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Smallholder Tree Plantations in Paraguay: Comparative Assessment of Influencing Factors and Contribution to Income Generation

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Abstract

Together with the global climate change debate, renewable energy is becoming a widely discussed topic. Wood based energy is the most traditional source of energy, but usually is underestimated in its contribution to the welfare of rural families. Forest resources constitute an important element in the rural economy in Paraguay, not only for subsistence but for income generation. High deforestation rates in the eastern part of the country between 1970's and 90's and hardly any reforestation in that time, significantly reduced the supply of wood. However, since a couple of decades, plantations are being established in small areas but with rising frequency. The study aim is to provide a better understanding of the socioeconomic factors influencing tree planting for energetic purposes and their contribution to income generation to small farms in eastern Paraguay. It is known that personal and socio-economic characteristics of an individual influence the respective decision making behaviour. Landowners who decide to plant trees engage themselves in an unusual form of land use practice. Participatory tools and expert interviews were conducted of smallholder tree growing initiatives. Results show that apart from land availability and income level as the main factors; the progressive attitude of farmers, social organisation level, and the perceived risk towards wood availability are also significant for successful tree growing. On the other hand, farmers with fewer resources consider that the government should promote state incentives for reforestation. Compared to agriculture or cattle breeding, tree planting requires significantly less labour for the farmer, but it also provides little financial return in the first years after planting. Other land use practices usually appear to be more attractive and profitable than forest plantations. Due to these facts, landowners only establish plantations under a certain set of circumstances or conditions like being beneficiaries for a long term extension service or a secured market for their products.

Keywords: Energy, income generation, Paraguay, tree planting initiatives