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Yields of the Field Experiments 1958

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58/R/CB/4 and 58/W/CB/4 Barley - Levels and Time of N

Rothamsted Research

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58/Cb/4.1

BARLEY

Levels and times of application of nitrogen - Rothamsted (R)
Great Knott III and Woburn (W) Stackyard, Series C 1958.

Design, (each field): 22 treatments arranged in 4 blocks of 13 plots each, the control and 3 of the 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 acres. Area harvested: 0.0141 acres.

Treatments: None, and all combinations of:-

Nitrogen: N_1 ; N_2 ; N_3 applied as 'Nitro-Chalk'.

Times of application: $\frac{1}{3}$ All in seedbed (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 Knott III (R): 0.23; 0.46; 0.69 cwt N per acre.

Stackyard (W): 0.3; 0.6; 0.9 cwt N per acre.

Basal dressing:

Great Knott III (R): 2 cwt compound fertilizer (16% P_2O_5 , 16% K_2O) per acre combine drilled with seed.

Stackyard (W): 1 cwt compound fertilizer (16% P_2O_5 , 16% K_2O) per acre combine drilled with seed.

Cultivations, etc.:

Great Knott III (R): Ploughed: Oct 28, 1957. Seedbed 'Nitro-Chalk' applied: Apr 2, 1958. Seed combine drilled at $2\frac{3}{4}$ bushels per acre: Apr 3. Early 'Nitro-Chalk' top dressing applied: Apr 25. Late 'Nitro-Chalk' top dressing applied: May 16. Sprayed with MCPA, 4 pints in 40 gallons per acre: May 20. Combine harvested: Aug 26. Variety: Herta. Previous crop: Spring wheat.

Stackyard (W). Ploughed: Feb 13 to Mar 5, 1958. Seedbed 'Nitro-Chalk' applied, seed combine drilled at $2\frac{1}{2}$ bushels per acre: Mar 22. Early 'Nitro-Chalk' top dressing applied: Apr 23. Late 'Nitro-Chalk' top dressing applied: May 16. Sprayed with MCPA, 4 pints in 40 gallons per acre: May 27. Combine harvested: Sept 1. Variety: Herta. Previous crop: Potatoes.

Standard errors per plot, Grain (at 85% dry matter).

Great Knott III (R): 1.85 cwt per acre or 5.4% (27 d.f.)

Stackyard (W): 1.49 cwt per acre or 4.4% (27 d.f.)

58/Cb/4.2

Summary of Results

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

N: cwt per acre	Time of application							Mean
	S	E	L	$\frac{1}{2}S\frac{1}{2}E$	$\frac{1}{2}S\frac{1}{2}L$	$\frac{1}{2}E\frac{1}{2}L$	$\frac{1}{3}S\frac{1}{3}E\frac{1}{3}L$	
Great Knott III, Rothamsted								
	(± 1.39)						(± 0.92)	(± 0.46)
None								22.7 ⁽¹⁾
0.23	30.2	32.0	30.1	31.7	31.9	30.2	30.5	30.9
0.46	35.8	36.0	35.7	35.7	36.0	39.5	37.7	36.7
0.69	36.6	37.8	37.8	37.2	38.4	38.9	39.3	38.1
Mean (± 0.77)	34.2	35.3	34.5	34.8	35.4	36.2	35.8 ⁽²⁾	34.3

(1) ±0.92 (2) ±0.53

Mean dry matter % as harvested: 75.5

Stackyard, Woburn

	(± 1.12)						(± 0.75)	(± 0.37)
None								21.6 ⁽¹⁾
0.3	32.1	32.3	32.4	31.6	33.6	33.4	32.5	32.5
0.6	34.6	38.2	35.2	35.4	37.5	38.5	38.5	37.0
0.9	34.0	36.1	36.1	35.9	37.4	34.8	38.3	36.4
Mean (± 0.62)	33.6	35.5	34.6	34.3	36.2	35.6	36.4 ⁽²⁾	34.3

(1) ±0.75 (2) ±0.43

Mean dry matter % as harvested: 83.4