

Agro-Forestry Expansion in Middle Gangetic Basin: Adopters' Motivations and Experiences in Bihar, India

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Abstract : Agro-forestry offers huge opportunities for diversification of agriculture in middle Gangetic Basin of India, particularly in the state of Bihar as the region is identified with traditional & stagnant agriculture, low productivity, high population pressure, rural poverty and lack of agro- industrial development. The region is endowed with favourable agro-climatic, soil & drainage conditions; interestingly, there has been an age old tradition of agro-forestry in the state. However, due to demographic pressures, declining land holdings and other socio- economic factors, agro forestry practices have declined in recent decades. The government of Bihar has initiated a special program for expansion of agro-forestry based on modern practices with an aim to raise income level of farmers, make available raw material for wood based industries and increase green cover in the state. The Agro-forestry Schemes - Poplar & Other Species are the key components of the program being implemented by Department of Environment & Forest, Govt. of Bihar. The paper is based on fieldwork based evaluation study on experiences of implementation of the agro-forestry schemes. Understanding adoption patterns, identification of key motives for practising agro-forestry, experiences of farmers well analysing the barriers in expansion constituted the major themes of the research study. This paper is based on primary as well as secondary data. The primary data consists of beneficiary household survey, Focus Group Discussions among beneficiary communities, dialogue and multi stakeholder meetings and field visit to the sites. The secondary data information was collected and analysed from official records, policy documents and reports. Primary data was collected from about 500 beneficiary households of Muzaffarpur & Saharsa- two populous, large and agriculture dominated districts of middle Gangetic basin of North Bihar. Survey also covers 100 households of non-beneficiaries. Probability Proportionate to Size method was used to determine the number of samples to be covered in different blocks of two districts. Qualitative tools were also implemented to have better insights about key research questions. Present paper discusses socio-economic background of farmers practising agro-forestry; the adoption patterns of agro- forestry (choice of plants, methods of plantation and others); and motivation behind adoption of agro-forestry and the comparative benefits of agro-forestry (vis-a-vis traditional agriculture). Experience of beneficiary farmers with agro-forestry based on government programs & promotional campaigns (in terms of awareness, ease of access, knowhow and others) have been covered in the paper. Different aspects of survival of plants have been closely examined. Non beneficiaries but potential adopters were also interviewed to understand barriers of adoption of agro- forestry. Paper provides policy recommendations and interventions required for effective expansion of the agro- forestry and realisation of its future prospects for agricultural diversification in the region.

Keywords : agro-forestry adoption patterns, farmers' motivations & experiences, Indian middle Gangetic plains, strategies for expansion

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