

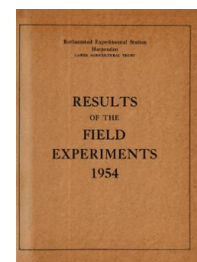
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Yields of the Field Experiments 1954

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54/W/CA/7 Wheat - Varieties, Seed Rates, Levels and Time of N

Rothamsted Research

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54/Ca/7.1

WHEAT

Varieties, seed rates, levels and time of N - Woburn, Roadpiece 1954.

System of replication: 4 randomized blocks of 8 plots each, certain high order interactions being confounded with block differences. In addition each block contained 2 plots with no nitrogen, the variety x seed rate interaction being confounded.

Area of each plot: 0.0159 acre.

Treatments: All combinations of:-

Varieties: Holdfast; Cappelle.

Seed rates: $1\frac{1}{2}$; 3 bushels per acre.

Nitrogen: 0.5; 1.0 cwt N per acre as nitrochalk.

Time of application of N: In seed bed; in early March; early April; mid-May.

Basal dressing: None

Cultivations, etc.: Cultivated after potatoes: Oct 21, 1953. Seed-bed nitrogen applied: Oct 26. Seed drilled: Nov 6. March top dressing applied: March 2, 1954. April top dressing applied: April 6. All plots sprayed with D.N.O.C. at 6 lb per acre in 100 gallons, May top dressing applied: May 11. Harvested: Sept 15. Varieties: Holdfast and Cappelle. Previous crop: Potatoes.

Standard error per plot:

Grain: 4.10 cwt per acre or 14.9% (12 d.f.)

Note: Records of incidence of disease (Take-all and Eyespot) and counts of plants, shoots and ear numbers were made.

54/Ca/7.2

Summary of Results

Grain: cwt per acre

	T ₁	T ₂	T ₃	T ₄	Mean
Mean (± 1.45)	21.6	30.2	35.6	30.1	29.4
	(± 2.05)				(± 1.02)
V ₁	21.4	25.7	33.7	28.1	27.2
V ₂	21.8	34.7	37.6	32.1	31.5
Difference (± 2.90)	+0.4	+9.0	+3.9	+4.0	+4.3 (± 1.45)
R ₁	19.8	29.4	33.0	28.2	27.6
R ₂	23.4	31.0	38.3	32.0	31.1
Difference (± 2.90)	+3.6	+1.6	+5.3	+3.8	+3.5 (± 1.45)
N ₁	22.8	25.3	29.2	26.5	26.0
N ₂	20.4	35.1	42.1	33.6	32.8
Difference (± 2.90)	-2.4	+9.8	+12.9	+7.1	+6.8 (± 1.45)

	R ₁	R ₂	Diff.	N ₀	N ₁	N ₂	Mean
Mean (± 1.02)				19.7 ⁽²⁾	26.0	32.8	27.4
	(± 1.45)		(± 2.05)	(± 2.05)	(± 1.45)		(± 0.92)
V ₁	26.0	28.4	+2.4	20.5	24.2	30.2	25.9
V ₂	29.2	33.9	+4.7	18.9	27.7	35.4	29.0
Diff. (± 2.05)	+3.2	+5.5	+2.3	-1.6 ⁽¹⁾	+3.5	+5.2	+3.1
				(± 2.05)	(± 1.45)		(± 0.92)
R ₁				18.9	23.6	31.6	25.9
R ₂				20.5	28.3	34.0	29.0
Diff. (± 2.05)				+1.6 ⁽¹⁾	+4.7	+2.4	+3.1

(1) ± 2.90 (2) ± 1.45

Treatments

V ₁ Holdfast	R ₁ 1½ bushels per acre	N ₀ No N
V ₂ Cappelle	R ₂ 3 bushels per acre	N ₁ 0.5 cwt N per acre
		N ₂ 1.0 cwt N per acre
	T ₁ Nitrochalk in seedbed	
	T ₂ Nitrochalk in early March	
	T ₃ Nitrochalk 5 weeks after T ₂	
	T ₄ Nitrochalk 5 weeks after T ₃	

The V x R table does not include the plots receiving no nitrogen.

54/Ca/7.3

	Straw: cwt per acre				Mean
	T ₁	T ₂	T ₃	T ₄	
Mean	23.7	37.1	40.2	32.3	33.3
V ₁	25.5	35.2	43.2	34.3	34.5
V ₂	22.0	38.9	37.2	30.3	32.1
Difference	-3.5	+3.7	-6.0	-4.0	-2.4
R ₁	20.4	36.2	36.1	29.4	30.5
R ₂	27.1	37.9	44.2	35.2	36.1
Difference	+6.7	+1.7	+8.1	+5.8	+5.6
N ₁	25.7	29.7	32.9	28.7	29.2
N ₂	21.8	44.4	47.5	35.9	37.4
Difference	-3.9	+14.7	+14.6	+7.2	+8.2

	R ₁	R ₂	Diff.	N ₀	N ₁	N ₂	Mean
Mean				21.0	29.2	37.4	30.9
V ₁	32.2	36.9	+4.7	22.6	30.6	38.5	32.2
V ₂	28.9	35.3	+6.4	19.5	27.9	36.3	29.6
Difference	-3.3	-1.6	+1.7	-3.1	-2.7	-2.2	-2.6
R ₁				20.8	26.1	34.9	28.6
R ₂				21.3	32.4	39.9	33.2
Difference				+0.5	+6.3	+5.0	+4.6

Treatments

V ₁ Holdfast	R ₁ 1½ bushels per acre	N ₀ No N
V ₂ Cappelle	R ₂ 3 bushels per acre	N ₁ 0.5 cwt N per acre
		N ₂ 1.0 cwt N per acre
	T ₁ Nitrochalk in seedbed	
	T ₂ Nitrochalk in early March	
	T ₃ Nitrochalk 5 weeks after T ₂	
	T ₄ Nitrochalk 5 weeks after T ₃	

The V x R table does not include the plots receiving no nitrogen.