

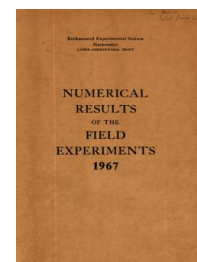
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67/R/CK/C/28 and 67/W/WCN/C/28 Potato Haulms - Potatoes

Rothamsted Research

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67/C/28.1

EFFECT OF POTATO HAULM ON WINTER WHEAT

(CK and WCN)

Rothamsted (R) Pastures and Woburn (W) Broadmead II, 1967, the first year (potatoes).

Design: 4 blocks of 8 plots, randomisation restricted.

Area of each plot: 0.0161. Area harvested: Pastures (R) - 0.0096, Broadmead II (W) - 0.0099.

Treatments: All combinations of:-

1. Nitrogen to potatoes: None (NO), 0.66 (N2), 1.32 (N4), 2.0 (N6) as 'Nitro-Chalk'.
2. Haulm disposal: Burnt off with acid (B), cut and removed (C).

Basal applications: 1200 lb (0:14:28) broadcast by drill.

Pastures (R): Weedkiller: Linuron at 0.75 lb plus paraquat at 0.5 lb ion in 37 gals. Fungicide: Mancozeb at 1.2 lb in 30 gals on four occasions.

Broadmead II (W): Weedkiller: Linuron at 0.5 lb plus paraquat at 0.5 lb ion in 50 gals. Insecticide: Ground application - demeton-s-methyl 3 oz in 30 gals, aerial application (by fixed wing aircraft) 3 oz in 2 gals. Fungicide: Mancozeb at 1.2 lb in 30 gals on 3 occasions.

Cultivations, etc.:-

Pastures (R): Rotary cultivated: Sept 16, 1966. Ploughed: Nov 23 - Jan 5, 1967. Basal PK applied: Mar 31. 'Nitro-Chalk' applied: Apr 4. Rotary cultivated second time, potatoes planted: Apr 6. Weedkiller applied: May 12. Fungicide applied: June 29, July 21, Aug 3, Aug 8. Haulm removed from C plots: Aug 29. B plots sprayed with undiluted BOV at 15 gals: Sept 7. Haulm destroyed mechanically: Sept 14. Lifted: Sept 15. Variety: Pentland Dell. Previous crops: Barley 1965, fallow 1966.

Broadmead II (W): Ploughed: Oct 22, 1966. Ground chalk applied at 4.5 tons: Jan 9, 1967. Basal PK applied: Mar 20. 'Nitro-Chalk' applied: Mar 28. Potatoes planted: Mar 30. Weedkiller applied: May 3. Rotary ridged: June 9. Insecticide and fungicide applied: June 20. Fungicide applied: June 30, Aug 8.

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Insecticide applied from the air: July 13. Haulm removed from C plots: Aug 24. B plots sprayed with diquat (Reglone at 4 pints in 40 gals): Aug 25. Lifted: Sept 11. Variety: Pentland Dell. Previous crops: Winter wheat 1965, spring wheat 1966.

NOTE: Samples of haulm were taken from C plots at the time of cutting for dry matter and percentage N. Potatoes were sampled at harvest for dry matter and percentage N.

Standard errors per plot. Total tubers:
Pastures (R): 0.925 or 5.0% (21 d.f.)
Broadmead II (W): 1.198 or 11.7% (21 d.f.)

67/c/28.3

SUMMARY OF RESULTS

	TOTAL TUBERS				Mean
	N0	N2	N4	N6	
	PASTURES (R)				
	(±0.463)				(±0.231)
B	15.91	17.96	20.10	20.93	18.73
C	14.68	19.25	19.10	19.53	18.14
Mean (±0.327)	15.29	18.60	19.60	20.23	18.43
	BROADMEAD II (W)				
	(±0.599)				(±0.299)
B	7.85	9.24	12.96	12.06	10.53
C	6.43	9.98	10.95	12.33	9.92
Mean (±0.423)	7.14	9.61	11.96	12.19	10.23

67/c/28.4

		% WARE				
		NO	N2	N4	N6	Mean
PASTURES (R)						
B		98.2	98.5	98.1	98.1	98.2
C		97.6	98.2	98.7	98.1	98.1
Mean		97.9	98.3	98.4	98.1	98.2
BROADMEAD II (W)						
B		90.6	94.9	97.1	96.9	94.9
C		86.9	94.6	96.4	97.3	93.8
Mean		88.8	94.8	96.8	97.1	94.3