

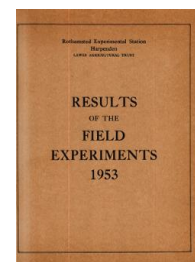
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## Yields of the Field Experiments 1953

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### 53/CA/2 Wheat - Eyespot, Varieties, Seed Rates and Time of Applying N - Rothamsted

#### Rothamsted Research

Rothamsted Research (1954) *53/CA/2 Wheat - Eyespot, Varieties, Seed Rates and Time of Applying N - Rothamsted* ; Yields Of The Field Experiments 1953, pp 70 - 72 - DOI:

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53/Ca/2.1

## WHEAT

The effects of varieties, seed rates and time of applying N on the incidence of Eyespot - Great Field 1953, the 2nd year.

System of replication: 8 randomized blocks of 8 plots each, certain high order interactions and the effect of spraying being confounded with block differences. In addition each block contained two extra plots with no nitrogen, the variety  $\times$  seed rate interaction being confounded.

Area of each plot: 0.0197 acre. Area harvested: 0.0129 acre.

Treatments: All combinations of

Variety: Squareheads Master 13/4; Bersee ( $V_1$ ;  $V_2$ ).

Seedrate:  $1\frac{1}{2}$ ; 3 bushels per acre ( $R_1$ ;  $R_2$ ).

Nitrogen: 0.4; 0.8 cwt per acre applied as sulphate of ammonia ( $N_1$ ;  $N_2$ ).

Time of application of N: At time of autumn sowing; early March; mid-April; 3rd week May ( $T_1$ ;  $T_2$ ;  $T_3$ ;  $T_4$ ).

Spraying: 4 blocks sprayed with  $12\frac{1}{2}\%$  sulphuric acid at 100 gallons per acre.

Basal dressing: None.

Cultivations, etc.: Ploughed: Sept 2, 1952. Seed drilled:  $V_1$  - Oct 17,  $V_2$  - Oct 21.  $T_1$  applied: Oct 24. Sprayed 4 blocks with sulphuric acid: Mar 4, 1953.  $T_2$  applied: Mar 5.  $T_3$  applied: Apr 11.  $T_4$  applied: May 22. Combine harvested: Aug 22. Previous crop: Wheat.

Standard error per plot:

Grain (at 85% D.M.): 3.41 cwt per acre or 16.3% (24 d.f.)

N.B. (1) In the Summary of Results:-

(a) The standard errors given are not valid for testing the effects of spraying for any particular treatment level; the interactions of spraying with treatments may however be tested.

(b) The  $V \times R$  tables do not include the plots receiving no nitrogen

(2) Records of incidence of disease (Take-all and Eyespot) and counts of plant, shoot and straw numbers were made.

Estimates of % area lodged were also recorded.

Summary of Results

Grain (at 85% Dry Matter): cwt per acre

	Unsprayed				Mean
	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	
Mean (±1.20)	20.6	21.8	21.4	23.5	21.8 (±0.85)
V <sub>1</sub>	17.1	18.9	18.6	23.4	19.5
V <sub>2</sub>	24.1	24.8	24.1	23.7	24.2
Difference (±2.41)	+7.0	+5.9	+5.5	+0.3	+4.7 (±1.20)
R <sub>1</sub>	21.5	22.0	23.7	27.2	23.6
R <sub>2</sub>	19.7	21.7	19.0	19.9	20.1
Difference (±2.41)	-1.8	-0.3	-4.7	-7.3	-3.5 (±1.20)
N <sub>1</sub>	17.5	23.1	18.8	22.0	20.3
N <sub>2</sub>	23.7	20.6	24.0	25.0	23.3
Difference (±2.41)	+6.2	-2.5	+5.2	+3.0	+3.0 (±1.20)

	R <sub>1</sub>	R <sub>2</sub>	Diff.	N <sub>0</sub>	N <sub>1</sub>	N <sub>2</sub>	Mean
Mean (±0.85)				15.1 <sup>(2)</sup>	20.3	23.3	20.5
	(±1.20)		(±1.70)	(±1.70)	(±1.20)		(±0.76)
V <sub>1</sub>	22.1	16.9	-5.2	11.7	19.1	19.9	17.9
V <sub>2</sub>	25.2	23.2	-2.0	18.5	21.6	26.8	23.1
Diff. (±1.70)	+3.1	+6.3	+3.2	+6.8 <sup>(1)</sup>	+2.5	+6.9	+5.2
				(±1.70)	(±1.20)		(±0.76)
R <sub>1</sub>				16.2	22.2	25.1	22.1
R <sub>2</sub>				14.1	18.5	21.6	18.9
Diff. (±1.70)				-2.1 <sup>(1)</sup>	-3.7	-3.5	-3.2

(1) ±2.41 (2) ±1.70 Mean D.M. %: 87.3

Treatment symbols

V<sub>1</sub> Squareheads Master 13/4 R<sub>1</sub> 1½ bushels per acre N<sub>0</sub> No N  
 V<sub>2</sub> Bersee R<sub>2</sub> 3 bushels per acre N<sub>1</sub> 0.4 cwt N per acre  
 N<sub>2</sub> 0.8 cwt N per acre

T<sub>1</sub> Sulphate of ammonia at time of autumn sowing  
 T<sub>2</sub> Sulphate of ammonia in early March  
 T<sub>3</sub> Sulphate of ammonia mid-April  
 T<sub>4</sub> Sulphate of ammonia 3rd week May

53/Ca/2.3

Grain (at 85% Dry Matter): cwt per acre

	Sprayed				Mean
	T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	
Mean ( $\pm 1.20$ )	22.6	22.9	21.0	21.0	21.9 ( $\pm 0.85$ )
V <sub>1</sub>	20.0	21.8	18.3	19.3	19.8
V <sub>2</sub>	25.2	24.1	23.7	22.7	23.9
Difference ( $\pm 2.41$ )	+5.2	+2.3	+5.4	+3.4	+4.1 ( $\pm 1.20$ )
R <sub>1</sub>	25.1	22.0	22.8	24.7	23.6
R <sub>2</sub>	20.1	23.9	19.1	17.4	20.1
Difference ( $\pm 2.41$ )	-5.0	+1.9	-3.7	-7.3	-3.5 ( $\pm 1.20$ )
N <sub>1</sub>	21.2	25.1	18.8	23.2	22.1
N <sub>2</sub>	24.0	20.8	23.1	18.9	21.7
Difference ( $\pm 2.41$ )	+2.8	-4.3	+4.3	-4.3	-0.4 ( $\pm 1.20$ )

	R <sub>1</sub>	R <sub>2</sub>	Diff.	N <sub>0</sub>	N <sub>1</sub>	N <sub>2</sub>	Mean
Mean ( $\pm 0.85$ )				18.7 <sup>(2)</sup>	22.1	21.7	21.2 ( $\pm 0.76$ )
		( $\pm 1.20$ )	( $\pm 1.70$ )	( $\pm 1.70$ )	( $\pm 1.20$ )		
V <sub>1</sub>	22.0	17.7	-4.3	19.0	19.7	19.9	19.7
V <sub>2</sub>	25.3	22.6	-2.7	18.3	24.4	23.5	22.8
Diff. ( $\pm 1.70$ )	+3.3	+4.9	+1.6	-0.7 <sup>(1)</sup>	+4.7	+3.6	+3.1 ( $\pm 0.76$ )
				( $\pm 1.70$ )	( $\pm 1.20$ )		
R <sub>1</sub>				24.7	24.0	23.3	23.8
R <sub>2</sub>				12.6	20.2	20.1	18.6
Diff. ( $\pm 1.70$ )				-12.1 <sup>(1)</sup>	-3.8	-3.2	-5.2

(1)  $\pm 2.41$  (2)  $\pm 1.20$  Mean D.M. %: 85.3

Treatment symbols

V<sub>1</sub> Squareheads Master 13/4 R<sub>1</sub> 1½ bushels per acre N<sub>0</sub> No N  
 V<sub>2</sub> Bersee R<sub>2</sub> 3 bushels per acre N<sub>1</sub> 0.4 cwt N per acre  
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