



Productivity of corn in Oxisol yellow in the integrated Crop-Livestock-Forest system in northeastern Pará

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Introduction

There is a large need to turn into productive areas natural resources degraded in northeastern Pará, with sustainable economic potential, by adjusting the improvement on the quality of life to ecosystem carrying capacity. The system integration Crop-Livestock-Forest (ICLF) allows the recovery of these areas in a sustainable manner and with a production per area (Balbino et al., 2011). This study aimed to evaluate the productivity of corn (BRS 1030) in Crop-Livestock-Forest integration system in northeastern Pará.

Material and Methods

The experiment was carried out on the farm Victoria (02 ° 57'29,47 "S, 47 ° 23'10,37" W, 89 meters of altitude), located in the municipality of Paragominas-PA. The treatments consisted of two systems used a hybrid BRS 1030: in iLPF system, with spacing 0,6 m, in consortium with *Brachiaria ruziziensis* and intercalary with *Khaya ivorensis* in area of 4.05 ha. where was held the planting of trees in rows, each with 2 lines, in the spacing 5x5 m, being distance between rows 20 m, which totaled 28% of the area occupied by the track of rows and density of 200 trees.ha⁻¹ and conventional system (3 ha). Corn evaluation was performed by sampling in two rows of 5 linear meters per track (area portion useful 7 m²), which were determined: the productivity of grains in kg.ha⁻¹; moisture content of the grain (%); plant stand (numbers of plant.ha⁻¹).

Results and Conclusions

Tab.1. Productivity of the corn BRS 1030 in integrated Crop-Livestock-Forest system and conventional system, farm Vitória, Paragominas-PA.

Treatment	Moisture harvest (%)	Productivity		Stand (plant.ha ⁻¹)	Straw production (kg.ha ⁻¹)
		(kg.ha ⁻¹)	(saca.ha ⁻¹)		
iLPF	23,97	5.764,41	96,07	58.333	4.849,89
Conventional	20,54	5.848,37	97,47	66.428	4.946,10

The ICLF system with the smallest population of the experimente (58.333 plant.ha⁻¹) obtained, in proportion, higher productivity grain (5.764,41 kg.ha⁻¹ e 96,07 saca.ha⁻¹), compared to the conventional system. It can be seen that the system iLPF with population about 14% smaller than the conventional system, has provided highest production per individual, in other words, around 0,1 kg.plant⁻¹, being this production about 13% higher to obtained in the conventional system. The corn in consortium with *Brachiaria ruziziensis* not suffered reduced in the productivity and obtained gain in grain production per individual when compared to the conventional system.

References cited

Balbino et al. (2011) Pesq. Agropec. Bras. 46; p. i-xii

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