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Introducing Sustainable Farming Practices in Rice Production to Myanmar’s Transitioning Agriculture Sector

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Abstract

Myanmar has experienced considerable economic and social changes since its political transition in 2011/2012. Its agriculture sector has demonstrated rapid intensification and modernisation. However, rice yield gaps remain an important issue with regard to food security. Reducing rice yield gaps in Myanmar could increase annual production and support efforts to establish food security. Therefore, agricultural best management practices (BMPs) were introduced to rice farmers in the Bago Region from 2012 on to increase sustainable rice production, reduce rice yield gaps, and counteract negative environmental impacts of agricultural intensification. The objective of this study was to determine rice farmers’ agronomic development, socioeconomic situation, and livelihood changes due to the adoption of BMPs. Using a digital survey questionnaire application to collect household data, 160 farmers in eight villages were interviewed in 2012 and 2017. Data were analysed using uni- and multivariate statistics. Results showed that farmers who adopted BMPs such as improved rice varieties and optimised fertiliser application demonstrated significantly higher yields, income, and profitability while reducing inputs and labour. Furthermore, after five years significant socioeconomic differences were found between BMP adopters and non-adopters. The study showed that BMP adopters improved their livelihoods due to increased agricultural efficiency. However, yield productivity remains low in Myanmar compared to neighbouring countries. Poor access to inputs, high input prices, and little risk management are factors impeding improved agricultural profitability, and hence rural development. Furthermore, natural conditions as well as economic and social constraints play an important role in the way farmers are able to manage their land. Therefore, further development research and dissemination strategies for the implementation of appropriate sustainable technologies are needed to improve rice farming.

Keywords: Adoption, best management practices, dissemination, impact, Myanmar, rice production, sustainable agriculture

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