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70/R/WW/1 and 70/W/WW/1 Winter Wheat Varieties X N

Rothamsted Research

Rothamsted Research (1971) *70/R/WW/1 and 70/W/WW/1 Winter Wheat Varieties X N* ; Numerical Results Of The Field Experiments 1970, pp 215 - 218 - **DOI:**

<https://doi.org/10.23637/ERADOC-1-59>

WINTER WHEAT

(70/R/WW/1 and 70/W/WW/1)

Varieties x N, Rothamsted (R) Great Knott III (pathogen free) and West Barnfield II (pathogen infected), and Woburn (W) Great Hill Bottom I (pathogen free) 1970.

Design: Great Knott III (R) and West Barnfield II (R): 3 randomised blocks of 8 plots, split into 4.
Great Hill Bottom I (W): 4 randomised blocks of 8 plots, split into 4.

Area of each sub-plot: Great Knott III (R) and West Barnfield II (R): 0.0096. Area harvested: 0.0064.
Great Hill Bottom I (W): 0.0024. Area harvested: 0.0016.

Treatments: All combinations of:-

- Whole plots: 1. Varieties: Champlain (CH), Cama (CM), Cappelle (CP), Joss Cambier (JC), Maris Beacon (MB), Maris Ranger (MR), Maris Widgeon (MW), West Desprez (WD).
Sub plots: 2. Nitrogen (in cwt N): 0.5 (N1), 1.0 (N2), 1.5 (N3) in spring, and 1.0 in spring plus 0.5 at flowering (N2 + 1). All N as 'Nitro-Chalk'.

Basal applications:

- Great Knott III (R) and West Barnfield II (R): 280 lb (8:20:16) combine drilled. Weedkiller: 2,4-D at 0.5 lb and dichlorprop at 2 lb in 20 gals.
Great Hill Bottom I (W): 280 lb (8:20:16). Weedkiller: Ioxynil at 9 oz and mecoprop at 27 oz in 25 gals.

Cultivations, etc.:-

- Great Knott III (R): Deep-tine cultivated: 21 Oct, 1969. Seed combine drilled at 180 lb: 23 Oct. Spring N applied: 8 May, 1970. Weedkiller applied: 13 May. Late N applied: 9 June. Combine harvested: 28 Aug. Previous crops: Spring beans 1968, potatoes 1969.
West Barnfield II (R): Ploughed: 29 Sept, 1969. Rotary cultivated, seed combine drilled at 180 lb: 10 Nov. Weedkiller applied: 8 May, 1970. Spring N applied: 13 May. Late N applied: 9 June. Combine harvested: 28 Aug. Previous crops: Barley 1968 and 1969.

70/R&W/WW/1

Great Hill Bottom I (W): Spring-tine cultivated: 24 Oct, 1969.
Seed drilled at 170 lb: 27 Oct. Basal NPK applied: 28 Oct.
Spring N applied: 28 Apr, 1970. Weedkiller applied: 7 May.
Late N applied: 8 June. Combine harvested: 14 Aug. Previous
crops: Sugar beet and barley 1968, potatoes 1969.

Standard errors per plot.

Grain, cwt: Great Knott III (R):	Whole plot: 1.74 or 3.7% (14 d.f.)
	Sub plot: 2.24 or 4.8% (48 d.f.)
West Barnfield II (R):	Whole plot: 1.71 or 6.3% (14 d.f.)
	Sub plot: 3.63 or 13.4% (48 d.f.)
Great Hill Bottom I (W):	Whole plot: 1.90 or 3.5% (21 d.f.)
	Sub plot: 3.48 or 6.4% (72 d.f.)

70/R&T/WW/1

SUMMARY OF RESULTS

GRAIN: CWT

	CH	CM	CP	JC	MB	MR	MW	WD	Mean
GREAT KNOTT III (R)									
(1) and (2)									(±0.46)
N1	45.0	45.4	38.4	47.0	50.0	45.1	38.9	45.0	44.3
N2	50.6	46.8	42.5	49.1	54.8	46.1	42.9	48.6	47.7
N3	51.7	44.3	42.8	51.7	53.3	44.2	43.8	47.2	47.4
N2+1	50.4	43.6	44.7	50.3	54.4	43.7	42.3	50.1	47.4
Mean (±1.01)	49.4	45.0	42.1	49.5	53.1	44.8	42.0	47.7	46.7

(1) (±1.51) For use in horizontal and diagonal comparisons only
 (2) (±1.29) For use in vertical and interaction comparisons only

Mean D.M. %: 86.0

WEST BARNFIELD II (R)

(1) and (2)									(±0.74)
N1	24.4	20.2	21.3	26.7	28.9	25.0	29.9	25.2	25.2
N2	30.3	22.6	26.4	31.8	29.0	30.3	29.6	22.3	27.8
N3	30.1	25.2	24.3	29.7	27.0	30.0	26.3	28.9	27.7
N2+1	26.9	22.8	27.1	31.0	33.1	26.4	27.5	25.0	27.5
Mean (±0.99)	27.9	22.7	24.8	29.8	29.5	27.9	28.3	25.4	27.0

(1) (±2.06) For use in horizontal and diagonal comparisons only
 (2) (±2.09) For use in vertical and interaction comparisons only

Mean D.M. %: 85.0

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GRAIN: CWT

GREAT HILL BOTTOM I (W)

	CH	CM	CP	JC	MB	MR	MW	WD	Mean
	(1) and (2)								(±0.62)
N1	46.2	50.2	47.4	49.7	52.3	46.2	47.7	50.3	48.7
N2	52.6	56.8	56.5	53.4	61.2	54.8	49.7	55.2	55.0
N3	62.1	52.3	58.7	55.6	63.8	57.8	53.8	57.0	57.6
N2+1	56.0	54.3	58.2	57.0	59.2	52.8	49.3	52.8	55.0
Mean (±0.95)	54.2	53.4	55.2	53.9	59.1	52.9	50.1	53.8	54.1

- (1) (±1.78) For use in horizontal and diagonal comparisons only
 (2) (±1.74) For use in vertical and interaction comparisons only

Mean D.M. %: 83.1