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Environmentally Friendly Rubber Plantation in Southern China: Farmers' Awareness and Acceptance

Shaoze Jin, Shi Min, Hermann Waibel

Leibniz Universität Hannover, Institute of Development and Agricultural Economics, Germany

Abstract

With the rapid expansion of rubber farming in the last three decades, Xishuangbanna (XSBN), one of the global hotspots of biodiversity protection in southern China, has emerged serious environmental problems, such as decline of water resource, soil erosion, and loss of biodiversity. A programme named "Environmentally Friendly Rubber Plantation (EFRP)" has been proposed by local researchers and government to mitigate the negative environmental effects of rubber cultivation and improve its sustainability. However, it is still unclear what farmers' attitudes toward the participation in this programme are, due to lacking quantitative information. Hence, the objective of this study is to explore smallholder rubber farmers' interests in and knowledge of EFPR and examine the relationship between their awareness and acceptance to adopt the EFRP. Using the baseline survey data collected in early 2013, we found that although approximate 10 % of farmers were not aware of the negative environmental effects of rubber cultivation, awareness of the negative environmental effects of rubber cultivation was an important driver of farmers' willingness to participate in ecosystem protection measures. Using the follow-up survey data collected in early 2015, we investigated farmers' awareness of EFRP in terms of the suitable growth conditions of rubber, including altitude and slope, cropping systems, and planting place. We examined farmers' willingness to accept these elements and its determinants. Our results show that while smallholders generally lack the knowledge of EFRP, they are aware of more elements of EFRP and are more willing to adopt the practice of EFRP. Moreover, their participation willingness is also determined by the socioeconomic characteristics of household, income sources, and the nature of rubber plantations. Our findings provide important quantitative information for local agricultural extension service and other agencies, and hereby have important policy implications for promoting sustainable development of rubber farming and contribute to environmental conservation in XSBN.

Keywords: Acceptance, awareness, environmentally friendly, rubber plantation

Contact Address: Shaoze Jin, Leibniz Universität Hannover, Institute of Development and Agricultural Economics, Koenigsworther Platz 1, 30167 Hannover, Germany, e-mail: jin@ifgb.uni-hannover.de