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Yields of the Field Experiments 1959

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59/W/CA/5 Wheat - Time of Sowing, Forms of N

Rothamsted Research

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59/Ca/5.2

Summary of Results

Time of sowing	N: fertilizer applied					Mean
	None	Autumn		Spring		
		C	S	C	S	
<u>Grain (at 85% dry matter): cwt per acre</u>						
			(±2.04)*			
Winter	11.5	16.7	20.4	19.4	24.8	18.6
Spring	13.7	10.8	13.2	15.4	11.5	12.9
Mean (±1.44)	12.6	13.8	16.8	17.4	18.1	15.7
Diff. (±2.88)**	+2.2	-5.9	-7.2	-4.0	-13.3	-5.7

* For use in horizontal comparisons only.

** For use only in testing the difference of two differences.

Mean dry matter % as harvested: 86.2

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

Winter	10.3	12.3	18.7	23.4	24.1	17.7
Spring	13.3	12.3	16.0	26.9	22.1	18.1
Mean	11.8	12.3	17.3	25.1	23.1	17.9
Diff.	+3.0	0.0	-2.7	+3.5	-2.0	+0.4

Mean dry matter % as harvested: 76.3

C = 100 lb N per acre as calcium nitrate

S = 100 lb N per acre as sulphate of ammonia.

BARLEY

Combine drilling of nitrogen - Rothamsted (R) Deacons Field and Woburn (W) Lansome Field 1959.

Design: 4 randomized blocks of 7 plots each.

Area of each plot:

Deacons Field (R): 0.0212 acres. Area harvested: 0.0141 acres.
Lansome Field (W): 0.0186 acres. Area harvested: 0.0124 acres.

Treatments: None and all combinations of:-

Nitrogen: 0.2; 0.5; 0.8 (0.7 - Lansome Field) cwt N per acre.

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

N_1 : 6% N; 15% P_{2O_5} ; 15% K_2O .
 N_2 : 8% N; 8% P_{2O_5} ; 8% K_2O .
 N_3 : 12% N; 9% P_{2O_5} ; 9% K_2O .

Basal dressing per acre:-

Deacons Field (R): 0.57 cwt P_{2O_5} and 0.57 cwt K_2O
Lansome Field (W): 0.54 cwt P_{2O_5} and 0.54 cwt K_2O .

combine drilled

(a) as compound (16% P_{2O_5} , 16% K_2O) on the no nitrogen and broadcast nitrogen plots,

(b) as compounds N_1 , N_2 , N_3 on the plots receiving drilled nitrogen.

Cultivations, etc.:

Deacons Field (R): Ploughed: Nov 17-24, 1958. Seed combine drilled at 2 bushels per acre: Mar 19, 1959. Sulphate of ammonia and balance of compound fertilizer (16% P_{2O_5} , 16% K_2O) broadcast: Mar 20. Sprayed with TCB/MCPA at 4 pints in 40 gallons per acre: May 6. Combine harvested: Aug 6. Variety: Proctor. Previous crop: Winter wheat.

Lansome Field (W): Ploughed: Nov 5, 1958. Seed combine drilled at 3 bushels per acre: Mar 20, 1959. Sulphate of ammonia broadcast: Mar 23. Combine harvested: Aug 17. Variety: Herta. Previous crop: Barley.

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

Deacons Field (R): 1.69 cwt per acre or 6.0% (18 d.f.)
Lansome Field (W): 1.70 cwt per acre or 6.4% (18 d.f.)

Note: Plant counts at germination were made.