



Deutscher Tropentag, October 8-10, 2003, Göttingen

“Technological and Institutional Innovations
for Sustainable Rural Development”

Adoption Potential for Fire-Free Agricultural Practices by Smallholders in the Eastern Amazon of Brazil

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Abstract

In the Eastern Amazon Region of Brazil the shortening of natural fallow periods constitutes major challenge in preserving secondary forests that are considered an important resource for human livelihoods. In response to this challenge, fire-free agricultural practices (the combination of mulch technologies and fallow improvement techniques) have been developed as promising agricultural production technologies that may contribute to the conservation of soil quality and secondary vegetation. Awareness of the adoption potential of such technologies would help to design appropriate extension approaches and policy interventions to support smallholders. In this paper, a case study of 270 farmers in the Bragantina Region was carried out to investigate which factors affect the willingness of smallholders to adopt mulch technologies using a tractor driven bush-chopper. The analysis confirmed that income, farm size, knowledge of fire-free agricultural practices, soil quality, and fertilizer use are factors associated with the potential acceptance of the technologies.

Keywords: Adoption potential, contingent valuation, fire-free agricultural practices, Brazil