



Economic results of the integrated crop-livestock systems implementation in degraded pastures in Pium, TO, Brazil

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Introduction

In Pium, Tocantins state, Brazil, in 2012 Embrapa developed a technology transference project in partnership with the state's rural extension service for the consolidation of low carbon emissions agriculture. The goal was to recover the degraded grasslands of the Trigueira farm (49°1'37.44"W and 10°24'58.84"S) with low cost using a crop-livestock system (ICL).

Material and Methods

After the socioeconomic and environmental assessment on this reference farm, before the crop seasons 2013/2014, extension workers, farmers and the Embrapa team choosed a system named "Barreirão" (Oliveira et al., 1996). This technology was developed to recover/renew degraded pasture in Cerrados's areas. Seeds of the perennial grasses are sowed simultaneously with annual crop, or after its harvest. The chosen crop to precede the new pasture of the grass *Brachiaria brizantha*, variety BRS Piatã, was the upland rice, variety BRS Sertaneja. According to analysis of soil, the fertility correction was recommended based on Sousa, Djalma M. G. & Lobato, Edson (2004). The rice sowing was in 2012 and of the grass in 2013. The fertilizer used for planting was 5-25-15 and for nitrogen topdressing was urea. All mechanized services were done with own machinery of the farm, except the rice harvest and its drying. Also, every data were registered to figure out the costs of the implemented activities.

Results and Conclusions

Table 1. Calculation of gross margin per hectare on the Farm Trigueira using integrated crop-livestock system in the harvests 2012/2013 and 2013/2014.

Operation / Service	Cost (R\$/ha)	Percentage %
Liming (1)	212,375	8,81
Soil preparation (2)	186,52	7,73
Soil Fertility correction (3)	347,01	14,39
Planting (4)	993,22	41,18
Cultivation (5)	284,85	11,81
Harvest (6)	85,00	3,52
Postharvest (7)	214,67	8,90
Rural extensionist's service (8)	25,50	1,06
EFFECTIVE OPERATING COST (1+2+3+4+5+6+7+8)	R\$2.411,63	100,00
GROSS INCOME - Rice sale	R\$2.683,33	
GROSS MARGIN	R\$271,70	

The adoption of crop- livestock integration system at the Trigueira farm positively influenced the gross margin of the farmer, paying the grassland reform.

References cited

Oliveira et al., (1996) Sistema Barreirão: Recuperação/renovação de pastagens degradadas em consórcio com culturas anuais. Embrapa-CNPAP. Documentos, 64.

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