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Development of agroforestry in upland northern Vietnam: A farmers’ perspective

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Abstract

Fruit tree-based agroforestry has been promoted as an alternative farming practice in upland Northwest Vietnam, which may replace erosion-prone staple crop monocultures. Although many studies have focused on evaluating the performance of agroforestry systems at the plot level, there has been little research on how farmers perceive and evaluate agroforestry and how adoption barriers may be overcome. We combined the Q method, which aims to explore commonalities and differences in farmer perspectives (discourses), with system thinking to understand farmers’ decision-making processes within the adoption context. Through the Q method, we identified three different discourses among agroforestry farmers on the farm-level impacts of adoption. Two of the three discourses are in favour of agroforestry, highlighting its beneficial impacts on livelihoods and environment, through diversification of household income and soil erosion control. The disagreement in farmer perceptions reflected the diversity of farmers’ experiences and adoption management strategies. We also generated a collective development pathway where farmers navigated and adapted the agroforestry practices to overcome adoption challenges. To illustrate these pathways, we used system thinking to visualise farmers’ mental models, which reflected a whole-system approach to farm resource management. Farmers leveraged the beneficial impacts of agroforestry and adaptively managed challenges, drawing upon systemic understandings of trade-offs and synergies. We identified structural barriers, such as unstable farm-gate prices, that may need intervention at higher levels. In addition to technical and financial support, a proper integration of informal and formal social networks in local agroforestry innovation systems may promote effective learning and cooperation to overcome both field-level and structural challenges. System thinking and its outcomes allow for social learning and assist researchers and policymakers in designing research and support mechanisms. While our study focused on the development of agroforestry, the approaches could be adapted to study a wide range of other agricultural innovation systems.

Keywords: Agroforestry, farmer perception, Q methodology