

Deriving an Index of Adoption Rate and Assessing Factors Affecting Adoption of an Agroforestry-Based Farming System in Dhanusha District, Nepal

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Abstract : This paper attempts to fulfil the gap in measuring adoption in agroforestry studies. It explains the derivation of an index of adoption rate in a Nepalese context and examines the factors affecting adoption of agroforestry-based land management practice (AFLMP) in the Dhanusha District of Nepal. Data about the different farm practices and the factors (bio-physical, socio-economic) influencing adoption were collected during focus group discussion and from the randomly selected households using a household survey questionnaire, respectively. A multivariate regression model was used to determine the factors. The factors (variables) found to significantly affect adoption of AFLMP were: farm size, availability of irrigation water, education of household heads, agricultural labour force, frequency of visits by extension workers, expenditure on farm inputs purchase, household's experience in agroforestry, and distance from home to government forest. The regression model explained about 75% of variation in adoption decision. The model rejected 'erosion hazard', 'flood hazard' and 'gender' as determinants of adoption, which in case of single agroforestry practice were major variables and played positive role. Out of eight variables, farm size played the most powerful role in explaining the variation in adoption, followed by availability of irrigation water and education of household heads. The results of this study suggest that policies to promote the provision of irrigation water, extension services and motivation to obtaining higher education would probably provide the incentive to adopt agroforestry elsewhere in the terai of Nepal.

Keywords : agroforestry, adoption index, determinants of adoption, step-wise linear regression, Nepal

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