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Yields of the Field Experiments 1949

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49/CA/1 Wheat - Eyespot

49/CA/1 *Wheat - Eyespot*, Rothamsted Research (1950) Yields Of The Field Experiments 1949, pp 64 - 66

WHEAT

49/Ca/1.1

Control of "Eyespot"

The effects of rates and times of application of sulphate of ammonia, of rates of sowing and of spraying, with sulphuric acid.

RW - Little Knott 1949

System of replication: 4 x 3 x 3 x 2 design in 6 blocks of 12 plots each, certain three factor interactions and the effect of spraying being confounded with block differences.

Area of each plot: 0.0146 acre

Treatments:

Sulphate of ammonia: Rates, None, $1\frac{3}{4}$, $3\frac{1}{2}$, $5\frac{1}{4}$ cwt per acre (N_0, N_1, N_2, N_3).
Times of application, March, April, May, (T_0, T_1, T_2).
Rates of sowing: $1\frac{1}{2}$, $2\frac{1}{2}$, $3\frac{1}{2}$ bushels per acre (R_0, R_1, R_2).
Spraying: 3 blocks sprayed with sulphuric acid (12% by volume).
B.O.V. at 100 gallons per acre in March.

Basal Manuring: 2 cwt superphosphate and $\frac{1}{2}$ cwt muriate of potash drilled across the plots.

Cultivations, etc.: Ploughed: Sept 30. Disc harrowed: Oct 11. Harrowed: Oct 12. Seed drilled: Oct 13. Basal manures drilled: Oct 15. Harrowed in: Oct 21. Sprayed 3 blocks with sulphuric acid: Mar 2. 1st application of sulphate of ammonia: Mar 5. 2nd application of sulphate of ammonia: Apr 5. Ring rolled: Apr 13. 3rd application of sulphate of ammonia: May 4. Sprayed whole experiment with Denocate to kill weeds: May 12. Harvested: Aug 3. Variety: Squareheads Master 13/4. Previous crop: Kale.

Standard errors per plot:

Grain: unsprayed blocks: 3.46 cwt per acre or 22.5% (12 d.f.)
 sprayed blocks: 6.26 cwt per acre or 32.8% (12 d.f.)
Straw: unsprayed blocks: 6.42 cwt per acre or 18.0% (12 d.f.)
 sprayed blocks: 10.04 cwt per acre or 29.4% (12 d.f.)

Note: No counts of 'Eyespot' or 'Take-all' were made.

49/Ca/1.2

Grain: cwt per acre

	Unsprayed				Mean	Sprayed				Mean	Effect of Spraying
	R ₀	R ₁	R ₂			R ₀	R ₁	R ₂			
				(±1.76)	(±1.00)				(±3.18)	(±1.81)	(±2.06) ⁽¹⁾
T ₀	14.5	14.3	15.7		14.9	22.3	16.0	21.1		19.8	4.9
T ₁	19.0	15.6	15.4		16.7	21.1	22.4	19.8		21.1	4.4
T ₂	14.1	15.2	14.6		14.6	14.7	16.5	17.8		16.3	1.7
Mean	15.9	15.1	15.2	(±1.00)	15.4	19.4	18.3	19.5	(±1.81)	19.1	
	N ₀	N ₁	N ₂	N ₃		N ₀	N ₁	N ₂	N ₃		
				(±2.00)					(±3.61)		
T ₀		13.9	15.3	17.0			20.9	20.9	22.0		
T ₁		16.3	17.9	20.8			17.9	23.7	22.7		
T ₂		19.0	14.1	13.0			24.0	15.8	16.9		
				(±2.00)					(±3.61)		
R ₀	15.7	15.8	15.5	16.5	15.9	15.4	23.3	17.3	21.6	19.4	3.5
R ₁	11.8	19.1	15.0	14.4	15.1	14.5	11.5	23.1	24.0	18.3	3.2
R ₂	10.1	14.3	16.7	19.9	15.2	14.0	28.1	20.2	16.0	19.5	4.3
Mean	12.6	16.4	15.7	16.9	15.4	14.6	20.9	20.2	20.6	19.1	
		(±1.15)					(±2.09)				
Effect of Spraying					(±2.38) ⁽¹⁾	2.0	4.5	4.5	3.7		

(1) Standard error for comparisons between main effects only.

49/Ca/1.3

Straw: cwt per acre

	Unsprayed				Mean	Sprayed				Mean	Effect of Spraying
	R ₀	R ₁	R ₂			R ₀	R ₁	R ₂			
		(±3.26)			(±1.85)		(±5.10)			(±2.90)	(±3.44) ⁽¹⁾
T ₀	32.2	35.4	38.3		35.3	39.9	32.9	40.6	37.8	2.5	
T ₁	37.8	33.0	35.4		35.4	38.9	42.5	39.4	40.3	4.9	
T ₂	29.8	31.1	34.4		31.8	25.3	29.5	31.2	28.7	-3.1	
Mean	33.3	33.2	36.0		34.2	34.7	35.0	37.1	35.6		
		(±1.85)					(±2.90)				
		N ₀	N ₁	N ₂	N ₃		N ₀	N ₁	N ₂	N ₃	
			(±3.71)					(±5.80)			
T ₀		32.1	38.5	41.3			39.3	42.5	42.8		
T ₁		33.4	42.1	42.5			34.2	47.4	44.0		
T ₂		39.5	29.6	28.7			37.3	31.1	30.6		
			(±3.71)					(±5.80)			(±2.90)
R ₀	31.1	32.4	35.6	34.0	33.3	27.3	38.1	33.6	39.8	34.7	1.4
R ₁	26.2	40.4	34.1	32.0	33.2	27.2	22.2	43.4	47.1	35.0	1.8
R ₂	25.1	32.1	40.4	46.4	36.0	23.3	50.5	44.1	30.4	37.1	1.3
Mean	27.5	35.0	36.7	37.5	34.2	25.9	36.9	40.4	39.1	35.6	
		(±2.14)					(±3.35)				
	Effect of Spraying (±3.97) ⁽¹⁾					-1.6	1.9	3.7	1.6		

(1) Standard error for comparisons between main effects only.