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Agroforestry Systems Acceptability in Pucallpa, Peruvian Amazon

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Abstract

In recent decades, accelerated rates of deforestation have caused growing environmental degradation throughout the developing countries of the tropics. The investigation was situated in Peruvian Amazon, Ucayali region, where similar problem exists; soil is deeply degraded by consequent impact of local agricultural practices. Shifting cultivation is no longer sustainable in this area and agroforestry is particularly appropriate for rehabilitating degraded land because of the multipurpose function of trees. Research was aimed at verification of proposed hypotheses related to agroforestry acceptability. The main objective was to identify factors influencing adoption of multistrata production systems by small-scale farmers and design a suitable agroforestry system in this region. Land-use systems were examined in three settlements- Antonio Raimondi, Pimental and Nueva Belén. Data were gathered through semi-structured questionnaires and interviews with local settlers. The influence of cultivation patterns of the smallholders, their crop preferences and factors such as income, labour, age of the peasants, size of household and possession of livestock was assessed in 54 households. Correlation between multistrata production system acceptability and different farming conditions was proved. Rates of reforestation and cultivation of timber trees on fields in association with other crops (goal-directed or unintentionally) are significant. Substantial number of respondents favouring agroforestry is market-oriented, with less labour available, earning less than Nuevo Sol 5000 (1 USD = Nuevo Sol 3.3) annually, not possessing livestock and having free land for disposal. Mainly young families establishing new fields and older settlers (requiring additional labour) welcome conversion to different land-use systems. There were differences among communities in multistrata system adoptability. Whereas in economically poorer village majority of households is practicing agroforestry nowadays (probable reason was soil of low agricultural quality and reduced productive capacity), in village with higher earnings, where cultivation is dedicated mostly to one market-appreciated monocropping (pepper), less importance is given to agricultural transition. As well in community where exploitation of forest products is important activity and farming is reduced, people find agroforestry methods less attractive. Crop preferences and calendar of filed work are discussed and suitable agroforestry system was designed.

Keywords: adoption of agroforestry, incentives, multistrata production systems, small-scale farmers' preferences, socio-economic characteristics