



Herbage accumulation and animal performance in piata and paiguas palisadegrass on integrated crop/pasture system

Denise B. MONTAGNER^{1*}, Rafael A.S. ANDRADE², Valéria P.B. EUCLIDES², Alexandre R. ARAÚJO², Nayana, N. NANTES³, Carolina A. QUEIROZ³, Itânia M.M. ARAÚJO³

¹ Embrapa Gado de Corte, Av. Rádio Maia, 830, Campo Grande, 79106-550, MS, Brazil. ² Programa de Pós-Graduação em Zootecnia, Universidade Federal da Grande Dourados, 79804-970, Dourados, MS, Brazil. ³ Programa de Pós-Graduação em Ciência Animal, Universidade Federal do Mato Grosso do Sul, 79090-900, Campo Grande, MS, Brazil.

E-mail address of presenting author*: denise.montagner@embrapa.br

Introduction The animal production is an important goal in integrated crop/pasture systems. It is important to know the limitations of this system and to generate recommendation about grazing management on integrated systems. The grazing height is an important framework to reach maximum animal and grains production in the system has being used in many sustainable grazing systems. The aim of this work is to evaluate herbage and animal production in piata and paiguas palisadegrass at two swards height on integrated crop/pasture system.

Material and Methods

The experiment was realized in an area of Embrapa Beef Cattle (20°27' S, 54°37'W, 530 m asl) from September 2014 to April, 2015. *Brachiaria brizantha* cvs. BRS Piata and Paiaguas were established after soybean culture and managed at two grazing heights, 25 and 40 cm. The experimental design was randomized blocks with factorial arrangement. Were evaluated the herbage mass and animal performance in grass forages submitted at integrated systems. The data were analyzed using the Mixed procedure (PROC MIXED; SAS Institute).

Results and Conclusions

Tab. 1. Averages for herbage offer, stocking rate and gain per area of piata and paiguas pastures managed at two grazing heights.

Variables	Sward height (cm)		p
	25	40	
Herbage offer (kg DM/100 kg LW)	8.0 B	11.0 A	0.0076
Stocking rate (AU ha ⁻¹)	4.7 A	3,6 B	0.0022
Gain per area (kg ha ⁻¹)	1,004 A	882 B	0.0102

Means followed by different letter in the same line are different by Tukey test (p<.005)

Herbage offer was affected by sward height and when grasses were maintained at 25 cm height it was possible to maintain more 1.1 AU/ha and to produce 122 kg/ha of live weight (Tab. 1) compared with 40 cm sward height, during a period of 194 days of pasture utilization. The herbage accumulation rate was similar between grasses, 67 kg ha⁻¹ day⁻¹, on average. The daily gain was 657 g animal⁻¹ day⁻¹ on average for piata and paiguas palisadegrass. The preliminary results show that is possible to enhance animal production at least 10% on integrated livestock systems, in comparison with traditional systems (Euclides, et al., 2008; Nantes et al., 2013). These results can be a consequence of soil quality improvement promoted by soybean crop. It is expected that the sward height will promote effects in grains production in the second crop that will be yet evaluated.

References cited

Euclides et al. (2009). *Pesq. Agrop. Bras.* 44: 98-106.
Nantes et al. (2013). *Pesq. Agrop. Bras.* 48: 114-121.

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