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52/CB/1 Barley - Late Application of Nitrogen - Rothamsted

Rothamsted Research

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52/Cb/1.1

BARLEY

Late application of nitrogen and methods of harvesting - Great Field II 1952.

System of replication: 4 randomized blocks of 3 plots each, blocks and plots being split into 2 strips for different methods of harvesting.

Area of each plot: 0.0242 acre. Area harvested: 'binder' plots - 0.0242 acre, 'combine' plots - 0.0091 acre.

Treatments:

Nitrochalk: None; $1\frac{1}{2}$; 3 cwt per acre applied as top dressing.
Methods of harvesting: Binder; N.I.A.E. combine harvester.

Basal manuring per acre: $2\frac{1}{4}$ cwt sulphate of ammonia; 1 cwt super-phosphate combine drilled with seed.

Cultivations, etc.: Sulphate of ammonia applied to linseed: Mar 19.
Harrowed in linseed which had failed: May 12. Seed and super-phosphate drilled: May 13. Sprayed with M.C.P.A., medium volume, 5 pints in 30 gallons water per acre: June 9. Nitrochalk applied: June 16. Harvested: 'binder' plots - Sept 16, 'combine' plots - Sept 19. Variety: Plumage Archer. Previous crop: Permanent grass.

Standard errors per plot. Grain:

Strip: 1.09 cwt per acre or 7.6% (3 d.f.)
Whole plot: 1.05 cwt per acre or 7.4% (6 d.f.)
Sub plot: 1.18 cwt per acre or 8.3% (6 d.f.)

52/Cb/1.2

Summary of Results

	Nitrochalk: cwt per acre as top dressing			Mean
	None	1.5	3.0	
Grain: cwt per acre				
	(a) and (b)			
Binder	13.1	13.5	13.1	13.2
Combine	14.7	15.6	15.5	15.3
Mean (± 0.53)	13.9	14.5	14.3	14.2
Difference (± 1.03)	1.6	2.1	2.4	2.1 (± 0.77)

(a) ± 0.67 for use in horizontal comparisons only(b) ± 0.79 for use in diagonal comparisons only

Straw: cwt per acre				
Binder	19.6	18.3	19.2	19.0

Crude Protein: cwt per acre				
Grain: Binder	1.76	1.84	1.78	
Increase		0.08	0.02	
Combine	2.07	2.16	2.14	
Increase		0.09	0.07	
Straw: Binder	1.17	1.11	1.12	
Increase		-0.06	-0.05	

Percentage uptake of added nitrogen			
Grain: Binder	6	1	
Combine	6	2	
Straw: Binder	-4	-2	