

CULTIVATIONS AND SOIL INVERTEBRATES

(70/R/CS/41)

Old and new grass, Road Piece 1970, the second year. For treatments and previous year's results see 'Results' 69/R/CS/41.

Design: 4 blocks of 8 plots, randomisation restricted.

Area of each plot: 0.0116. Area harvested: 0.0018.

Revised treatments:

One of the duplicate pairs of unploughed plots in each block was ploughed in autumn 1969. Both plots received M treatment (most cultivations necessary to produce the seedbed for newly sown ley in spring). On one plot (AM) treatments will not be repeated, on the other (AMR) treatments will be repeated annually. Treatment of other plots ploughed in spring (SF and SM) was unchanged.

Cultivations, etc.: Basal PK applied: 23 Oct, 1969. AM and AMR plots ploughed: 9 Dec. SMR and SFR plots ploughed: 16 Mar, 1970. Basal NK applied: 17 Mar. AM, AMR and SMR plots disced four times, SFR plots twice. Harrowed and rolled, seed drilled at 20 lb and covered in with weeder: 30 Apr. SFR, SMR, AM and AMR plots topped: 4 Aug. SFR, SMR, AM and AMR plots cut once: 1 Oct, other plots 3 times: 2 June, 3 Aug, 1 Oct. NK applied to all plots except SFR, SMR, AM and AMR: 9 June, 6 Aug. SFR, SMR, AM and AMR plots: 6 Aug only. Seeds mixture for 1970: 6 lb Meadow Fescue S215, 4 lb Marbury Fescue, 4 lb Oakmere Timothy, 1.5 lb Kersey uncertified white clover, 0.5-lb wild white clover English Old Pasture.

NOTE: Soil cores were taken for total fauna on 5 Jan, 18 Mar, 22 Apr, 2 July, 10 Aug, 26 Oct. Quadrats (2 feet square) were sampled on each plot for earthworms on 30 Apr and 18 Dec.

Standard errors per plot. Dry matter, cwt:

1st cut:	5.01 or 13.0% (9 d.f.)
2nd cut:	1.47 or 31.0% (9 d.f.)
3rd cut:	3.23 or 24.7% (9 d.f.)
Total of 3 cuts:	7.68 or 13.7% (9 d.f.)

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SUMMARY OF RESULTS

DRY MATTER: CWT

	O*	SF	SM	Mean	SFR	SMR	AM	AMR	Mean
	(±1.77)	(±2.50)							
1st cut	42.2	34.1	35.0	38.4					
	(±0.52)	(±0.73)							
2nd cut	5.1	4.3	4.5	4.7					
	(±1.41)	(±2.00)					(±2.00)		
3rd cut	13.8	9.8	15.1	13.1	17.7	19.9	22.4	24.0	17.1**
Total of	(±2.72)	(±3.84)							
3 cuts	61.0	48.2	54.6	56.2					

Mean D.M. %: 1st cut: 22.8
 2nd cut: 31.1
 3rd cut: 25.3
 Total of 3 cuts: 26.4

* Duplicated level

** General mean

NOTE: AM = AMR in 1970