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“Solidarity in a competing world —
fair use of resources”

Evaluation of the Cost of Forest Restoration of Degraded Areas and Legal Reserves in Sinop-Brasil

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Abstract

Throughout the 2000s, the Brazilian federal government implemented several policies in order to inhibit forest deforestation. The main policies are: strengthening monitoring and law enforcement; expanding protected territory; and adopting a conditional rural credit policy. Since 2008, Brazilian landowners are required by law to maintain the Legal Reserve, a mandatory practice instrument which defines a certain share of land (from 20 % to 80 %, depending on the region) that should be left in forest or its native vegetation for biodiversity conservation. Therefore, this study aims to evaluate the costs of implementing several strategies of restoration of degraded areas and legal reserves in the state of Mato Grosso - Brazil. We used Embrapa - Brazilian Agricultural Research Corporation - research field, located in Sinop, Mato Grosso, to collect all the relevant data regarding to all agricultural practices related to first two years. This study presents an economic analysis of ten different forest restoration schemes conducted by Embrapa Agrossilvopastoral. The result shows that the implementation cost varies according to the applied strategy and that they are higher on those strategies that are more labour demanding. On the other hand, those strategies presented a better performance on the forest indicators (better growth and lower mortality rate). If the landowner intended purpose is only to comply with the law, he should choose the cheapest strategy. However, strategies with higher costs are also the ones with greater availability to provide a secondary source of income, such as timber and non-timber forestry products. From 17 different forest species planted in this experiment, we found 44 products which could be economically explored and sold to the market. In this sense, we argue that those non-timber forest products have the potential to generate a new source of secondary income for Mato Grosso landowners and that Brazilian government should support to the establishment of those markets.

Keywords: Brazilian Amazon, deforestation, policies