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Faculty Abstract

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The Potential for Mobile Agriculture Extension.

ABSTRACT: Public agricultural extension services in many developing countries suffer from management and accountability problems, and provide coarse messages that are not tailored to farmer circumstances. Private agricultural extension services are subject to market failures: a service may charge for advice, but that advice can easily be shared, and if a service is supported by commissions its credibility is difficult to assess. A mobile phone based approach could provide information at low marginal cost. Existing research suggests this could potentially increase smallholder farmers' productivity; facilitate adaptation to changing climate and extreme weather; reduce use of unnecessary pesticides and fertilizer, and improve the operations of contract farming organizations. Information could be tailored to local agro-climatic conditions (soil chemistry, weather forecasts, pest outbreaks), market conditions (input and output availability and prices), and individual farmer characteristics (acres under operation, labor supply, time of planting, education, previous experience). Such a system could allow for a two-way flow of information with farmers on results and experiences. Using machine learning and continuous experimentation, the platform could continuously improve its ability to deliver tailored messages on best practices. Access could potentially made free to farmers by partnering with large-scale contract farming organizations, governments, and donors. There may also be potential for financing via advertising, technology firms, and telcos.