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Yields of the Field Experiments 1958

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58/R/CB/3 and 58/W/CB/3 Barley - Combine Drilling of N

Rothamsted Research

Rothamsted Research (1959) *58/R/CB/3 and 58/W/CB/3 Barley - Combine Drilling of N* ; Yields Of The Field Experiments 1958, pp 93 - 94 - DOI: <https://doi.org/10.23637/ERADOC-1-181>

BARLEY

Combine drilling of nitrogen - Rothamsted (R) Great Knott III and Woburn (W) Lansome Field 1958.

Design (each field): 4 randomized blocks of 7 plots each.

Area of each plot: 0.0212 acres. Area harvested: 0.0141 acres.

Treatments: None and all combinations of:-

Nitrogen: 0.22* (N₁); 0.54 (N₂); 0.72* (N₃) cwt N per acre.

Method of application: Broadcast as sulphate of ammonia; combine drilled as compound fertilizer:

*N₁: 5% N, 12% P₂O₅, 12½% K₂O
N₂: 8% N, 8% P₂O₅, 8% K₂O
*N₃: 12% N, 9% P₂O₅, 9% K₂O

*Note: For N₁ and N₃ on Great Knott III (R), the compound fertilizer was actually applied at the rates of 0.19 and 0.57 cwt N per acre. The broadcast dressings were corrected to these amounts.

Basal dressing per acre (each field): 0.54 cwt P₂O₅ and 0.54 cwt K₂O combine drilled

(a) as compound (16% P₂O₅, 16% K₂O) on the no nitrogen and broadcast nitrogen plots.

(b) as compounds N₁, N₂, N₃ on the plots receiving drilled nitrogen.

Cultivations, etc.:

Great Knott III (R). Ploughed: Oct 28, 1957. Seed combine drilled at 2¾ bushels per acre: Apr 3, 1958. Sulphate of ammonia broadcast: Apr 4. Sprayed with MCPA at 4 pints in 40 gallons per acre: May 20. Combine harvested: Aug 25. Variety: Herta. Previous crop: Spring wheat.

Lansome Field (W). Ploughed: Nov 27, 1957. Seed combine drilled at 2¾ bushels per acre: Apr 3, 1958. Sulphate of ammonia broadcast: Apr 8. Sprayed with MCPA at 5 pints in 40 gallons per acre: May 22. Combine harvested: Aug 27. Variety: Herta. Previous crop: Fallow.

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

Great Knott III (R): 2.25 cwt per acre or 7.3% (18 d.f.)

Lansome Field (W): 1.79 cwt per acre or 5.8% (18 d.f.)

58/Cb/3.2

Summary of Results

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

N: cwt per acre

None	Broadcast			Combine drilled			Mean
	0.22 ⁺	0.54	0.72*	0.22 ⁺	0.54	0.72*	

Great Knott III, Rothamsted

19.0	25.0	36.1	36.4 (±1.13)	25.8	37.3	37.2	31.0
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Mean dry matter % as harvested: 74.2

Lansome Field, Woburn

20.0	27.7	33.9	33.4 (±0.89)	28.0	36.5	35.0	30.6
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Mean dry matter % as harvested: 84.3

⁺ 0.19 on Great Knott III, Rothamsted.

*0.57 " " " " " "