

Cattle production on pastureland during dry season at integrated crop-livestock systems on the Cerrado of Maranhão

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Introduction The Cerrado of Maranhão has stood out in the production of grains in cropland areas. Although intensely managed during the cropping cycle, these areas remain idle or underutilized for longer periods in the dry season. An alternative for the more efficient use of these areas is the use of integrated crop-livestock systems. This system is characterized by diversification, rotation, intercropping and / or succession of agricultural and livestock activities within the farm, resulting in a single system with mutual benefits. This study aimed to evaluate the production of young cattle in an integrated crop-livestock system in Maranhão, during the dry season.

Material and Methods

The work was carried out at Santa Luzia Farm, in São Raimundo das Mangabeiras, MA. The farm is located at 6°49'48"S and 45°23'52"W, with an altitude of 475 m. The stocking rate and weight gain of 1500 Nellore under integrated crop-livestock systems were evaluated from 2007 to 2013, during the grain crop fallow, in the dry season. Grazing areas were derived from the simultaneous cultivation (intercrop) of corn and *Brachiaria ruziziensis* (CRUCIOL, 2011). After the harvest of the maize, animals were introduced and remained in the area for 120 days receiving an extra multiple mixture composed of 40 % corn, 25% soybean protein, 3% livestock urea, 14% of sulfur bloom and 0,7% micronutrients.

Results and Conclusions

Tab. 1: Cattle yield in integrated crop-livestock systems at Santa Luzia Farm, MA . 2007-2013.

year	Stocking Rates (AU/ha)	weight gain (@/animal/period)	weight gain (@/ha/period)
2007	2,24	3,8	8,5
2008	2,26	4,16	9,32
2009	2,43	3,0	7,32
2010	2,2	4,6	10,1
2011	2,2	4,18	9,2
2012	3,2	4,0	12,8
2013	2,3	4,84	11.13
Average	2,4	4,08	9,80

The initial average weight of animals was 12.7 @ with an average stocking rate of 2.4 AU / ha. The average weight after 120 days was 17.54 @, resulting in an average weight gain of 9.8 @ / ha during the dry season. The average cost of production was 3.1 @ / ha providing a net income of 6.7 @ / ha. The results indicate the feasibility of producing cattle in the off-season (dry season) in integrated crop-livestock systems in Maranhão State.

References cited

Cruciol et al. (2011). Revista Brasileira de Pesquisa Agropecuária, v46, n 10, p 1234-1240, 2011.