Food Security and Livelihood Improvement through e-Learning of Women Friendly Seed Technology in Northern Region of Bangladesh

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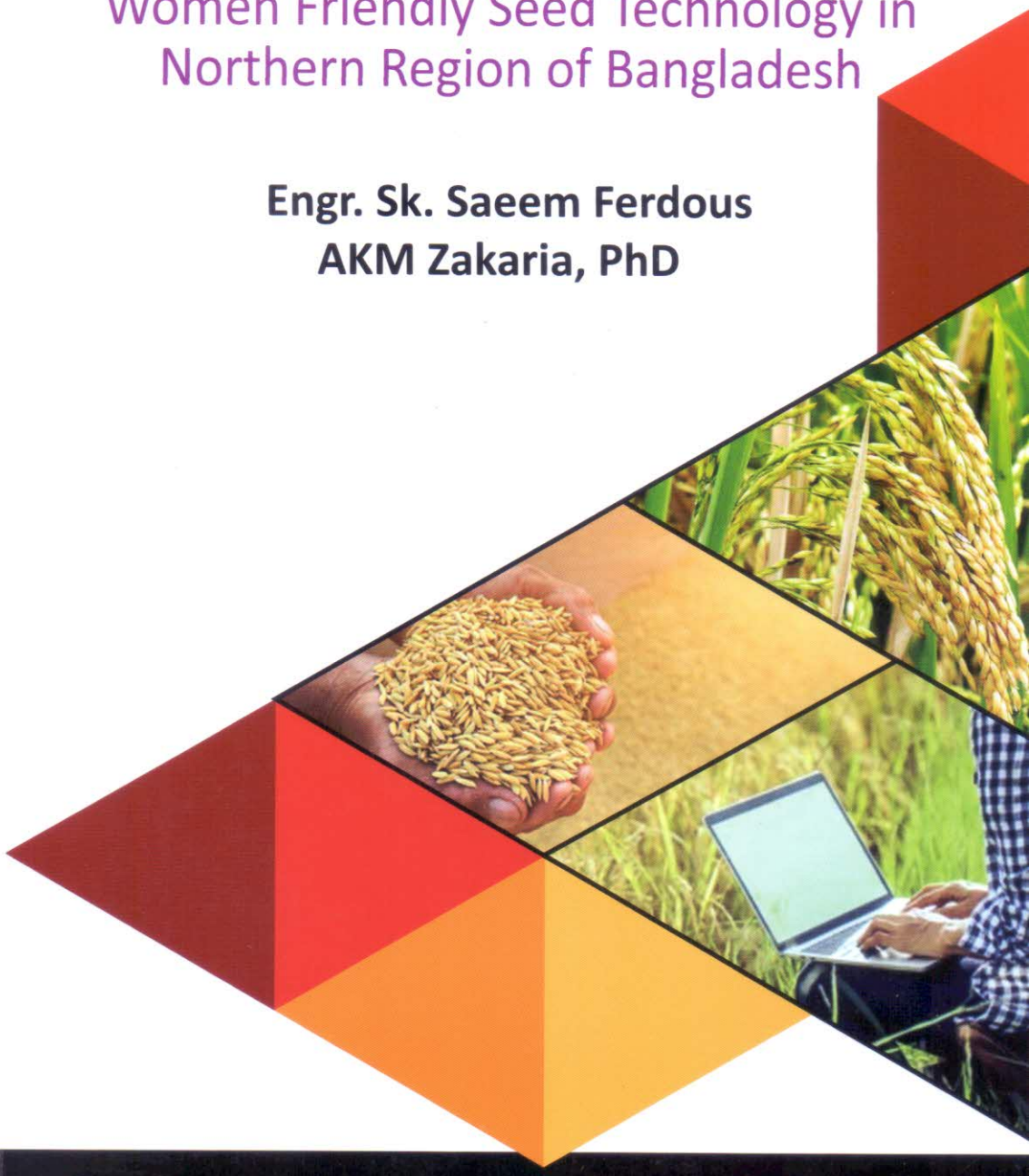

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IT and IR Professional, He is working as a Deputy Director of Rural Development Academy (RDA), Bogra, Bangladesh. He was one of the core committee members of drafting the ICT Policy 2009 Phase-1 in 2009. He is a member of the Global Saemaul Development Network ('GSDN') and The Institution of Engineers, Bangladesh (IEB). He has received many National and Internation Training like : On the job training on e-learning in Web Development. IRRI, Philippines etc.

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Agricultural Scientist, inventor of several agriculture, environment and rural development models for Bangladesh and South Asia, bases at the Rural Development Academy (RDA)in Bogura. He has more than 25 years experience in researching and teahing nationally and internationally. Women in Seed Entrepreneurship (WISE), Rural Plant Clinic are his remarkable invention. He was formar Director of Rural Development Academy(RDA), Bogura. Now, He is working as a Deputy Chief Of Party , USAID supported Project at Helen Kellller International

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Executive Summary

The goal of this study is to examine the impact pre and post-intervention quality of farmers' retained rice seed and to understand better the workings of such an education system to understand the relationship between the role of rural women and their selected personal, socio-economic, and psychological attributes and also see the rural women to their role on practicing rice seed management.

This study conducted in three districts. Those are Bogura, Rangpur, and Dinajpur districts. Among the three districts, selected 3 villages (Maria, Mirjapur and Mostofapur) using mainly cross-sectional data to measures the impact of socio-economic factors of the rural women and see their role on practicing rice seed management on farmers' knowledge, attributes to use of environment-friendly e-learning technologies training and productivity.

Seed is the foundation of agriculture for enhancing crop production. But the availability of quality seed is the main constraint to crop production in Bangladesh. The use of quality seed can contribute significantly to increase grain yield as well as to increase the availability of every day's food intake. The production of quality seed is thus essential, and that's why the government has recently given the seed sector a `Topmost Priority' status. Therefore, the main objective of research related to the availability of quality seeds for developing farmers' knowledge, seed management through user-friendly e-learning technology for better rice seed production at farmers' level for increasing crop yield and production towards attaining food security.

Data were collected through Pre and post-structural questionnaires, PRA, FGD, interviews and different types of survey questionnaires. Besides, the farmers' homegrown seed of rice were collected and analyzed for determining seed quality.

The collected data were compiled and analyzed through the appropriate computer software for report writing.

Results indicate that e-learning education significantly improved performance in all three areas: knowledge, environmentally sustainable technology skills, and productivity.

Rural women according to their exchange of personal views during post-intervention survey exchange of personal views (38.67 per cent) had exchanged personal views, and 82.67 per cent of the respondent did exchange personal views in women's association in the case of a post-intervention situation. which is a positive sign impact exchange of personal views of rural women. The seed management knowledge score of the rural women during the post- intervention is 24.67 per cent. It is noticeable that, previously, none of the rural women had high seed management knowledge.

Overall, the findings suggest that access to literacy, agricultural resources, and information are critical factors for determining farmer success in these schools. The study highlights the importance of learning for adult farmers, especially women, from resource-poor backgrounds for sustainable technology skills and productivity outcomes. This research has direct implications for similar development programs for adult female and male learners in low-literacy and low-resource contexts.

On the other hand, most of the farmers do not have adequate knowledge regarding modern cultivation and post-harvest technologies of rice. If the farmers are to be motivated through adequate non-formal e-learning training, community-level awareness program, the formation of seed society, television program, and other appropriate techniques, they might be able to produce quality rice seeds. Besides, the capacity of public and private seed companies should be strengthened through government support (financial and technical) for producing more quality seeds to meet up the national seed demand.

If we consider the research on SDG. for policymaking then we consider any other country in the world, Bangladesh will need quality education –underscoring improved agricultural knowledge – for both male and female farmers, in alignment with the SDG 4 (quality education) and SDG 5 (gender equality). Quality farmer education will help ensure food security for the poorest people to reach the zero hunger goal (i.e., SDG 2) by 2030. Especially in the current state of increasing economic migration of educated males from rural to urban areas, women's farming knowledge and skills are more likely than ever to determine the future of agriculture in Bangladesh

Finally, This study evaluates the impact of non-formal e-learning education of women on seed technology to change rice seed management practising, socio-economic and psychological attributes in Bogura, Rangpur, and Dinajpur districts to improve food security and livelihood in the Northern Region of Bangladesh.

And, also the goal of this study is to examine the impact of knowledge, psychological attributes and socio-economic factors to improve the livelihood outcomes and to better understand the rice seed management through the e-learning system.