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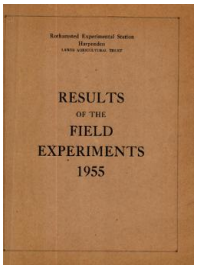
Yields of the Field Experiments 1955

Full Table of Content



55/R/CB/2 and 55/W/CB/2 Barley - Levels and Time of N

Rothamsted Research

Rothamsted Research (1956) *55/R/CB/2 and 55/W/CB/2 Barley - Levels and Time of N ;* Yields Of The Field Experiments 1955, pp 82 - 83 **- DOI: https://doi.org/10.23637/ERADOC-1-175**

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BARLEY

Rates and times of application of nitrogen - Rothamsted (R) Great Field I and Woburn (W) Butt Close.

Design (each field): 22 treatments arranged in 4 blocks of 13 plots each, the control and 3 treatments occurring in every block, the other 18 treatments occurring in 2 blocks. The total amounts of N applied per block were equal.

Area of each plot: 0.0212 acre. Area harvested: 0.0141 acre.

Treatments: None, and all combinations of:-

Nitrogen: N_1; N_2; N_3.

Times of application: All in seed bed (S); all as early top dressing (E); all as late top dressing (L); $\frac{1}{2}$ S & $\frac{1}{2}$ E; $\frac{1}{2}$ S & $\frac{1}{2}$ L; $\frac{1}{2}$ E & $\frac{1}{2}$ L; $\frac{1}{3}$ S, $\frac{1}{3}$ E & $\frac{1}{3}$ L.

Where N_1; N_2; N_3 =

Great Field I (R): 0.23; 0.46; 0.69 cwt N per acre applied as 'Nitro-Chalk'.

Butt Close (W): 0.3; 0.6; 0.9 cwt N per acre applied as 'Nitro-Chalk'.

Basal dressing: 1.15 cwt per acre compound fertilizer (13% P_2O_5, 13% K_2O) combine drilled with the seed.

Cultivations, etc.:

Great Field I (R). Ploughed: Nov - Dec 1954. Seed drilled at 2 bushels per acre with basal fertilizer, and seed bed 'Nitro-Chalk' applied: Apr 2, 1955. Early 'Nitro-Chalk' top dressing applied: Apr 30. Sprayed with DNC 8 lb active material in 80 gallons per acre: May 11. Late 'Nitro-Chalk' top dressing applied: May 19. Combine harvested: Aug 21. Variety: Herta. Previous crop: Potatoes.

Butt Close (W). Ploughed: Dec 23-28, 1954. Applied ground chalk at 2 tons per acre: Feb 4, 1955. Seed bed 'Nitro-Chalk' applied: Mar 21. Seed drilled at 2 bushels per acre with basal fertilizer: Mar 22. Early top dressing of 'Nitro-Chalk' applied: Apr 20 Late top dressing of 'Nitro-Chalk' applied: May 16. Sprayed with MCPA amine at low volume: May 22. Combine harvested: Aug 22. Variety: Herta. Previous crop: Potatoes.

Standard errors per plot. Grain: cwt per acre.

Great Field I(R): 1.68 cwt per acre or 3.4% (27 d.f.)

Butt Close (W): 3.84 cwt per acre or 9.9% (27 d.f.)*

Note: The Woburn crop was severely and irregularly damaged by birds. Estimates of damage were made before harvesting and the yields have been corrected on the basis of these.

*At 85% dry matter.

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Summary of Results

Grain: cwt per acre

Rothamsted Great Field I

	Time of application							
	S	E	L	$\frac{1}{2}S\frac{1}{2}E$	$\frac{1}{2}S\frac{1}{2}L$	$\frac{1}{2}E\frac{1}{2}L$	$\frac{1}{3}S\frac{1}{3}E\frac{1}{3}L$	Mean
N: cwt per acre			(±1.26)				(±0.84)	(±0.42)
None								46.9 (1)
0.23	48.2	47.7	49.8	46.2	47.1	47.6	49.2	48.1
0.46	50.5	51.2	47.7	49.5	50.2	48.9	49.8	49.7
0.69	48.0	46.6	51.5	48.5	47.7	48.2	48.9	48.5
Mean (±0.70)	48.9	48.5	49.7	48.0	48.3	48.2	49.3 (2)	48.7

(1) ±0.84 (2) ±0.48

Mean dry matter % as harvested: 85.0

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

Woburn Butt Close

	Time of application							
	S	E	L	$\frac{1}{2}S\frac{1}{2}E$	$\frac{1}{2}S\frac{1}{2}L$	$\frac{1}{2}E\frac{1}{2}L$	$\frac{1}{3}S\frac{1}{3}E\frac{1}{3}L$	Mean
N: cwt per acre			(±2.89)				(±1.92)	(±0.96)
None								21.2 (1)
0.3	29.7	34.7	34.0	34.8	32.6	32.2	31.5	32.6
0.6	41.4	44.4	42.0	37.3	36.2	39.3	44.4	41.2
0.9	46.5	50.5	41.9	48.7	44.7	45.4	48.3	46.8
Mean (±1.61)	39.2	43.2	39.3	40.3	37.8	38.9	41.4 (2)	38.7

(1) ±1.92 (2) ±1.11

Mean dry matter % as harvested: 84.5

Time of application

S In Seedbed.
E Early top dressing.
L Late top dressing.

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