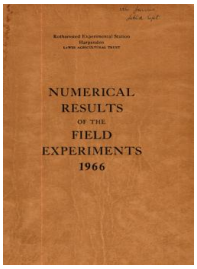
ROTHAMSTED RESEARCH

Yields of the Field Experiments 1966

Full Table of Content



66/W/C/25 K and Protein Synthesis - Grass

Rothamsted Research

Rothamsted Research (1967) *66/W/C/25 K and Protein Synthesis - Grass ;* Yields Of The Field Experiments 1966, pp 213 - 216 **- DOI: https://doi.org/10.23637/ERADOC-1-158**

66/C/25.1

GRASS

Effect of K on protein synthesis - Woburn Stackyard Series C 1966, 2nd year.

Design: 4 randomised blocks of 10 plots, with N on blocks for 3rd and 4th cuts.

Area of each plot: 0.0014. Area harvested: 0.0008.

Treatments: All combinations of:-
Blocks (to 3rd and 4th cuts only):
1. N in addition to basal: None, 100 lb N as ammonium nitrate on June 21, repeated Aug 2 (i.e. for 3rd and 4th cuts).

Plots:
2. Species: Cocksfoot S37 (C), Meadow Fescue S215 (M), sown 1965.
3. Levels of K: None (K0), 60 (K1), 120 (K2), 180 (K3), 240 lb K (K4) as sulphate of potash applied after the second cut.

Basal application: 100 lb N as ammonium nitrate in spring and after the first, second and third cuts.

Cultivations etc.: N applied: Mar 9, May 10, June 21, Aug 2, 1966. K applied: June 23. Cut four times: May 10, June 21, Aug 2, Sept 27.

NOTES: (1) After each cut samples were analysed for total N, protein N and K. After the last cut, samples were taken to assess the residual effects.
(2) For the previous year's results see 'Results' 65/C/32.

Standard errors per plot. Dry matter:

1st cut:	1.21 or 5.2% (27 d.f.)
2nd cut:	1.77 or 8.8% (27 d.f.)
Total of 1st and 2nd cuts:	1.74 or 4.0% (27 d.f.)
3rd cut:	1.53 or 7.6% (18 d.f.)
4th cut:	1.77 or 6.6% (18 d.f.)
Total of 3rd and 4th cuts:	3.01 or 6.4% (18 d.f.)

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66/C/25.2

SUMMARY OF RESULTS

DRY MATTER

	K0	K1	K2	K3	K4	Mean
1ST CUT						
			(±0.61)			(±0.27)
C	14.3	16.2	18.0	18.5	20.1	17.4
M	28.1	28.8	30.0	29.7	30.8	29.5
Mean (±0.43)	21.2	22.5	24.0	24.1	25.4	23.5
2ND CUT						
			(±0.88)			(±0.40)
C	19.1	21.4	20.4	20.2	21.5	20.5
M	20.1	20.4	19.5	18.1	19.1	19.5
Mean (±0.62)	19.6	20.9	19.9	19.1	20.3	20.0
TOTAL OF 1ST AND 2ND CUTS						
			(±0.87)			(±0.39)
C	33.4	37.6	38.4	38.6	41.6	37.9
M	48.2	49.3	49.6	47.8	49.9	48.9
Mean (±0.61)	40.8	43.5	44.0	43.2	45.7	43.4

Mean D.M. %: 1st cut: 19.2
2nd cut: 22.8
1st and 2nd cuts: 21.0

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66/C/25.3

DRY MATTER

	K0	K1	K2	K3	K4	Mean
3RD CUT						
			(±0.77)*			
N1	16.4	18.8	20.9	20.0	21.5	19.5
N2	16.9	20.7	21.1	21.9	23.3	20.8
			(±0.77)			(±0.34)
C	15.3	19.2	21.0	21.8	22.9	20.1
M	18.0	20.4	21.0	20.2	21.9	20.3
Mean (±0.54)	16.7	19.8	21.0	21.0	22.4	20.2
4TH CUT						
			(±0.89)*			
N1	22.5	25.4	27.9	27.9	28.9	26.5
N2	20.9	26.4	27.3	29.9	29.8	26.9
			(±0.89)			(±0.40)
C	19.9	24.9	27.2	28.8	29.8	26.1
M	23.5	26.8	28.0	29.1	28.9	27.3
Mean (±0.63)	21.7	25.9	27.6	28.9	29.4	26.7

Mean D.M. %: 3rd cut: 23.3
4th cut: 25.0

* For use in horizontal and interaction comparisons only

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66/C/25.4

DRY MATTER

	K0	K1	K2	K3	K4	Mean
			TOTAL OF 3RD AND 4TH CUTS			
			(±1.51)*			
N1	38.9	44.2	48.8	47.9	50.5	46.1
N2	37.8	47.2	48.4	51.8	53.1	47.7
			(±1.51)			(±0.67)
C	35.3	44.2	48.2	50.5	52.8	46.2
M	41.4	47.2	49.1	49.3	50.8	47.6
Mean (±1.07)	38.3	45.7	48.6	49.9	51.8	46.9

Mean D.M. %: 24.1

* For use in horizontal and interaction comparisons only

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