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58/R/CB/5 and 58/W/CB/5 Barley - Varieties and N

Rothamsted Research

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58/Cb/5.1

BARLEY

Varieties and levels of nitrogen - Rothamsted (R) Great Knott III and Woburn (W) Lansome Field.

Design: 3 randomized blocks of 6 plots each, plots being split into 2 for the application of nitrogen.

Area of each sub plot (acres):	Area harvested (acres):
Great Knott III (R): 0.0103.	0.0069
Lansome Field (W): 0.0167.	0.0111.

Treatments: All combinations of:-

Whole plots. Varieties: Domen (1); Herta (2); Ingrid (3); Plumage Archer (4); Proctor (5); Rika (6).

Sub plots. Nitrogen, applied as sulphate of ammonia.

Great Knott III (R): None; 0.3 cwt N per acre
Lansome Field (W): 0.4; 0.8 cwt N per acre.

Basal dressing:

Great Knott III (R): $2\frac{1}{2}$ cwt compound fertilizer (12% N, 9% P_2O_5 , 9% K_2O) per acre combine drilled with seed.

Lansome Field (W): $2\frac{1}{2}$ 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 - Nov 6, 1957. Seed combine drilled at $2\frac{1}{2}$ bushels (Proctor - 2 bushels) per acre: Apr 3 - 4, 1958. Sulphate of ammonia applied: Apr 8. Sprayed with MCPA at 4 pints in 40 gallons per acre: Apr 22. Combine harvested: Aug 26. Previous crop: Spring wheat.

Lansome Field (W): Ploughed: Nov 27 - 29, 1957. Sulphate of ammonia applied: Apr 3, 1958. Seed combine drilled at $2\frac{3}{4}$ bushels per acre: Apr 11. Sprayed with MCPA at 5 pints in 40 gallons per acre: May 22. Combine harvested: Aug 27. Previous crop: Fallow.

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

Great Knott III (R):

Whole plot: 1.14 cwt per acre or 3.7% (10 d.f.)

Sub plot: 0.81 cwt per acre or 2.6% (12 d.f.)

Lansome Field (W):

Whole plot 1.38 cwt per acre or 4.2% (10 d.f.)

Sub plot: 1.88 cwt per acre or 5.8% (12 d.f.)

58/Cb/5.2

Summary of Results

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

N: cwt per acre (including basal)	Variety						Mean
	1	2	3	4	5	6	
	Great Knott III (R)						
	(± 0.73)*						
0.3	26.5	30.5	26.8	24.9	30.6	29.7	28.1
0.6	30.0	36.4	33.2	30.6	36.7	34.2	33.5
Mean (± 0.65)	28.2	33.5	30.0	27.8	33.6	31.9	30.8
Difference (± 0.66)	3.5	5.9	6.4	5.7	6.1	4.5	5.4 (± 0.27)

Mean dry matter % as harvested: 74.4

N: cwt per acre	Lansome Field (W)						Mean
	1	2	3	4	5	6	
	(± 1.10)*						
0.4	32.1	33.0	33.4	29.9	34.1	35.0	32.9
0.8	31.3	30.9	33.5	26.3	37.1	32.8	32.0
Mean (± 0.79)	31.7	31.9	33.4	28.1	35.6	33.9	32.4
Difference (± 1.54)	-0.8	-2.1	+0.1	-3.6	+3.0	-2.2	-0.9 (± 0.63)

Mean dry matter % as harvested: 83.1

* for use in comparisons other than vertical.