	CP	JC	MB	MN	MW	TO	Mean
N: KG/HA	(1) and (2)								(±0.071)
63	5.57	5.73	5.40	5.56	5.82	5.75	5.16	5.59	5.57
126	6.39	5.65	6.20	5.49	6.49	6.50	5.42	5.61	5.97
189	5.78	4.87	5.31	4.37	5.82	6.45	4.88	4.86	5.29
126+63	5.72	5.40	5.68	5.17	6.19	6.63	5.19	5.18	5.65
Mean (±0.130)	5.86	5.41	5.65	5.15	6.08	6.33	5.16	5.31	5.62

(1) (±0.218) For use in horizontal and interaction comparisons only

(2) (±0.202) For use in vertical and diagonal comparisons only

Mean D.M. %: 81.4