Table 1. Effects of different supplementations during the rainy season on nitrogen (N) metabolism of beef cattle steers on tropical pasture (g/day, unless otherwise stated)

	Diets <sup>1</sup>			SEM <sup>2</sup>	P-value
Item	MS	AMSP	EPSP	- SLIVI	r-vaiue
N intake	133.353	139.211	125.792	8.991	0.766
Urinary-N excretion	41.161 <sup>a</sup>	29.772 <sup>b</sup>	26.993 <sup>b</sup>	2.848	0.036
Fecal-N excretion	55.655	59.609	51.432	3.740	0.673
Urinary-N excretion, % of N intake	30.660a	21.115 <sup>ab</sup>	25.309 <sup>b</sup>	1.805	0.021
Fecal-N excretion, % of N intake	42.553	43.716	42.097	1.310	0.804
Retained-N	36.537	52.608	44.587	5.067	0.151
Retained-N, % of N intake	26.785 <sup>b</sup>	35.168a	32.593a	2.085	0.006

 $<sup>^{</sup>a-b}$ Values followed with superscript letters indicate statistical differences (P < 0.05) based on Tukey test

 $<sup>^{1}</sup>$ MS = ad libitum mineral supplementation; AMSP = added mineral supplementation of 0.1% of BW per day plus phytogenic blend, and EPSP = energetic-protein supplementation of 0.3% of BW per day plus phytogenic blend

<sup>&</sup>lt;sup>2</sup>SEM = standard error of the mean