

Title: Experience of farmers using mobile phone for farming information flow in Boro rice production: A case of Eastern Gangetic Plain

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Abstract: Mobile phones are widely used for personal communication, but their use for agricultural purposes is scarce in the Eastern Gangetic Plain. Given Bangladesh's heavy reliance on rice production, particularly dry season, the study addresses the gap in the literature by investigating farmers' perceptions and examining the factors that influence mobile phone usage and its impact on Boro rice production. The research entailed questionnaire surveys with 150 farmers from highly Boro-intensive regions. A perception index was used to gauge mobile phone acceptance, and Ordinary Least Square (OLS) and logit models were employed to analyze the factors affecting mobile phone usage and their influence on production levels. The perception index highlights various benefits, including easy access to farming and market information, prompt responses from extension officers, utilization of mobile apps for disease detection, and participation in online training and seminars. The logit model underscores the significance of educational status, credit access, household income, and extension services on the informative use of mobile phones among Boro rice farmers. The OLS findings showed that the informative use of mobile phones significantly increases Boro rice production by 1.6–4.5%, indicating that farmers with better access to farming information achieve higher production than non-users. Factors such as selling price, rainfall, credit availability, cultivable land, and farming experience significantly influenced Boro rice production. Overall, the study is rooted in the growing significance of mobile technology for disseminating crucial agricultural information. It seeks to thoroughly investigate its potential impact on Boro rice production, contributing to well-informed policy interventions and promoting sustainable agricultural development in the Eastern Gangetic Plain.

Keywords: Digital agriculture, Disruptive innovation, Farm activity, Technology, Bangladesh

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