

Mobile Extension in Enhancing the Livelihood of Farmers in India

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ABSTRACT

This research article is based on an empirical investigation into mobile advisory services co-created by the National Bank for Agriculture and Rural Development (NABARD), M.S. Swaminathan Research Foundation (MSSRF) and the agriculture farmers' community of the Union Territory of Puducherry, India. It seeks to map pattern of mobile advisory use and its impact on agricultural livelihood vis-à-vis agriculture and animal husbandry. This research article investigates the effectiveness of the agricultural extension tool of mobile phone among farmers in areas of rural in Puducherry, during the years 2010-2013. Investigation with the farmers revealed that innovative dissemination of mobile advisory has improved their agricultural productivity. The mobile audio advisories played a vital role in bridging the knowledge gap and scientific solutions between the scientific and farming communities. This research paper analyses farmers' benefits, gaps in mobile advisory services (MAS), perception of mobile messages, socio-demographic, and socio-economic data. As a result, farmers were able to acquire knowledge and skills relating to their livelihoods and make timely decisions to cope with emerging issues and trends in agriculture to an extent of diversifying their cropping pattern. The audio advisories helped farmers with timely information on agriculture. Mobile advisory has also strengthened the local agricultural extension system where farmers have updated their knowledge and skills. These messages enhanced their knowledge in crop management, latest farming technologies, and agriculture-related government schemes and entitlements, and post-harvest techniques along with care and management of livestock. These skills are very much useful for them to get adapted to changing climate scenarios and to have improved livelihood opportunities.

KEYWORDS

Agriculture Extension, Agriculture Productivity, Knowledge Gap, Mobile Advisory Extension, Mobile Advisory Services (MAS)

INTRODUCTION

Agriculture production is very much vulnerable to losses caused by unfavourable weather events and climatic conditions (Rosenberg, 1992). Many researchers have reported the adverse climate change effects on crops, pests, soil and livestock (Aggarwal, 2008; Suryavanshi, 2012; Nelson et al., 2009; Khan et al., 2009; Rosegrant et al., 2008). These changes affect the livelihoods of a large number of the rural poor farmers in the developing countries such as India, Bangladesh, Pakistan, Brazil, South

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Africa and China. The rural sector has agriculture and animal husbandry as major livelihood options, and this paper concentrates on these with focus on mobile advisory services (MAS).

Information and communication technologies (ICTs) in developing countries over the past decade offer a unique opportunity to transfer knowledge via private and public information systems (Aker, 2010; Sulaiman et al., 2003; Richardson et al., 2006; Digital Review of Asia Pacific, 2008). ICTs directly support farmers' access to timely and relevant information, as well as empower the creation and sharing of knowledge of the farming community (Aker, 2010).

Information and Communication Technology (ICT) is universally acknowledged as an important catalyst for social transformation and national progress. But disparities in the levels of ICT readiness and use could translate into disparities in level of productivities and hence could influence a country's rate of economic growth. Understanding and leveraging ICT is, therefore, critical for countries striving for continued social and economic progress.

Mobile phones reduce communication and information costs for the rural poor in developing countries. This not only provides new opportunities for farmers to obtain access to information on agricultural technologies but also to use ICTs in agricultural extension systems (Aker, 2010). The increasing penetration of mobile phones and mobile-enabled information services in rural India can reduce information asymmetry and complement the role of extension services (Mittal et al., 2010).

Adhigurua and BIRTHALB (2009) found that agricultural public extension services in India have been accessed only by 5.7 per cent households proving the need for strengthening the extension services. The public agriculture department's extension service has clearly not reached all farmers in need for information.

The public agricultural extension systems often fail due to inadequate consultation of farmers about their information needs and poor understanding of their information search strategies (Babu et al., 2012).

MOBILE EXTENSION PROJECT

Agriculture is one of the most important occupations for the people of the Union Territory of Puducherry, India. Puducherry was a French territory during the colonial India, and it became a union-administrated territory within Independent India. It lies in the southern part of India. Most of the people in Puducherry are Tamil speaking. About 45% of the total population of the Union Territory depends directly or indirectly on farming. The main crop of Puducherry is paddy. The agriculture sector contributes to less than 2% of the Gross Domestic Product (GDP). During the last five decades, Puducherry has made significant strides in the field of agriculture by increasing the productivity of agricultural land, achieving crop diversification, exploiting irrigation potential, building infrastructure, creating a marketing network, etc. Situated in the coastal area, Puducherry is frequently affected by natural calamities. The increasing cost of agricultural inputs such as seeds, fertilizers, pesticides and the non-remunerative prices for the agricultural produce are other bottlenecks the farmers face.

The National Bank of Agriculture and Rural Development (NABARD) and the M.S. Swaminathan Research Foundation (MSSRF) jointly launched a pilot project to disseminate agricultural knowledge through mobile audio advisory messages to the farmers of Puducherry in 2010. Since this service is enabled by all telecom service providers, all the farmers could receive this information. Samples for this project were selected from four blocks, namely Bahour, Mannadipet, Nettapakkam, and Villianur of Puducherry.

MSSRF AS AN INSTITUTIONAL INTERMEDIARY

Village centres are computer-based information network set up in villages to supply locally-needed information and to empower the villagers. They are called by different names: telecentres; village information centres; village resource centres and their subunits village knowledge centres; and

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