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## Yields of the Field Experiments 1971

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### 71/R/WS/3 Dwarf Spring Wheat, Varieties, N and Ccc - S. Wheat

#### Rothamsted Research

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71/R/WS/3

SPRING WHEAT

DWARF SPRING WHEAT, VARIETIES, N AND CCC

Object: To study the effects of CCC (chlormequat) and a range of nitrogen levels on three semi-dwarf spring wheat varieties - Long Hoos IV.

Design: A single replicate of 4 x 4 x 4 in 4 blocks of 4 whole plots, split into 4 sub-plots, with split plot confounding of 3 factor interactions with blocks.

Whole plot dimensions: 2.16 x 29.6. Sub plot area harvested: 0.00087.

Treatments:

Whole plots: 1. Varieties: Benoist 257 (B), Inia (I), Kolibri (K), VR 6/57 (V).

Sub plots: All combinations of:-

2. Nitrogen: 75, 150, 225, 300 kg N as 'Nitro-chalk'.
3. Chlormequat: None, 1.12, 2.24, 3.36 kg in 337 l.

Basal applications: 336 kg (0:20:20). Weedkiller: 2,4-D at 0.56 kg plus dichlorprop at 2.24 kg in 337 l.

Cultivations, etc.: Deep-tine cultivated on 2 occasions: 10 and 12 Oct, 1970. Seed drilled at 188 kg, PK applied: 2 Apr, 1971. N applied: 16 Apr. Weedkiller applied: 11 May. Chlormequat applied: 21 May. Combine harvested: 2 Sept. Previous crops: Spring beans 1969, potatoes 1970.

NOTES: (1) Shoot heights were measured and plant numbers counted. Samples were taken just before harvest for components of yield and dry matter.

- (2) Mildew (*Erysiphe graminis*) was severe on Inia and there was considerable bird damage on all plots.

Standard error per plot estimated from unconfounded 3 factor interaction.

Grain, tonnes/hectare: Whole plot: 0.297 or 8.6% (9 d.f.)  
Sub plot: 0.166 or 4.8% (15 d.f.)

71/R/WS/3

SUMMARY OF RESULTS

GRAIN: TONNES/HECTARE

	N: KG/HA				CHLORMEQUAT: KG/HA				Mean
	75	150	225	300	0	1.12	2.24	3.36	
	(1) and (2)				(1) and (2)				(±0.149)
B	3.91	4.14	4.44	4.21	3.62	4.29	4.42	4.36	4.17
I	2.21	2.30	2.51	2.63	2.27	2.54	2.40	2.45	2.41
K	2.04	2.45	2.94	3.25	2.56	2.76	2.67	2.70	2.67
V	4.30	4.65	4.64	4.64	4.26	4.59	4.60	4.77	4.56
	N: KG/HA				(±0.083)				(±0.042)
			75		3.01	3.02	3.36	3.07	3.12
			150		3.00	3.69	3.32	3.53	3.38
			225		3.40	3.91	3.56	3.66	3.63
			300		3.29	3.57	3.86	4.02	3.68
Mean (±0.042)					3.18	3.55	3.52	3.57	3.45

Mean D.M. %: 81.9

- (1) (±0.165) For use in vertical and diagonal comparisons only
- (2) (±0.083) For use in horizontal and interaction comparisons only