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## Yields of the Field Experiments 1960

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### 60/R/CA/7 and 60/W/CA/7 Spring Wheat - Combine Drilling of N

#### Rothamsted Research

Rothamsted Research (1961) *60/R/CA/7 and 60/W/CA/7 Spring Wheat - Combine Drilling of N* ;  
Yields Of The Field Experiments 1960, pp 94 - 95 - DOI: <https://doi.org/10.23637/ERADOC-1-180>

60/Ca/7.1

SPRING WHEAT

Combine drilling of nitrogen - Rothamsted (R) Little Knott I and Woburn (W) Lansome Field 1960.

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

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

Treatments:

No nitrogen. 0.41 cwt N per acre ( $N_1$ ); 0.82\* cwt N per acre ( $N_2$ ) either broadcast as sulphate of ammonia or combine drilled as part of a compound fertiliser.

0.41 cwt N per acre as above plus 0.35 cwt N per acre as 'Nitro-Chalk' top dressing.

Compound fertilisers used:

$N_1$ : 8% N, 8%  $P_2O_5$ , 8%  $K_2O$ .

$N_2$ : 16% N, 9%  $P_2O_5$ , 9%  $K_2O$ .

\*Note: 0.88 on Lansome Field, Woburn.

Basal dressing per acre: combine drilled

(a) on the plots receiving drilled nitrogen, as compounds  $N_1$ ,  $N_2$ :-

Little Knott I (R): 0.46 cwt  $P_2O_5$ ; 0.46 cwt  $K_2O$ .

Lansome Field (W): 0.49 cwt  $P_2O_5$ ; 0.49 cwt  $K_2O$ .

(b) on the no nitrogen and broadcast nitrogen plots: as compound 16%  $P_2O_5$ , 16%  $K_2O$ :-

Little Knott I (R): 0.46 cwt  $P_2O_5$ ; 0.46 cwt  $K_2O$ .

Lansome Field (W): 0.60 cwt  $P_2O_5$ ; 0.60 cwt  $K_2O$ .

Note: The rates of application aimed at were  $N_1$ , 0.45;  $N_2$ , 0.8; N top-dressed, 0.35 cwt per acre; basal  $P_2O_5$  and  $K_2O$ , 0.45 cwt per acre. The discrepancies were due to machine application.

Cultivations, etc.:

Little Knott I (R): Ploughed: Nov 10, 1959. Ground chalk applied at 23 cwt per acre: Feb 24 - Mar 2, 1960. Seed combine drilled at  $2\frac{3}{4}$  bushels per acre, sulphate of ammonia applied: Mar 21. 'Nitro-Chalk' top dressings applied: Apr 22. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 10. Combine harvested: Sept 13. Variety: Jufy I. Previous crop: Oats.



60/Oa/7.2

Lansome Field (W): Sprayed twice with sodium trichloroacetate at 15 lb in 40 gallons per acre: Nov 17 and Dec 29, 1959. Ground chalk applied at 46 cwt per acre: Feb 16, 1960. Seed combine drilled at  $2\frac{3}{4}$  bushels per acre, sulphate of ammonia applied: Mar 22. Sprayed with 2,4-D butoxyethyl ester at  $\frac{1}{2}$  pint in 40 gallons per acre: May 7. Combine harvested: Sept 10. Variety: Jufy I. Previous crop: Potatoes.

Note: Plant counts at germination were made.

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

Little Knott (R): 2.06 cwt per acre or 6.5% (18 d.f.)

Lansome Field (W): 1.58 cwt per acre or 8.4% (18 d.f.)

Summary of Results

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

N: cwt per acre

None	Broadcast			Drilled			Mean
	0.41	0.82*	0.41 & 0.35 <sup>+</sup>	0.41	0.82	0.41 & 0.35 <sup>+</sup>	

Little Knott I (R)

26.9	31.5	33.3	32.5	31.4	33.1	34.8	31.9
			(±1.03)				

Mean dry matter % as harvested: 83.2

Lansome Field (W)

14.2	17.9	19.9	20.8	19.5	20.7	18.5	18.8
			(±0.79)				

Mean dry matter % as harvested: 80.3

\*0.88 at Woburn

<sup>+</sup>Top dressing.