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Yields of the Field Experiments 1960

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60/W/CB/3 Barley - Forms and Application of N

Rothamsted Research

Rothamsted Research (1961) *60/W/CB/3 Barley - Forms and Application of N* ; Yields Of The Field Experiments 1960, pp 100 - 101 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/Cb/3.1

BARLEY

Forms of N and methods of application - Butt Close Woburn 1960.

Design: $4 \times 2 \times 4$ in 6 blocks of 16, with certain high order interactions partially confounded with block differences, plus 2 control plots per block.

Area of each plot: 0.0146 acres.

Treatments: No nitrogen and all combinations of:-

<u>Forms of N:</u>	Ammonium sulphate 21% N	(S)
	Calcium nitrate 15.5% N	(C)
	Ammonium nitrate 23% N	(A)
	or Urea 45.6% N	(U)

Levels of N: 0.3; 0.6 cwt N per acre.

Methods of application: Broadcast (B), combine drilled (D), side band placed (P), top dressed (T).

Basal dressing: 2 cwt granular compound fertiliser (14% P_2O_5 , 28% K_2O) per acre cross drilled.

Cultivations, etc.: Ploughed Jan 27 - Feb 8, 1960. Seed drilled at 2 bushels per acre and seedbed fertilisers applied: Mar 24.
Nitrogen top dressings applied: Apr 29. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 9. Combine harvested: Aug 23.
Variety: Proctor. Previous crop: Sugar beet.

Standard error per plot.

Grain (at 85% dry matter): 1.95 cwt per acre or 7.7% (67 d.f.)

60/Cb/3.2

Summary of Results

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

	Form of N				Mean
	S	C	A	U	
Mean (± 0.40)	26.2	26.1	26.2	26.0	26.1 (± 0.20)
N: cwt per acre					
0.3 (± 0.56)	23.3	24.4	24.0	24.4	24.0
0.6 (± 0.56)	29.1	27.8	28.5	27.7	28.3
Diff. (± 0.80)	+5.8	+3.4	+4.5	+3.3	+4.3 (± 0.40)
Method of application					
B	25.4	24.3	25.6	25.4	25.2
D (± 0.80)	26.3	26.0	25.3	25.5	25.7 (± 0.40)
P	24.5	25.8	24.6	24.9	24.9
T	28.4	28.3	29.6	28.4	28.7

	Method of application			
	B	D	P	T
N: cwt per acre				
0.3 (± 0.56)	22.8	23.8	23.1	26.3
0.6 (± 0.56)	27.5	27.7	26.8	31.0
Diff. (± 0.80)	+4.7	+3.9	+3.7	+4.7

Control: 18.0 (± 0.56)

General mean: 25.2

Mean dry matter % as harvested (all plots): 81.4

Form of N

S = Ammonium sulphate 21% N

C = Calcium nitrate 15.5% N

A = Ammonium nitrate 23% N

U = Urea 45.6% N

Method of application

B = Broadcast

D = Combine drilled

P = Side band placed

T = Top dressed