

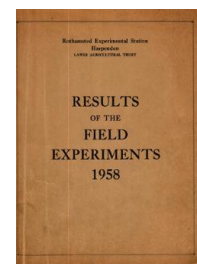
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Yields of the Field Experiments 1958

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58/R/CA/2 Winter Wheat - Uptake of N

Rothamsted Research

Rothamsted Research (1959) *58/R/CA/2 Winter Wheat - Uptake of N* ; Yields Of The Field Experiments 1958, pp 78 - 79 - DOI: <https://doi.org/10.23637/ERADOC-1-181>

58/Ca/2.1

WINTER WHEAT

Uptake of nitrogen - Great Harpenden II 1958.

Design: 3 randomized blocks of 8 plots each.

Area of each plot: 0.0289 acres. Area harvested: 0.0129 acres.

Treatments: None (two plots per block) and all combinations of:-

Forms of nitrogen: Calcium nitrate; sulphate of ammonia, each at 100 lb N per acre.

Times of application of N: In autumn; in spring; half in autumn and half in spring.

Basal dressing: 5 cwt compound fertilizer (10% P_2O_5 , 20% K_2O) per acre applied by hand.

Cultivations, etc.: Ploughed: Sept 16, 1957. Compound fertilizer applied, seed drilled at $2\frac{1}{2}$ bushels per acre, autumn nitrogen applied: Oct 5. Spring nitrogen applied: Mar 20, 1958. Sprayed with CMFP at 6 pints in 40 gallons per acre: Apr 30. Combine harvested: Sept 3. Variety: Cappelle. Previous crop: Fallow.

Standard error per plot.

Grain (at 85% dry matter): 2.33 cwt per acre or 5.3% (15 d.f.)

Note. The mineral nitrogen content of the soil and the total nitrogen content of the plants were determined at various stages of growth.

58/Ca/2.2

Summary of Results

Form of N	Time of application			Mean
	Autumn	Spring	Autumn & Spring	
Grain (at 85% dry matter): cwt per acre				
None		(±1.35)		(±0.78)
Calcium nitrate	44.8	42.7	42.4	43.9 ⁽¹⁾
Sulphate of ammonia	44.3	46.2	42.3	44.3
Mean (±0.95)	44.5	44.4	42.3	43.8
Difference (±1.90)	-0.5	+3.5	-0.1	+1.0
				(±1.10)
(1) ±0.95				

Straw (at 85% dry matter): cwt per acre

None				40.9
Calcium nitrate	44.0	38.4	43.2	41.9
Sulphate of ammonia	43.7	41.2	45.6	43.5
Mean	43.8	39.8	44.4	42.2
Difference	-0.3	+2.8	+2.4	+1.6

Mean dry matter % as harvested: Grain: 79.4
Straw: 76.1