

observed by Emanuele and Staples (1990). This partly agreed with the observation of Ibrahim et al. (1990) and Ledoux and Martz (1991) except in Mg and P although the former is less soluble than the latter. Thus, the proportion of minerals solubilized by water is associated to the soluble fraction of the forages and they are immediately available for the host animal and their ruminal microbes.

Disappearance of dry matter and macro mineral at 24 hr incubation

The effects species and season on DM and macro mineral disappearance of forages at 24 hr incubation are presented in Table 2. The analysis of variance (ANOVA) showed that DM and Ca disappearance of the forages were significantly ($p < 0.05$) affected by season and species. As expected, at 24 hr incubation period, the disappearance of DM and macro mineral was higher than at 0 hr incubation.

Table 2. Disappearance of dry matter and macro mineral at 24 hr incubation (%) of forages

Forage species	Season	DM	Ca	P	Mg	S
<i>Grass :</i>						
<i>A. compressus</i>	Rainy	20.4	19.2	50.5	12.2	34.2
	Dry	18.5	18.2	45.2	10.5	30.1
<i>P. urpuphoides</i>	Rainy	24.9	15.7	75.2	29.2	50.3
	Dry	22.2	18.0	59.6	30.2	50.1
<i>P. maximum</i>	Rainy	30.2	39.4	60.2	70.7	47.2
	Dry	29.2	40.2	50.2	60.2	40.2
<i>Legume :</i>						
<i>C. pubescens</i>	Rainy	41.5	22.2	30.3	32.3	59.2
	Dry	33.3	22.2	25.3	21.2	55.2
<i>C. mucunoides</i>	Rainy	44.2	30.4	77.4	60.3	59.2
	Dry	38.3	25.6	50.6	51.2	30.3
<i>L. leucocephala</i>	Rainy	33.3	60.3	60.5	70.2	37.2
	Dry	44.4	43.4	49.7	60.1	35.2
<i>A. mangium</i>	Rainy	34.7	40.5	49.2	50.2	27.5
	Dry	38.2	27.2	52.2	50.2	30.1
Mean :	Grass	24.2 ^a	25.1 ^a	56.8 ^a	35.5 ^a	42.0 ^a
	Legume	37.2 ^b	34.0 ^b	64.4 ^b	50.1 ^b	43.3 ^a
Sig. of effect :	Species	**	***	***	***	***
	Season	**	***	***	*	ns
	Spe. X Sea	**	**	**	*	**
Legume	Species	***	***	***	***	***
	Season	*	ns	**	ns	***
	Spe. X Sea	*	**	**	ns	***

a,b : values in the same row with different superscripts are significantly differ ($p < 0.05$)
 *** : $P < 0.001$; ** : $P < 0.01$; * : $P < 0.05$ and Ns : Non significant