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Yields of the Field Experiments 1964

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64/R/AY/C/5 and 64/W/WBC/C/5 Methods of Application of Fertiliser 1963-64 - Potatoes

Rothamsted Research

Rothamsted Research (1965) *64/R/AY/C/5 and 64/W/WBC/C/5 Methods of Application of Fertiliser 1963-64 - Potatoes* ; Yields Of The Field Experiments 1964, pp 153 - 155 - **DOI:**
<https://doi.org/10.23637/ERADOC-1-160>

64/C/5.1

METHODS OF APPLICATION OF FERTILISER 1964 - 65

(AY and WBC)

Methods of application of fertiliser - Rothamsted (R) Whittlocks and Woburn (W) Broad Mead II, 1964 the first year - potatoes.

Design (each field): 3 randomised blocks of 12 plots each.

Area of each plot: 0.0212. Area harvested: 0.0133.

Treatments: None (L0) (3 plots per block) and all combinations of:-

1. Levels of 13:13:20 to supply (cwt):

N	P2O5	K2O
0.66	0.66	1.02 (L1)
1.32	1.32	2.03 (L2)
2.00	2.00	3.07 (L3)

2. Methods of application: Broadcast (B), placed (P), broadcast and rotary cultivated in (BR).

NOTE: The experiment is designed to include an additional factor applied to the 1965 wheat crop, viz. PK broadcast on seedbed and 'Nitro-Chalk' as spring dressing to supply:-

N, P2O5 and K2O at levels as (0), (1), (2) above.

Basal dressing: None.

Cultivations, etc.:

Whittlocks (R). Ploughed: Oct 11, 1963. Fertilisers applied to ploughing: Apr 8, 1964. Rotary cultivated, fertilisers applied, potatoes planted: Apr 15. Earthed up: June 12. Sprayed three times with mancozeb at 1.2 lb in 35 gals: June 30, July 16, July 31. Sprayed with diquat (Reglone at 3 pints in 40 gals): Sept 8. Lifted: Sept 15. Variety: King Edward. Previous crops: Winter and spring wheat 1962, spring wheat 1963.

Broad Mead (W). Ploughed twice: Oct 2, 1963 and Jan 13, 1964. Fertilisers applied to ploughing: Apr 9. Rotary cultivated: Apr 13. Fertilisers applied, potatoes planted: Apr 14. Sprayed with diquat/paraquat (Preaglone Extra at 2 pints in 40 gals): May 12. Sprayed with mancozeb at 1.6 lb in 50 gals: June 25, and again at 1.2 lb in 36 gals: July 14. Sprayed with diquat (Reglone at 3 pints in 40 gals): Sept 2. Lifted: Sept 10. Variety: King Edward. Previous crops: Spring wheat 1962, barley 1963.

Standard errors per plot. Total tubers:

Whittlocks (R): 0.610 or 5.6% (24 d.f.)
Broad Mead II (W): 1.985 or 17.4% (24 d.f.)

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SUMMARY OF RESULTS

WHITTLOCKS (R)

	L0	L1	L2	L3	Mean
TOTAL TUBERS					
					(± 0.203)
B		11.23	12.83	13.92	12.66
P		10.72	13.04	13.27	12.34
BR		10.27	13.01	14.60	12.63
Mean (± 0.209)	6.18	10.74	12.96	13.93	10.95*
% WARE					
B		90.4	90.1	91.4	90.6
P		86.3	91.7	91.4	89.8
BR		88.3	91.9	91.1	90.4
Mean	82.0	88.3	91.2	91.3	88.2*

* General mean

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BROAD MEAD II (W)

	L0	L1	L2	L3	Mean
TOTAL TUBERS					
		(±1.146)			(±0.662)
B		9.82	11.90	14.84	12.19
P		12.96	15.55	14.09	14.20
BR		10.06	13.50	14.66	12.74
Mean (±0.662)	6.51	10.94	13.65	14.53	11.41*
% WARE					
B		84.2	85.7	80.0	83.3
P		89.1	86.0	78.3	84.5
BR		88.4	88.0	85.9	87.4
Mean	82.4	87.2	86.6	81.4	84.4*

* General mean