Entry No. IRRC-0337

Category	: International Rice Research Conference
Select Theme	: Food systems for the future
Endorsement email	:
Keyword 1	: The future of rice farming
Keyword 2	: Markets and market integration
Keyword 3	: Value chain analysis
Title of Entry	: Eliciting farmers' preference trade-offs for varietal trait improvements in Bangladesh
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Select only one type of presentation	: 15 minute oral presentation
Abstract	: Farmers, similarly with rice breeders, are faced with cost and risk trade-offs under resource constraints. Also, little is known about farmers' preferences for varietal trait improvements (VTIs) in rice. In earlier breeding programs, the appropriate product concepts and quality targets of rice farmers were rarely considered. The International Rice Research Institute (IRRI) has developed a novel, interactive tablet-based Investment Game Application (IGA) to provide farmers the opportunity to express and prioritize their preferences for VTIs by designing optimal breeding product profiles that could help improve their livelihoods. IGA features an "investment market" that involves real money (i.e. an endowment fund) and generates real returns. In September 2016, 160 farming households (with both husband and wife) from Jessore and Rangpur Districts in Bangladesh joined the IGA experiment, set-up in a central location in each of the districts. Farmers selected their most popular rice variety and were given the option to improve 11 varietal traits (i.e. slenderness, unstickiness, aroma, head rice recovery, lodging tolerance, disease resistance, insect resistance, abiotic stress tolerance, reduction of shattering, earliness, and straw digestibility) to create an ideal replacement variety, subject to the cost and risk trade-offs rice breeders face. The budget constraint and risk trade-offs helped the farmers in prioritizing their preferred VTIs, consistent with the trade-offs in rice breeding. Factors that determine investment shares in grain quality, abiotic, agronomic, and by-product traits were analyzed through econometrics. Results suggest that exposure to market and climate change information, the cropping season, past experience with lodging problems and output price are among the factors that affect farmers' preferences for trait improvements. The data also revealed that, if farmers were put in the shoes of donors and given the opportunity to invest in public rice breeding, they would allocate more than half of their investment share in the improvement of bioti stress resistance of their replacement varieties and this preference is strongly in line with women's preferences. Overall IGA is a novel tool which enables farmers to actively participate in resource allocation decisions and guides rice breeding programs to develop targeted product profiles that are market-driven, climate-resilient, and gender-inclusive. Read more»

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