

Category	: International Rice Research Conference
Select Theme	: Disruptive technologies and innovations
Endorsement email	:
Keyword 1	: Mobile advisory technology
Keyword 2	: Knowledge intensive agriculture
Keyword 3	: Innovation systems
Title of Entry	: Sustainable Agriculture Through ICT Enabled Platform in Bihar, India
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Affiliation 1	: Environmental Defense Fund
Affiliation 2	: Farms n Farmers
Select only one type of presentation	: 15 minute oral presentation

Abstract : For sustainable food production, farmers' require access to quality inputs, new technologies, markets, and timely extension services. A working value chain allows the farmer to focus on efficiency and maximize long term productivity. This value chain is in different levels of disarray in developing countries. Innovative methods are required to overcome the current constraints of a broken agriculture value chain to improve yields, farm economics while reducing environmental degradation. In West Champaran district of Bihar(India), Environmental Defense Fund (EDF) in collaboration with Farms n Farmers (FnF) is utilizing an ICT based platform and mobile app to provide 360o agricultural services to >7,000 farmers across 30 villages through a network of micro-entrepreneurs selected from and in consultation with the farmer community. The platform, aptly named "Dehaat" ("village" in Hindi) provides farmers with advisories on and access to soil testing, quality seeds, improved nutrient management, conservation agriculture, water saving technologies and market linkages. This "Dehaat" service delivery model has already been tested with >30,000 farmers in India and Nepal. In West Champaran district, our target is to reach 20,000 farmers across ~80 villages by the end of 2018. The data collected through "Dehaat" app is being analyzed to determine how well the "Dehaat" intervention is driving efficiency across the value-chain while reducing environmental pollution and climate impacts. In 2016, this intervention increased both paddy yields and farm gate prices by 14% while decreasing total input costs by 6% and total nitrogen use by 27%, as compared to hundreds of baseline farmers. The reduction in input costs occurred due to 35% reduction in total fertilizer use and seed cost and 16% reduction in urea use. We are currently collecting many new parameters through the DeHaat app and otherwise to use internationally approved greenhouse gas estimation methodologies and measuring soil carbon/health indicators. These current efforts will help estimate reduction in GHG emissions and improvement in soil carbon/health resulting from the DeHaat intervention. Our presentation will also discuss the efforts to scale up these interventions at sub-national levels such that they can act as an impetus for a positive change in Indian national agricultural policy.

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