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# Yields of the Field Experiments 1983

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## 83/R/WW/4 Seed Rates and Divided N Dressings - W. Wheat

### Rothamsted Research

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83/R/WW/4

WINTER WHEAT

SEED RATES AND DIVIDED N DRESSINGS

Object: To study the effects of a range of rates of early nitrogen dressings on the growth and yield of wheat sown at one third or at standard seed rate - Little Hoos.

Sponsors: J. McEwen, R. Moffitt.

Design: 2 randomised blocks of 30 plots.

Whole plot dimensions: 3.0 x 10.0.

Treatments: All combinations of:-

1. SD RATE      Seed rates (kg):

67  
200

2. EARLY N      Nitrogen fertilizer applied 22 Feb, 1983 (kg N) as 'Nitro-Chalk':

0  
25  
50  
75

3. APRIL N      Nitrogen fertilizer applied 13 Apr (kg N) as 'Nitro-Chalk':

75  
100  
125

plus extra treatments, all combinations of:-

1. SD RATEX      Seed rates (kg):

67  
200

2. APRIL NX      Nitrogen fertilizer applied 13 Apr (kg N):

150  
175  
200

Basal applications: Manures: (0:18:36) at 420 kg. Weedkillers: Paraquat at 0.83 kg ion in 250 l. Isoproturon at 2.1 kg with dicamba, mecoprop, and MCPA (as 'Poly-Farmon CMPP' at 4.2 l) in 250 l. Fungicides: Carbendazim at 0.15 kg, maneb at 1.6 kg and tridemorph at 0.38 kg in 500 l. Growth regulator: Chlormequat at 1.1 kg in 250 l.

Seed: Avalon.

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Cultivations, etc.:— Discd: 25 Aug and 1 Sept, 1982. PK applied: 10 Sept.  
Paraquat applied: 15 Oct. Rotary harrowed, seed sown: 27 Oct.  
Isoproturon with 'Poly-Farmon CMPP' applied: 11 Mar, 1983. Growth  
regulator applied: 29 Apr. Fungicides applied: 13 June. Combine  
harvested: 10 Aug. Previous crops: W. wheat 1981, w. oats 1982.

NOTES: (1) Plant counts were made in February, shoot counts in March and  
April and ear counts in July.

(2) 1000 grain weights and N content of grain were measured.

# GRAIN TONNES/HECTARE

## \*\*\*\*\* TABLES OF MEANS \*\*\*\*\*

EARLY N	0	25	50	75	MEAN
SD RATE					
67	7.81	8.56	8.64	9.09	8.52
200	7.88	8.62	8.98	9.19	8.67
MEAN	7.85	8.59	8.81	9.14	8.60
APRIL N	75	100	125	MEAN	
SD RATE					
67	8.30	8.60	8.67	8.52	
200	8.16	8.72	9.13	8.67	
MEAN	8.23	8.66	8.90	8.60	
APRIL N	75	100	125	MEAN	
EARLY N					
0	7.19	8.06	8.28	7.85	
25	8.13	8.73	8.90	8.59	
50	8.49	8.81	9.14	8.81	
75	9.10	9.04	9.28	9.14	
MEAN	8.23	8.66	8.90	8.60	
SD RATE	APRIL N	75	100	125	
67	EARLY N				
	0	7.26	8.04	8.12	
	25	8.23	8.80	8.65	
	50	8.65	8.64	8.64	
	75	9.07	8.92	9.27	
200	0	7.13	8.07	8.45	
	25	8.04	8.67	9.15	
	50	8.34	8.97	9.64	
	75	9.12	9.17	9.29	
APRIL NX	150	175	200	MEAN	
SD RATEX					
67	9.00	8.65	9.16	8.94	
200	8.38	9.58	9.23	9.06	
MEAN	8.69	9.12	9.19	9.00	
GRAND MEAN	8.68				

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GRAIN TONNES/HECTARE

\*\*\*\*\* STANDARD ERRORS OF DIFFERENCES OF MEANS \*\*\*\*\*

TABLE	SD RATE	EARLY N	APRIL N	SD RATE EARLY N
SED	0.099	0.139	0.121	0.197

TABLE	SD RATE APRIL N	EARLY N APRIL N	SD RATE EARLY N APRIL N	SDRATEx
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SED	0.171	0.241	0.341	0.197
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TABLE	APRIL NX	SD RAtEx APRIL NX
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SED	0.241	0.341
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\*\*\*\*\* STRATUM STANDARD ERRORS AND COEFFICIENTS OF VARIATION \*\*\*\*\*

STRATUM	DF	SE	CV%
BLOCK.WP	29	0.341	3.9

GRAIN MEAN DM% 85.8

PLOT AREA HARVESTED 0.00229