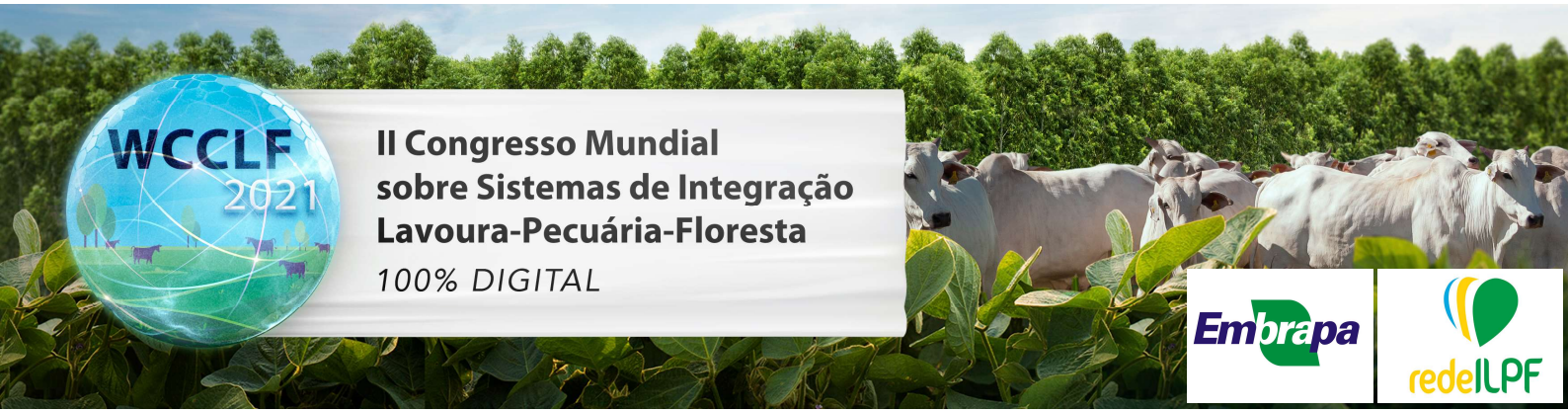

HIGHLIGHTING THE PASTURE COMPONENT OF A LONG-TERM CROP-LIVESTOCK SYSTEM IN THE CERRADO BIOME, BRAZIL

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INTRODUCTION

Integrated systems are one way to enhance the resilience of crop and livestock production (Szymczak et al., 2020).

This system allows the land sustainable use and its intensification by introducing no-till technology in synergy with crops and livestock activities with a minimal interface between them.

Data of pasture management and productivity in integrated crop-livestock systems represent an important component in the sustainability of the system.

This study was evaluated the animal body weight gain and biomass production of forage grass *Megathyrsus maximus* grazed in an integrated crop-livestock system using intermittent grazing with high stocking rate of calves per hectare, during the last six years.

MATERIAL AND METHODS

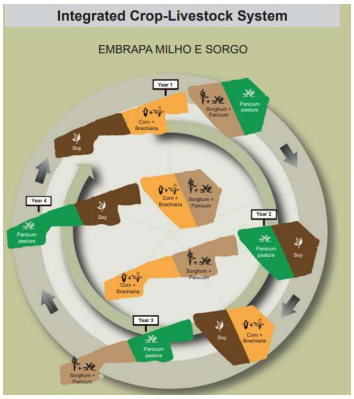
Experimental area: integrated crop-livestock system (CLS) installed in the Embrapa Maize and Sorghum;

Characterization of the region: Cerrado region; climate Aw - Type A: megathermic (tropical humid); 1350 mm distributed between the months of October and March; Oxisol, dystrophic Red Latosol, clayey and smooth wavy relief.;

Management strategies: 22 ha divided in four areas. Dry season all 22 ha was used as pasture; rainy season 5.5 ha was used as pasture subdivided in five paddocks under rotated management;

Animals: two blood groups (Nellore and Nellore:Angus) weighing on average 173 kg.

Evaluated variables: green and dry biomass yield; animal production in transition, wet and dry season from 2013 to 2019.



RESULTS AND DISCUSSIONS

Table 1. Season means and standard deviations of the green and dry biomass available (t/ha) and consumed by animals in *Megathyrsus maximus* 'Tânzania-1', in 2013/2014, and 'Mombaça' pasture, in two seasons, years from 2015 to 2019.

Characteristic	Wet season	Transition
	2013/2014	
Green biomass availability– before stocking	27.82±13.27	16.14±6.76
Dry biomass availability– before stocking	5.56±2.65	3.23±1.35
	2015/2016	
Green biomass availability– before stocking	19.45±3.68	10.80±1.8
Dry biomass availability– before stocking	4.12±0.78	2.92±0.49
	2016/2017	
Green biomass availability– before stocking	19.48±3.84	9.38±0.48
Dry biomass availability– before stocking	4.24±0.83	3.06±0.16

Characteristic	Wet season	Transition
	2017/2018	
Green biomass availability – before stocking	28.05±9.46	15.01±3.14
Dry biomass availability - before stocking	5.57±2.11	5.09±1.16
Green biomass – after stocking	14.38±6.15	12.9±2.4
Dry biomass - after stocking	3.05±1.22	4.75±0.97
	2018/2019	
Green biomass availability – before stocking	26.43±7.35	23.15±6.35
Dry biomass availability - before stocking	5.03±1.32	4.18±0.60
Green biomass – after stocking	14.70±4.98	16.45±5.70
Dry biomass - after stocking	2.80±0.48	3.10±0.28

Table 2. Live body weight gain (LBWG), and grazing days (GD) per season (dry, wet and transition), over the years of conducting the integration crop-livestock system at Embrapa Maize and Sorghum, Sete Lagoas, MG, Brazil.

	Dry	Wet	Transition	Total of Period
2013-2014 – 32 animal units				
LBWG (kg/ha)	64.65	619.18	351.81	1035.00
GD	109	167	81	357
2014-2015 – 42 animal units				
LBWG (kg/ha)	71.14	699.90	401.00	1172.04
GD	96	114	79	289
2015-2016 – 40 animal units				
LBWG (kg/ha)	157.14	549.36	628.45	1334.90
GD	65	167	63	295

	Dry	Wet	Transition	Total of Period
2016-2017 – 60 animal units				
LBWG (kg/ha)	74.09	1117.36	578.45	1769.90
GD	89	177	82	348
2017-2018 – 45 animal units				
LBWG (kg/ha)	96.86	483.86	216.11	796.83
GD	145	142	56	343
2018-2019 – 47 animal units				
LBWG (kg/ha)	192.09	1030.54	357.54	1580.17
GD	103	165	59	327

CONCLUSION

The animal gains recorded in the pasture phase over the years reflect the potential of pastures associated with the proper management, and group animal evaluated. Therefore, the integrated crop-livestock system in region provide the opportunity for intensification with sustainability.