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Yields of the Field Experiments 1961

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61/R/DB/1 Barley - Forms and Application of N

Rothamsted Research

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61/Db/1.1

BARLEY

Forms and methods of application of nitrogen - Great Knott I 1961.

Design: 3 randomised blocks of 20 plots each.

Area of each plot: 0.0194 acres.

Treatments: No nitrogen (2 plots per block) and all combinations of:-

Forms of N: Ammonium sulphate 21% N (S);
Calcium nitrate 15.5% N (C);
Urea 45.6% N (U)

Levels of N: 0.35; 0.70 cwt N per acre.

Methods of application: Broadcast (B); combine drilled (D);
side band placed (P).

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

Cultivations, etc.: Ground chalk applied at 45 cwt per acre:

Oct 17, 1960. Ploughed: Nov 29. Seed drilled at $2\frac{1}{2}$ bushels
per acre and seedbed fertilisers applied: Mar 14, 1961. Sprayed
with CMPP at 6 pints in 40 gallons per acre: May 11. Combine
harvested: Aug 16. Variety: Proctor. Previous crop: Winter wheat.

Standard error per plot.

Grain (at 85% dry matter): 1.61 cwt per acre or 4.1% (37 d.f.)

61/Db/1.2

Summary of ResultsGrain (at 85% dry matter): cwt per acre

	Form of N			Mean
	S	C	U	
Mean (± 0.38)	39.2	39.6	38.1	39.0 (± 0.22)
N: cwt per acre				
0.35 (± 0.54)	36.4	36.3	36.0	36.2
0.75	42.1	42.8	40.2	41.7
Diff. (± 0.76)	+5.7	+6.5	+4.2	+5.5 (± 0.44)
Method of application				
B	38.0	41.1	38.0	39.0
D (± 0.66)	40.3	38.3	37.1	38.5 (± 0.38)
P	39.5	39.4	39.2	39.3
	Method of application			
	B	D	P	
N: cwt per acre				
0.35 (± 0.54)	35.8	36.5	36.3	
0.70	42.2	40.6	42.3	
Diff. (± 0.76)	+6.4	+4.1	+6.0	

No N: 25.0 (± 0.66)

General mean: 37.6

Mean dry matter % as harvested (all plots): 82.5

Form of N

S = Ammonium sulphate 21% N

C = Calcium nitrate 15.5% N

U = Urea 45.6% N

Method of application

B = Broadcast

D = Combine drilled

P = Side band placed