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Rumen disappearance of organic matter, crude protein, crude fibre, ADF and NDF from grasses, white clover and grass-white clover mixture

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Disappearance of cell walls, organic matter and protein were studied using the Nylon Bag technique for grass, white clover, and grass-white clover mixture.

Three fistulated Jersey cows, weighing 450 kg ± 20 kg, were used for the experiment.

Bags (100 mm x 210 mm), round base, pore size 46 mm and containing 5 g the sample, were incubated in the rumen for 3, 6, 12, 24 and 48 hours.

Samples were taken on 20.05.1993 from the first-cut pasture.

ML - *Trifolium repens*-grass mixture (60:40)
MG - *Grass mixture*
WK - *Poa pratensis*
FR - *Festuca pratensis*
WL - *Trifolium repens*

For each of these items and each point of kinetics, nine replicate bags were used.

The highest OM degradation was obtained for *Trifolium repens*, for all stages of incubation.

Protein degradation was high for all forages. For 24 h incubation, it was highest (85 %) for white clover, and lowest (73 %) for grass-clover mixture.

It should be noted that the proportion of protein lost exceeded OM loss, and most noticeably in the shorter incubations (3, 6 h).

Significant differences were also observed in crude fiber, ADF and NDF degradation among forages. For 24 h incubation, the lowest values of crude fiber, ADF and NDF degradations were obtained for *Poa pratensis* (50, 41, 51 %) and the highest for *Trifolium repens* (66, 57, 71 %). ADF losses at 12 and 24 h incubation differed considerably more than NDF losses.

It can be concluded that because of the relatively insignificant differences between protein and non N components degradations obtained for white clover and white-clover mixture, these forages correspond to a better N utilisation.

Items	Rumen disappearance after 24 h incubation (%)				
	OM	CP	CF	ADF	NDF
ML	66.21	73.12	57.09	45.82	51.12
MG	68.45	78.89	56.32	43.23	54.78
WK	64.65	81.23	50.23	41.43	51.13
FR	67.32	76.23	60.55	45.66	56.89
WL	80.41	85.13	66.71	57.89	71.76