Grazing systems production with forestry on Brazilian beef cattle productivity

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Introduction and Objective

Sustainable Systems   **Sustainable MEAT**

↓ **Forests pressure**

Diversifying financial income of the farmers

✓ **OBJECTIVE: to assess beef cattle productivity of different grazing systems scenario**

Materials and Methods

(7) (8) **EXT:** Extensive continuous grazing system

(9) (0) **INT:** Intensive: Dryland rotational grazing system

(5) (6) **CL:** Rotational grazing system with crop rotation in each paddock

(3) (4) **SP:** Rotational grazing with eucalyptus trees (15 x 2 m spacing).

(1) (2) **CLF:** The same as CL with eucalyptus trees (15 x 2 m spacing).

✓ **ONE year trial (december 2014 to december 2015);**

✓ **30 Canchim steers (284.8 ± 6.0 kg of live weight - LW; 15 months old);**

✓ **FIVE grazing systems with two area replications (blocks);**

Results

Table 1. Beef cattle productivity in different grazing system (least square means ± standard error of the mean)

Item*	Systems †					SEM	P
	EXT	INT	CL	CLF	SP		
Stocking rate (AU ha^{-1})	1.2b	**2.3a**	1.5b	1.9ab	2.4a	0.52	0.001
Live BW (kg ha^{-1} year^{-1})	245b	**516a**	439ab	394ab	447ab	43.15	0.045
Carcass (kg ha^{-1} year^{-1})	130b	**281a**	237ab	203ab	231ab	22.74	0.038
CEP (kg ha^{-1} year^{-1})	93b	**199a**	170ab	142ab	159ab	16.85	0.045

a,b Means within a row with unlike letters differ at $P \leq 0.05$; SEM: standard error of the mean.
*BW: body weight; CEP: carcass edible portion.
†**EXT** = extensive ; **INT** = intensive; **CL**= integated crop-livestock system; **CLF** = integrated crop-livestock-forestry system ; **SP**=Integrated silvopastoral system

✓ **FORESTRY inclusion in integrated systems as SP and CLF provided intermediate productivity in kg ha-1 year-1 as conventional system (INT and EXT)**

✓ It's possible to reach high levels of productivity as well as environmental, social and economic sustainability with **Agroecosystems**

Acknowledgements