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66/R/BR/C/22 and 66/R/BS/C/22 Formalin and N - 2 Sites - Spring Wheat

Rothamsted Research

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66/C/22.1

SPRING WHEAT

(BR, BS)

Effects of formalin and nitrogen, Pastures (few pathogens), and Little Knott I (many pathogens) 1966, the second year.

Design: Pastures: 2 blocks of 8 plots split into 2.
Little Knott I: 4 blocks of 8 plots.

Area of each plot: 0.0032. Area harvested: Pastures - 0.0012,
Little Knott I - 0.0013.

Treatments:

Pastures: All combinations of:-

- Whole plots: 1. Formalin (applied 1965): None (O), sprayed with a 38% solution of formaldehyde at 266 gals in 3700 gals (R).
2. N: None (NO), 0.5 (N1), 1.0 (N2), 1.5 (N3) cwt as 'Nitro-Chalk' applied in 1965 and 1966.
Sub plots: 3. Formalin (applied 1966): None (O), sprayed with a 38% solution of formaldehyde at 266 gals in 3700 gals (F).

Little Knott I: All combinations of:-

1. Formalin (applied 1965): None (O), sprayed with a 38% solution of formaldehyde at 266 gals in 3700 gals (R).
2. Formalin as 1965, applied 1966: (O) and (F).
3. N (applied 1965 and 1966): None (NO), 0.5 (N1), 1.0 (N2), 1.5 (N3) cwt as 'Nitro-Chalk'.

Basal applications: 280 lb (0:20:20). Weedkillers:

Pastures: Ioxynil/mecoprop (Actril P at 4 pints in 40 gals).
Little Knott I: Dichlorprop/MCPA (Cornox RK Extra at 6 pints in 40 gals).

Cultivations, etc.:

Pastures: Ploughed: Nov 4, 1965. Formalin applied: Feb 18, 1966. PK basal compound and 'Nitro-Chalk' (first half dressing) applied, rotary cultivated, seed sown at 180 lb: Mar 14. 'Nitro-Chalk' applied (2nd half dressing): May 6. Weedkiller applied: May 12. Harvested: Aug 26. Variety: Kloka.

Little Knott I: Ploughed: Oct 25, 1965. Formalin applied: Feb 18, 1966. PK basal compound, 'Nitro-Chalk' (first half dressing) applied, rotary cultivated, seed drilled at 180 lb: Mar 14. 'Nitro-Chalk' applied (2nd half dressing): May 6. Weedkiller applied: May 13. Harvested: Aug 26. Variety: Kloka.

NOTES: (1) Samples of grain and straw were taken at harvest for N percentage determinations.

(2) For previous year's results see 'Results' 65/C/29.

66/c/22.2

Standard errors per plot. Dry matter:

Pastures (R): Whole plot: 2.31 or 6.3% (7 d.f.)
 Sub plot: 3.44 or 9.4% (8 d.f.)
 Little Knott I (R): 3.71 or 13.6% (14 d.f.)

SUMMARY OF RESULTS

PASTURES

GRAIN

	NO	N1	N2	N3	Mean
Mean (± 1.15)	32.7	39.3	39.1	34.7	36.5
		(± 1.63)			(± 0.82)
O	29.5	39.5	39.3	36.7	36.3
R	35.8	39.1	38.9	32.8	36.6
		(1) and (2)			(± 0.86)
O	28.4	39.2	39.2	36.0	35.7
F	36.9	39.5	39.0	33.4	37.2
	O	R			
		(3) and (4)			
O	35.7	35.7			
F	36.8	37.6			

Mean D.M. %: 80.2

(1) (± 1.67) (3) (± 1.18) For use in horizontal and diagonal comparisons
 (2) (± 1.72) (4) (± 1.22) For use in vertical and interaction comparisons

66/C/22.3

		PASTURES				
		STRAW				
		NO	N1	N2	N3	Mean
Mean		42.9	61.1	61.5	61.1	56.6
O		41.0	59.4	61.3	63.1	56.2
R		44.8	62.7	61.7	59.1	57.1
O		33.9	55.1	57.4	56.8	50.8
F		51.9	67.0	65.6	65.4	62.5
		O	R			
O		50.8	50.8			
F		61.6	63.4			

Mean D.M. %: 63.8

66/C/22.4

LITTLE KNOTT I

GRAIN

	NO	N1	N2	N3	Mean
Mean (± 1.31)	22.0	26.8	30.1	30.0	27.3
		(± 1.86)			(± 0.93)
O	23.8	27.6	32.7	30.2	28.6
R	20.3	26.1	27.5	29.9	25.9
O	16.2	24.0	29.2	27.0	24.1
F	27.9	29.7	31.1	33.1	30.4
	O	R			
	(± 1.31)				
O	26.5	21.6			
F	30.6	30.2			

Mean D.M. %: 81.3

66/C/22.5

LITTLE KNOTT I

STRAW

	NO	N1	N2	N3	Mean
Mean	26.0	43.0	49.6	52.6	42.8
O	27.7	45.3	52.1	54.0	44.8
R	24.4	40.6	47.2	51.2	40.8
O	18.3	32.5	42.2	43.6	34.1
F	33.8	53.4	57.1	61.6	51.5
	O	R			
O	36.7	31.6			
F	52.9	50.1			

Mean D.M. %: 72.0