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Yields of the Field Experiments 1965

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65/R/C/29 and 65/W/C29 Formalin and N - 2 Sites - Spring Wheat (Br, Bs, Wbm)

Rothamsted Research

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65/c/29.1

SPRING WHEAT

(BR, BS and WBM)

Effects of formalin and nitrogen, Rothamsted (R) Pastures (pathogen free) and Little Knott I (pathogen infected), Woburn (W) Horsepool (pathogen free) 1965.

Design: Pastures (R) and Horsepool (W): 2 randomised blocks of 8 plots.

Little Knott I (R): 4 randomised blocks of 8 plots.

Area of each plot: 0.0032. Area harvested: 0.0011.

Treatments: All combinations of:-

Formalin: None (0), sprayed with a 38% solution of formaldehyde at 266 gals in 3700 gals (F).

N: None (N0), 0.5 (N1), 1.0 (N2), 1.5 (N3) cwt as 'Nitro-Chalk'.

Basal applications: 280 lb (0:20:20). Weedkiller (Rothamsted only): Dichlorprop/MCPA (Cornox RK Extra at 6 pints in 60 gals).

Cultivations, etc.:-

Pastures (R): Ploughed: Dec 1, 1964. Formalin and PK basal compound applied: Feb 25, 1965. 'Nitro-Chalk' applied (first half dressing), seed sown at 180 lb: Mar 31. 'Nitro-Chalk' applied (2nd half dressing): May 17. Sprayed: May 20. Harvested: Sept 15. Variety: Opal. Previous crops: Grass 1963, spring wheat 1964.

Little Knott I (R): Ploughed: Oct 13, 1964. Chisel ploughed: Dec 23. Formalin and PK basal compound applied: Feb 25, 1965. 'Nitro-Chalk' applied (first half dressing), seed sown at 180 lb: Mar 31. 'Nitro-Chalk' applied (2nd half dressing): May 17. Sprayed: May 20. Harvested: Sept 6. Variety: Opal. Previous crops: Barley 1963 and 1964.

Horsepool (W): Chisel ploughed: Nov 2, 1964. Formalin applied: Dec 22. PK basal compound applied: Feb 10, 1965. Seed sown at 180 lb, 'Nitro-Chalk' (first half dressing) applied: Mar 15. 'Nitro-Chalk' (2nd half dressing) applied: May 14. Plots abandoned because of severe lodging and damage by sparrows, no yields taken: Aug 26. Variety: Opal. Previous crops: Winter wheat 1963, potatoes 1964.

NOTE: Soil samples were taken for determination of mineralisable N and pH. On Horsepool (W) green crop samples were taken for yield and N determination. Samples were taken at harvest for N determination.

Standard errors per plot. Grain:

Pastures (pathogen free) (R): 2.34 or 8.5% (7 d.f.)

Little Knott I (pathogen infected) (R): 2.43 or 8.6% (21 d.f.)

65/C/29.2

SUMMARY OF RESULTS

GRAIN

	NO	N1	N2	N3	Mean
PASTURES (R)					
	(±1.65)				(±0.83)
O	33.6	32.7	24.1	18.5	27.2
F	35.9	28.5	25.1	21.7	27.8
Mean (±1.17)	34.7	30.6	24.6	20.1	27.5
LITTLE KNOTT (R)					
	(±1.21)				(±0.61)
O	17.0	28.3	26.6	26.2	24.5
F	23.9	34.9	35.4	32.5	31.7
Mean (±0.86)	20.4	31.6	31.0	29.4	28.1

Mean D.M. %: Pastures (R): 77.1
 Little Knott (R): 82.3

65/C/29.3

STRAW					
	NO	N1	N2	N3	Mean
PASTURES (R)					
O	50.0	61.2	56.6	52.8	55.1
F	54.1	64.3	59.0	6.0	58.3
Mean	52.1	62.8	57.8	54.4	56.7
LITTLE KNOTT (R)					
O	27.0	46.8	45.9	47.7	41.8
F	34.1	52.5	56.8	55.4	49.7
Mean	30.5	49.7	51.3	51.5	45.8

Mean D.M. %: Pastures (R): 52.1
 Little Knott (R): 82.5