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Yields of the Field Experiments 1960

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60/R/CB/1 Barley - N and Residual N Fertilisers

Rothamsted Research

Rothamsted Research (1961) *60/R/CB/1 Barley - N and Residual N Fertilisers ; Yields Of The Field Experiments 1960*, pp 96 - 98 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/Cb/1.1

BARLEY

Direct and residual effects of N fertilisers - Harwoods Piece 1960.

Design: $2 \times 8 \times 2$ factorial in 4 randomised blocks of 16 plots each, with certain high order interactions partially confounded with block differences.

Area of each plot: 0.0087 acres. Area harvested: 0.0078 acres.

Treatments. All combinations of:-

N (applied 1960): None; 0.5 cwt per acre applied as 'Nitro-Chalk'.
Residuals of N fertilisers applied in 1958 and 1959 to grass. See
'Results of the Field Experiments' 58/Cg/1 and 59/Cg/1.

Basal manuring per acre: 2 cwt compound fertiliser (14% P_2O_5 , 28% K_2O)
combine drilled.

Cultivations, etc.: Ploughed: Dec 2, 1959. N applied, seed combine
drilled at 2 bushels per acre: Mar 28, 1960. Sprayed with CMPP
at 6 pints in 40 gallons per acre: May 24. Combine harvested:
Aug 18. Variety: Proctor. Previous crop: Italian ryegrass.

Standard error per plot.

Grain (at 85% dry matter): 2.59 cwt per acre or 8.0% (29 d.f.)

Summary of Results

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

	Ureaformaldehyde applied			Fertiliser			'Nitro-Chalk' applied		
	None	1958	1959	1958 & 1959	As single dressing spring 1959	1958	1959	1958 & 1959	Mean
Mean (± 0.91)	29.6	32.0	32.4	33.0	32.0	32.1	33.2	33.9	32.3
N: cwt per acre in 1960					(± 1.29)				
None	22.6	28.3	27.5	29.4	26.5	28.8	28.6	30.5	27.8
0.5	36.7	35.8	37.2	36.7	37.4	35.4	37.8	37.3	36.8
Diff. (± 1.83)	+14.1	+7.5	+9.7	+7.3	+10.9	+6.6	+9.2	+6.8	+9.0 (± 0.65)
N: cwt per acre in 1959					(± 1.29)				
1.0		32.4	32.1	31.8	30.9	32.1	31.8	32.8	32.0 (± 0.49)
2.0		31.7	32.6	34.3	33.0	32.1	34.6	35.0	33.3
Diff. (± 1.83)		-0.7	+0.5	+2.5	+2.1	0.0	+2.8	+2.2	+1.3 (± 0.69)

Mean dry matter % as harvested: 80.2

60/Cb/1.2

60/Cb/1.3

Straw (at 85% dry matter): cwt per acre									
		Ureaformaldehyde applied		Fertiliser		'Nitro-Chalk' applied			
		1958	1959	1958 & 1959	As single dressing spring 1959	1958	1959		
None		1958	1959	1958 & 1959	As single dressing spring 1959	1958	1959	1958 & 1959	Mean
Mean		21.2	23.2	24.7	21.6	21.9	22.8	23.8	22.7
N: cwt per acre in 1960									
None		16.1	21.1	20.9	19.5	19.3	19.4	21.8	19.6
0.5		26.4	25.4	28.5	23.7	24.5	26.1	25.8	25.8
Diff.		+10.3	+4.3	+7.6	+4.2	+5.2	+6.7	+4.0	+6.2
N: cwt per acre in 1959									
1.0			22.6	22.4	21.3	20.9	22.1	24.2	22.2
2.0			23.9	26.9	22.0	22.9	23.4	23.4	23.7
Diff.			+1.3	+4.5	+0.7	+2.0	+1.3	-0.8	+1.5

Mean dry matter % as harvested: 81.9