



Implementing a Technological Reference Unit (TRU) of integrated Crop-Livestock-Forrest system (iCLF) as a model for socioeconomic and environmental adjustment of rural establishments.

Narliane de M. MARTINS¹, Thomás L. FERREIRA*¹, ALMEIDA, Roberta A. ¹, Anderson S. TEODORO ², Marcelo D. MULLER³, Willian F. BERNARDO ³, Carlos E. MARTINS³.
1- IBIO, Rua Café Filho, 76, 35160-250, Ipatinga, MG, Brazil. 2- Instituto Estadual de Florestas, Av. Olegário Maciel, 448, 35300-000, Caratinga, MG, Brasil. 3- Embrapa Gado de Leite, 36038-330, Juiz de Fora, MG, Brazil.

Introduction

The integrated management of rural establishments is an imperative tool in the reconciliation of economic effectiveness and efficiency with social and environmental parameters. In this presentation, we investigate the impacts of implementing integrated Crop-Livestock-Forest systems (iCLF) on the protagonist role of farmers as managers of rural areas.

Material and Methods

BioAtlântica Institute (IBIO), in partnership with *Embrapa Gado de Leite* and the State Forest Institute (IEF-MG), coordinates the implementation of a technological reference unit (TRU) of an iCLF system in a family production unit (FPU). The receiving FPU has 22.13 ha, with dairy farming as the main source of income. It is located in the Ribeirão do Boi watershed, within the Rio Doce basin, and the municipality of Caratinga - MG. The UPF's performance was evaluated through Agro-ecosystem Sustainability Indicators (ASI) (Ferreira et al, 2012).

Results and Conclusions

The calculated ASI for the selected FPU was 0.51 in October 2014, below the suggested sustainability threshold of 0.7. This result suggested that the FPU displayed inadequate conditions for sustainability, which led to the adoption of better productive and environmental practices by the owners, with the support of partner institutions. The model sought an increase in forest cover integrated with a change in the management and design of the unit's agro-ecosystems. In November and December 2014, 3.5 ha were allocated for the implementation of iCLF, 0.71 ha of riparian forest were fenced and planted with native species and a fragment of 7.9 ha of native forest was fenced to reduce grazing impact and induce natural regeneration. These practices intend to improve the property's economic, social and environmental performance, bringing the sustainability index up to 0.53 in the first year. The *Ribeirão do Boi* watershed has 35 thousand hectares of which 35.8% are covered by Atlantic Forest fragments and 35.3% by pastures in similar conditions to those found in this reference FPU, thus below an ideal sustainability parameter. This suggests a great potential for replication of iCLF systems in the basin.

References

FERREIRA, J. M. L.; VIANA, J. H. M.; MONTEIRO DA COSTA, A.; VIEIRA DE SOUZA, D.; FONTES, A. A. Adequação socioeconômica e ambiental de propriedades rurais. Informe Agropecuário, Belo Horizonte, v. 33, n.271, p. 12-25, nov./dez. 2012.

Acknowledgments

To our supporting teams at Embrapa Gado de Leite, IBIO and IEF; to Mr. Sebastião Rocha, Mrs. Neusa de Fátima and his sons and to all partners of Ribeirão do Boi's Sustainable Land Use Project.

How does integrating cropping-livestock-forest systems influence sustainability issues?




 **Thomás Lopes Ferreira**

“ Implementation of TRU of iCLF as means of socioeconomic and environmental suitability of rural establishments

 AP4Z

 http://www.eventweb.com.br/specific-files/manuscripts/wc-clf2015/36599_1432575442.pdf

GO TO

-  KEYNOTE SPEAKERS
-  ORAL PRESENTATIONS
-  POSTERS

NEXT
ABSTRACT



47

