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66/R/RW101/DA/1 and 66/W/WW101/DA/1 Winter Wheat - Row Spacing

Rothamsted Research

Rothamsted Research (1967) *66/R/RW101/DA/1 and 66/W/WW101/DA/1 Winter Wheat - Row Spacing* ; Yields Of The Field Experiments 1966, pp 243 - 246 - DOI:
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66/Da/1.1

WINTER WHEAT

(RW101 and WW101)

Row spacing, seed rates and N - Rothamsted (R) Great Knott I and Woburn (W) Workhouse 1966.

Design: 2 replicates of a 4 x 2 x 4 factorial arranged in 4 blocks of 8 whole plots, with N on half plots. (4 - 3 + 2 - 1 on whole plots Great Knott I (R), 3 - 2 + 1 - 0 on Workhouse (W)).

Area of each sub plot: 0.0069. Area harvested: 0.0069.

Treatments: All combinations of:-

Whole plots.

1. Row spacing etc.:

- Seed broadcast, autumn fertiliser** broadcast (B)
- Seed drilled, 4 inch rows, autumn fertiliser broadcast (C)
- Seed drilled, 7 inch rows, autumn fertiliser broadcast (W)
- Seed drilled, 7 inch rows, with autumn fertiliser combine drilled (W*)

2. Seed rates: 140 lb (L), 240 lb (H).

Sub plots:

3. Nitrogen in spring:

- Great Knott I (R): 0.4 (N1), 0.8 (N2), 1.2 (N3), 1.6 (N4) cwt N as 'Nitro-Chalk' broadcast.
- Workhouse (W): None (N0), 0.4 (N1), 0.8 (N2), 1.2 (N3) cwt N as 'Nitro-Chalk' broadcast.

** Great Knott I (R): (6:15:15) to all plots - rate 340 lb.
Workhouse (W): (8:20:16) to all plots - rate 310 lb.

NOTE: At Rothamsted because of a mistake in an instruction nitrogen was applied to the wrong plots: in order to achieve balance certain additions were made making the total applications listed.

Basal applications: Great Knott I (R): Ioxynil/MCPA (Actril A at 2 pints in 40 gals).

66/Da/1.2

Cultivations, etc.:

Great Knott I (R): Deep-tine cultivated twice: Nov 3 and 4, 1965.
Seed sown, NPK applied: Nov 5. 'Nitro-Chalk' applied: Apr 13, 1966,
completed: Apr 21. Sprayed: Apr 29. Combine harvested: Aug 24.
Variety: Cappelle. Previous crops: Barley 1964, potatoes 1965.
Workhouse (W): Deep-tine cultivated: Oct 27, 1965. Seed sown,
NPK applied: Nov 3. 'Nitro-Chalk' applied: Apr 27, 1966.
Combine harvested: Aug 27. Variety: Cappelle. Previous crops:
Grass 1964, potatoes 1965.

Standard errors per plot. Grain:

Great Knott I (R).	Whole plot: 2.57 or 5.3% (14 d.f.)
	Sub plot: 3.11 or 6.4% (16 d.f.)
Workhouse (W).	Whole plot: 2.88 or 5.2% (14 d.f.)
	Sub plot: 3.98 or 7.1% (16 d.f.)

66/Da/1.3

SUMMARY OF RESULTS

GREAT KNIGHT I (R)

GRAIN

	B	C	W	W*	Mean
Mean (± 0.91)	49.2	48.7	48.9	46.4	48.3
	(± 1.29)				(± 0.64)
L	49.3	50.6	50.9	48.3	49.8
H	49.0	46.8	47.0	44.5	46.8
	(1) and (2)				(3) and (4)
N1	49.9	49.8	47.3	47.0	48.5
N2	52.0	51.3	50.7	48.1	50.5
N3	46.4	48.1	49.4	45.0	47.2
N4	48.4	45.6	48.3	45.4	47.0
	L	H			
	(5) and (6)				
N1	49.6	47.4			
N2	50.9	50.2			
N3	48.7	45.7			
N4	49.9	44.0			

- (1) (± 1.56) (5) (± 1.10) For use in vertical and interaction comparisons involving N4-N2 or N3-N1
 (2) (± 1.69) (6) (± 1.20) For use in all other comparisons
 (3) (± 0.78) For use in comparisons N4-N2 or N3-N1
 (4) (± 0.85) For use in all other comparisons

66/Da./1.4

WORKHOUSE (W)

GRAIN

	B	C	W	W*	Mean
Mean (± 1.02)	55.9	56.7	55.4	55.3	55.8
		(± 1.44)			(± 0.72)
L	56.5	57.7	56.1	54.9	56.3
H	55.4	55.8	54.6	55.6	55.3
		(1) and (2)			(3) and (4)
NO	52.8	55.3	53.7	53.0	53.7
N1	57.4	60.1	59.8	57.5	58.7
N2	59.6	58.8	56.2	56.7	57.8
N3	53.9	52.6	52.0	53.8	53.1
	L	H			
	(5) and (6)				
NO	52.4	55.0			
N1	57.8	59.6			
N2	59.3	56.4			
N3	55.8	50.3			

- (1) (± 1.99) (5) (± 1.41) For use in vertical and interaction comparisons involving N3-N1 or N2-NO
- (2) (± 2.02) (6) (± 1.43) For use in all other comparisons
- (3) (± 1.00) For use in comparisons N3-N1 or N2-NO
- (4) (± 1.01) For use in all other comparisons