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

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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)

									(±0.74)
(1) and (2)									
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

70/R&W/WW/1

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